Teach Primary

Teaching Practices in Five Cantons of Bosnia and Herzegovina

RESULTS OF THE TEACH PRIMARY CLASSROOM OBSERVATION STUDY

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European Commission

Funded by the European Union

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February 2023

Table of Contents

List of Figures

List of Tables

List of Acronyms

BiH	Bosnia and Herzegovina
CLASS	Classroom Assessment Scoring System
PLATO	Protocol for Language arts Teaching Observations
OPERA	Observation of Teaching Practices in Relation to Pupil Learning
SCOPE	Standards-based Classroom Observation Protocol for Egypt
SDI	Service Delivery Indicators
SEL	Socioemotional Learning
TIPPS	Teacher Instructional Practices and Processes System
UDL	Universal Design for Learning

Acknowledgements

'At a Glance' Overview and Results: An insight into teaching practices

This study in Bosnia and Herzegovina (BiH) was conducted as part of the Functional Review of Education Service Delivery under the 'Support to Public Sector Management Reform' Project and with financial support from the European Commission. Based on recommendations from earlier stages of the Education Functional Review, this technical assistance activity provides targeted support to select jurisdictions in BiH on improving pedagogical practices through classroom observations. Teach Primary is a classroom observation tool that was implemented in five cantons as part of this study: Zenica-Doboj, West Herzegovina, Sarajevo, Tuzla and Una-Sana.

The Teach Primary tool measures the time teachers spend on learning activities in a typical lesson, the extent to which students are on task, and the quality of teaching practices over the course of a teacher's lesson. As part of the Time on Task component, 3 "snapshots" of 1–10 seconds are used to record both the teacher's actions and the number of students who are on task during the snapshot. The Quality of Teaching Practices component, on the other hand, is organized into three broad areas: Classroom Culture, Instruction, and Socioemotional Skills. These areas have nine corresponding elements that point to twenty-eight behaviors. The behaviors are characterized as low, medium, or high, based on the evidence observed in this classroom. These preliminary scores are translated into a five-point scale, which quantifies the teacher's practices as captured in two, 15-minute observations.

With the aim of conducting classroom observations using the TEACH Primary tool, the World Bank contracted a local social science research firm in BiH, proMENTE. After the ProMENTE team was selected for this task, two TEACH Master trainers from WBG conducted a TEACH training session combining both synchoronous and asynchronous methodologies, from May 10th – 18th 2022. All 5 proMENTE trainers passed the reliability exam.

Table 1: Overview of Study		
Location		B&H
Number of Schools		76
% of Urban Schools		50%
% of Rural School		50%
Number of Teachers		379
% of Female Teachers		86%
# of Teach Observations		380
Median Class Size		17
Number of Students		6,346
% of Male Students		50%
% of Female Students		50%
% of Grade Level Observed	Grade 1	8%
	Grade 2	7%
	Grade 3	15%
	Grade 4	16%
	Grade 5	17%
	Grade 6	31%
	Multigrade	7%
Subject Distribution	Mathematics	25%
	Mother Language	28%
	Other	47%

These five TEACH Master trainers from proMENTE then went on to conduct the training of 30 BiH staff from the five selected cantons.[1] This training combined in-person (3 days) and online training (2 days) tools. Participants included staff from pedagogical institutes, Institute for the Development of Pre-University Education (Sarajevo Canton), Ministry of Education, Science, Culture and Sports (West-Herzegovina Canton), Ministry of Education and Science (Tuzla Canton), and staff from a number of Primary Schools (Una Sana Canton). 27 participants passed the reliability exam out of which 22 participants went on to observe classrooms in 5 cantons in BiH, that formed the basis for this study.

During the training, the participants learned about the structure of the tool, i.e. components, elements and behaviors. For the purpose of the training, short (2-3 minutes) and medium-length (15-minute) videos of local classrooms were used, which were recorded in Zenica-Doboj Canton with the support of the Pedagogical Institute of the Zenica-Doboj Canton. Participants were offered various examples, scenarios for practice, as well as quizzes to check knowledge and identify difficulties in mastering the content. Work on assignments required individual and group engagement.

On the final day of training, participants took a reliability test where they had to code 3 full length videos that were 15 minutes each. To pass the exam, participants had to reliably rate 8 out of 10 elements in each video. For the Learning Time element, participants were considered reliable if they fully agreed with the master code for two out of three "snapshot". For all other elements, participants were cruronsidered reliable if their rating of the elements did not differ from the master code by more than one point/rating.

Participants who did not pass the exam in the first attempt received feedback and another opportunity to take the exam. In the second exam, they watched three other videos. Participants who passed the exam were certified as Teach Primary observers, and received a certificate valid for one year. Certified observers are hired to observe classes in selected schools that belong to the area/canton they come from.

STUDY SAMPLE:

This study was designed to measure the quality of teaching practices in a selection of 76 primary schools (50% rural and 50% urban) in five cantons of BiH. 22 observers[2], who were trained and certified to conduct classroom observations, captured the practices of 379 teachers (86% female) **(Table 1)**

In order to present a reliable picture of the quality of teaching practices in the selected cantons of BiH, a representative sample of schools from the participating 5 cantons was selected. Representatives of the ministries of education from these 5 cantons submitted a list of schools. From that list, a random selection was made of schools where observations would be conducted. In the cantons participating in this study, there are 259 primary schools in total, of which 76 (29.3 percent of total) were randomly selected. From these 76 schools, 380 classroom observations were conducted in total. The observations included schools in both urban and rural areas. In each of the selected schools, a total of 5 observations of different classes from the first to the sixth grade (including grades that have combined classrooms) were conducted. Subjects that were covered in the observed classes included Mathematics, Social Sciences, Mother Tongue language and Natural Science. Subjects

1   Participants from Zenica-Doboj, West-Herzegovina & Tuzla Cantons attended trainings from August 29th – 5th September 2022 and participants from Una-Sana & Sarajevo Canton attended trainings from 5th September 2022 – 10th September 2022.

2   30 participants were trained out of which 27 were certified. However, only 22 observers finally conducted the classroom observations (this included 2 members from the proMENTE team).

such as arts, sports, and religion classes were excluded. The data collected on the basis of the conducted observations were entered into the SurveyCTO data collection platform.

SUMMARY OF TEACH RESULTS

Teachers in the five selected cantons of BiH are seen to have strong ability in building classroom culture, as more than 90% of observed teachers demonstrated effectiveness in this area scoring higher than 3 out of 5 on the Teach Primary scale). However, they demonstrate less effectiveness in building socioemotional skills as only 27% of teachers score higher than 3 out of 5 in this area. With respect to instruction, 74% of teachers demonstrate effectiveness, which still leaves a considerable share of teachers without obtaining mastery in this area. **Figure 2.**

Teach results show that a majority of teachers are highly effective at creating a supportive learning environment (85% of teachers score a 4 or 5), setting positive behavioral expectations (78%), lesson facilitation (80%) and using checks for understanding (61%). However, a large share of teachers are ineffective (Scoring 1 out of 5) at fostering collaborative classroom environment (55%), building critical thinking skills (13%) and providing students with feedback (14%). **Figure 5** highlights the distribution of scores by element.

Introduction

School enrollment has increased substantially over the last 25 years in low and middle-income countries. Schooling, basic reading, writing, and arithmetic skills (World Development Report, 2018) — a state of affairs UNESCO (2013) dubbed the "global learning crisis." Around the world, the learning crisis is, at its core, a teaching crisis (Bold et al., 2017). This report details the nature of teaching practices across Bosnia and Herzegovina as captured by the high-inference classroom observation tool, Teach.

Why Measure teachING practices?

Identifying effective teaching is not easy. Research indicates teacher characteristics such as formal education, years of experience (beyond the first two), cognitive skills, and entry exam performance scores only explain a small fraction of the variation in teacher effectiveness (Staiger & Rockoff, 2010; Araujo et al., 2016; Bau & Das, 2017; Cruz-Aguayo et al., 2017). Variation in student learning is better explained by teachers' practices in the classroom. For example, a seminal study in Ecuador found a one SD increase in teacher quality, as measured by teachers' scores on the CLASS observation tool, is associated with a 0.18 SD increase in learning outcomes (Araujo et al., 2016). Moreover, teachers' scores on classroom observation tools in the United States are positively associated with student achievement gains (Kane & Staiger, 2009; Kane & Staiger, 2009; Hamre et al., 2014; Holtzapple, 2003; Milanowski, 2004). However, it's not simply teaching practices that exhibit positive effects as the improvement of their practices also has positive effects on student outcomes. For instance, students of Chilean teachers who were given access to classroom observation feedback and coaching performed .05-.09 SD higher on state tests and .04-.06 SD higher on national tests than those whose teachers did not receive such feedback (Bruns et al., 2016). Moreover, a study of over 60 coaching programs found those designed to advance teaching practices (0.58 SD) also resulted in increased student learning (0.15 SD) (Kraft et al., 2018).

BACKGROUND OF THIS STUDY

Bosnia & Herzegovina faces a learning crisis in basic education, with nearly 60 percent of students either reaching only low benchmarks for achievement or failing to reach such benchmarks. This is the case for Grade 4 students in both mathematics and science, according to the latest round of TIMSS 2019. However, the results are similar for students in secondary education according to PISA 2018, where over half of 15-year-old students did not achieve basic competencies required for reading, mathematics, and science.

One of the critical factors contributing to this learning crisis are teaching practices that are insufficiently geared towards learning. A functional review conducted by the World Bank highlights several important shortcomings in terms of teacher skills, namely the lack of professional standards and criteria for teachers as guiding force for the profession, the lack of relevant data for assessment and evaluation purposes, and insufficient opportunities for continuous professional development of teachers. Classroom observations represent a valuable tool for improvement and they are expected as part of the teacher policy framework in selected jurisdictions studied, but they are not sufficient informative to drive change.

Global evidence shows that teaching practices and behaviors observed through classroom observations can account for significant improvements in student learning. Some examples of this includes practices aimed at enhancing classroom management and instructional quality, as well as instructional practices that allow students to evaluate, integrate and apply learned knowledge (OECD, 2019). Multiple studies show that teachers' measurable characteristics—e.g. level of education, years of experience, or salary level—do not explain or predict student learning. Instead, pedagogical practices and behaviors of teachers are key to improving learning outcomes, but currently there is little information on pedagogical practices across schools in BiH. Documenting and measuring pedagogical practices through classroom observations is a first step towards improving teacher CPD policy and towards building the capacity of pedagogues, teachers, school principals, and staff of pedagogical institutes to support school improvement efforts.

In response to this need, the World Bank along with BiH counterparts and the ProMENTE survey firm have implemented the TEACH classroom observation tool in Zenica-Doboj, West Herzegovina, Sarajevo, Tuzla and Una-Sana cantons in an attempt to gain better insight into teaching practices in BiH. These cantons were selected for this stageto ensure a mix of ethnic composition, enrollment size, and implementation readiness.

Theoretical Framework: Capturing Teaching Practices

WHAT DOES TEACH PRIMARY MEASURE?

Teach Primary measures over the course of a teacher's lesson (i) the time teachers spend on learning and the extent to which students are on task, and (ii) the quality of teaching practices that help develop students' socio-emotional and cognitive skills.

As part of the Time on Task component, 3 "snapshots" of 1–10 seconds are used to record both the teacher's actions and the number of students who are on task throughout the observation. The Quality of Teaching Practices component, on the other hand, is organized into 3 primary areas: Classroom Culture, Instruction, and Socio-emotional Skills.[3]

Figure 1: Teach Framework

TIME ON TASK		TIME ON LEARNING			
QUALITY OF TEACHING PRACTICES	**CLASSROOM CULTURE**	SUPPORTIVE LEARNING ENVIRONMENT		POSITIVE BEHAVIORAL EXPECTATIONS	
	INSTRUCTION	LESSON FACILITATION	CHECK FOR UNDERSTANDING	FEEDBACK	CRITICAL THINKING
	SOCIOEMOTIONAL SKILLS	AUTONOMY	PERSEVERANCE	SOCIAL & COLLABORATIVE SKILLS	
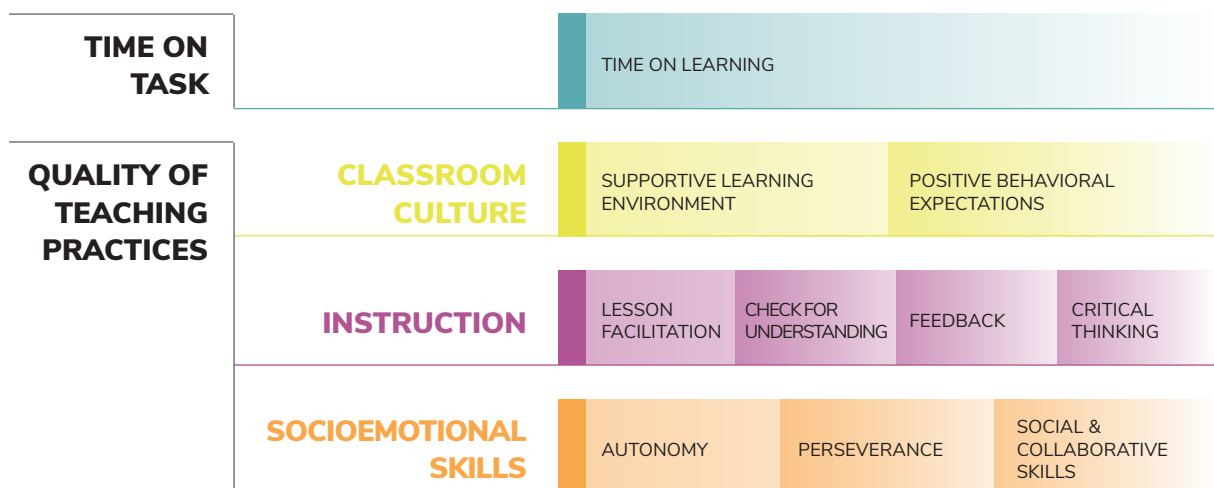
The 3 quality of teaching practices' areas have 9 corresponding elements that point to 30 behaviors. The behaviors are characterized as low, medium, or high, based on the quality of teaching practices observed. These behavior scores are translated into a 5-point scale that quantifies teaching practices as captured in a series of two, 15-minute lesson observations.

1. **Classroom Culture:** The teacher creates a culture that is conducive to learning. The focus here is not on the teacher correcting students' negative behaviors but rather the extent to which the teacher creates: (i) a supportive learning environment by treating all students respectfully, consistently using positive language, responding to students' needs, and both challenging gender stereotypes and not exhibiting bias (against gender or students with disabilities) in the classroom; and (ii) positive behavioral expectations by setting clear behavioral expectations, acknowledging positive student behavior, and effectively redirecting misbehavior.

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3   It should be noted that it is impossible to draw a clear line between teaching practices linked to academic versus socio-emotional learning. Many teaching practices included in common professional teaching frameworks do impact student's socio-emotional development, though are usually thought of in terms of academic rather than socio-emotional learning. Explicitly linking teaching practices with socio-emotional outcomes in measures used for assessment will serve to increase the salience of student's socio-emotional skills to teachers, as well as to other stakeholders and policymakers, thus ensuring a focus on both academic and socio-emotional learning in the classroom.

2. **Instruction:** The teacher instructs in a way that deepens student understanding and encourages critical thinking and analysis. The focus here is not on content-specific methods of instruction, but rather the extent to which the teacher: (i) facilitates the lesson by explicitly articulating lesson objectives that are aligned to the learning activity, clearly explaining content using multiple forms of representation, and connecting the learning activity to other content knowledge or students' daily lives, and by modeling the learning activity through enacting or thinking aloud; (ii) does not simply move from one topic to the next but checks for understanding by using questions, prompts, or other strategies to determine students' level of understanding, by monitoring students during group and independent work, and by adjusting his/her teaching to the level of students; (iii) gives feedback by providing specific comments or prompts to help clarify students' misunderstandings or identify their successes; and (iv) encourages students to think critically by asking open-ended questions and providing students with thinking tasks that require them to actively analyze content. Students exhibit critical thinking ability by asking open-ended questions or performing thinking tasks.

3. **Socio-emotional Skills:** The teacher fosters socio-emotional skills that encourage students to succeed both inside and outside the classroom. To develop students' social and emotional skills, the teacher: (i) instills autonomy by providing students with opportunities to make choices and take on meaningful roles in the classroom. Students exhibit their autonomy by volunteering to participate in classroom activities; (ii) promotes perseverance by acknowledging students' efforts, rather than focusing solely on their intelligence or natural abilities, by having a positive attitude toward students' challenges by framing failure and frustrations as part of the learning process, and by encouraging students to set short- and long-term goals; and (iii) fosters social and collaborative skills by encouraging collaboration through peer interaction and by promoting interpersonal skills, such as perspective taking, empathizing, emotion regulation, and social problem solving. Students exhibit social and collaborative skills by collaborating with one another through peer interaction.

HOW WAS TEACH PRIMARY DEVELOPED?

The Teach Primary development team rigorously researched, revised, and piloted different iterations of the tool over a 2-year timeframe: First, the development team — which comprised 1 education measurement expert, 1 instructional expert, 1 psychologist and 1 teacher — assessed 5 classroom observation tools widely used in the United States to create an inventory of teaching practices that are commonly evaluated.[4] The team then built upon this list to include behaviors from international classroom observation tools used in developing countries.[5] Based on this preliminary analysis, the team created an inventory of 3 areas and 43 elements.[6]

Secondly, the development team hosted a working group of 22 education experts and practitioners to help further reduce and prioritize elements for the Teach Primary framework. Participants were asked to indicate whether any elements were missing from the inventory, to rank the elements and areas by relevance, and to identify elements they characterized as unobservable. This process reduced the framework to 25 elements. Then, the development team reviewed the theoretical and empirical evidence from developing countries to further eliminate elements from the framework. This process resulted in a downsized framework of 14 elements.

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4   The Teach Primary framework built upon the inventory created by Gill and others (2016), who conducted a content analysis of the differences in dimensions of instructional practice of 5 commonly used classroom observation tools comparing the behaviors they measure with the extent to which they predict student learning. The tools included CLASS, FFT, PLATO, Mathematical Quality of Instruction, and UTeach Observational Protocol. The content, predictive power, and potential bias of these instruments were also analyzed as part of this preliminary framework.

5   These included OPERA, SCOPE, SDI, Stallings, and TIPPS.

6   Elements refer to groups of multiple, similar behaviors that aim to capture teaching practices related to positive learning outcomes

These 14 elements comprised the first working version of the tool, which aimed to capture both quality and frequency of teaching practices as measured by each element.[7] This preliminary tool was piloted in person in Pakistan and Uruguay and using classroom video footage in Afghanistan, China, Pakistan, the Philippines, Tanzania, Uruguay, and Vietnam. From these pilots, it became apparent that observers struggled to code reliably when they had to simultaneously capture the frequency and quality of teaching practices for each element. In response, the development team revised the structure of the tool to address this challenge as well as other errors and logical inconsistencies. This process resulted in a tool that comprised 10 elements.

Then, the development team convened a technical advisory panel, including Lindsay Brown, Pam Grossman, Heather Hill, Andrew Ragatz, Sara Rimm-Kaufman, Erica Woolway, and Nick Yoder, to provide written feedback on the tool. These comments were compiled and addressed as part of a 1-day technical workshop. During the workshop, the experts advised the team on which issues to prioritize and how to incorporate the comments to further improve the tool. This updated version of the tool was applied in 4 settings, where observers were given a certification exam that ensured they could reliably code using Teach. In Mozambique, 74% of the observers passed the certification exam; in Pakistan and the Philippines, 96% passed; and in Uruguay, 100% passed. The observers also provided comments on the tool and training that was considered during the revision process.

The development team worked closely with Andrew Ho to analyze psychometric properties of the tool. Based on this analysis and feedback from the trainers and observers, the development team revised each element's structure and complementary examples to improve the tool's consistency and clarity. As part of this process, the Time on Learning element was modified to capture teachers' time on instruction and students' time on task through a series of snapshots. This process resulted in a tool that comprised 1 low-inference and 9 high-inference elements. The final stage involved testing these revisions using the Teach Primary global video library. The tool was released to the public in 2019.

Since its release to the public and as of December 2021, Teach Primary has been applied in 35 countries. Teach Primary has been implemented by the World Bank and by external organizations, including J-PAL, IDinsight, IRC, Save the Children, and Education World Trust, as well as individual schools. Through these different implementations, the Teach Primary team has gained insights about the tool's use in the field and has adjusted and made revisions to the tool and its complementary materials in order to better support implementations in the field. The Teach Primary team has also conducted additional analyses and studies to verify the psychometric properties of the tool (Luna-Bazaldua, Molina, and Pushparatnam 2021).

In 2020 and 2021, Teach Primary underwent a revision process to strengthen the way the tool measured inclusive teaching practices. Inclusive teaching practices are defined as those that create increased opportunities for all students to access learning. The revised version of the tool (Second Edition) reflects some important adjustments from the original version. A group of experts in inclusive education provided extensive feedback on the proposed revisions to the tool, and these comments were incorporated into a revised version of the tool. The Second Edition Teach Primary tool was piloted with a set of videos a global video library. In addition, the tool was also piloted in Rwanda. These codes were compared to assess that the revised tool was better capturing inclusive teaching practices. The revised Second Edition of the Teach Primary Observer Manual and Tool was published in 2021.

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7   For example, the tool aimed to capture not just the quality with which a teacher checked for understanding (adjusting the lesson, prompting students to determine their level of understanding, etc.), but the frequency with which the teacher checked for understanding in each lesson.

Teach Primary Results: Insights into Teaching Practices

TEACH PRIMARY RESULTS

Results indicate that observed teachers[8] have strong ability in classroom culture (81% of teachers scored between a 4-5) but are seen to be less effective at fostering socioemotional skills (43% of teachers scored between 1-2). **(Figure 2)**. The most common practices are creating a supportive environment, lesson facilitation and setting positive behavioral expectations whereas the least common practices are fostering social and collaborative skills, building perseverance and providing feedback **(Figure 5)**. In Teach Primary findings in other countries (Molina et al., 2018) found that teachers effectiveness in building Classroom Culture is more prevalent whereas they are less effective in Instruction and fostering Socio-emotional Skills.

Figure 2: Distribution of TEACH Primary scores from 1 to 5 (Percentages)

Teaching Practices	*Percentage of observed teachers who are effective in each area*				
	Low (In this classroom, the teacher is ineffective in building this element)		*Medium (In this classroom, the teacher is somewhat effective in building this element)*	*High (In this classroom, the teacher is highly effective in building this element)*	
	1	**2**	**3**	**4**	**5**
Classroom Culture					
1. Supportive learning environment	0	1	14	54	31
2. Positive behavioral expectations	1	1	19	55	23
Instruction					
3. Lesson Facilitation	0	1	19	32	48
4. Checks for understanding	2	6	31	27	34
5. Feedback	14	19	33	15	19
6. Critical Thinking	13	11	41	21	13
Socioemotional Skills					
7. Autonomy	5	14	49	21	12
8. Perseverance	7	36	35	13	9
9. Socioemotional skills	55	13	12	11	10

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8   For this report it is important to note that when the report cites BiH, the authors are referring to data collected from Zenica-Doboj, West Herzegovina, Sarajevo, Tuzla and Una-Sana cantons.

Figure 3: Distribution of Average Teach Primary Scores by Area and Overall

Classroom Culture

Distribution of Scores

Instruction

Distribution of Scores

Socioemotional Skils

Distribution of Scores

Teach Global Score

Distribution of Scores
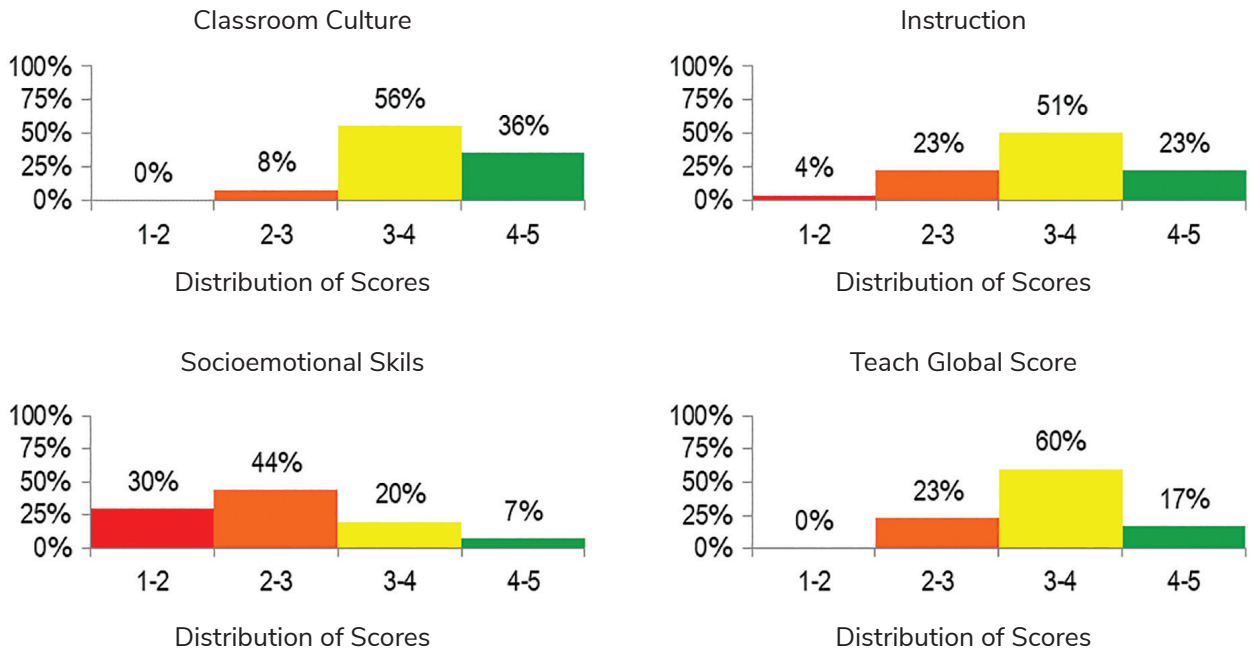
Source: Authors' analysis of classroom observation data, 2022.

Out of the three snapshots, observed teachers in BiH provided a learning activity on average 93% of the time. Moreover, when teachers provide a learning activity, all students are on task in 76% of the total classrooms observed. **(Figure 4)**.

Figure 4: Distribution of Time on Task variables

0.1. Teacher provides learning activity

■ No ■ Yes

0.2. Students are on task

■ L: 6 or more students are off task
■ M: 2 to 5 students are off task
■ H: 0 or 1 students are off task

Source:Teach Primary BiH Database, 2022.

With respect to classroom culture, observed teachers in the five selected cantons of BiH are highly skilled at creating a supportive learning environment, less so at setting positive behavioral expectations, scoring around the medium range in this area. With respect to lesson instruction, the results indicate practices to be the most prominent (average score of more than 4 out of 5), but practices related to checks for understanding, feedback and opportunities to build critical thinking among students are less common. With respect to socio emotional skills, BiH teachers are moderately skilled at fostering autonomy for students, though less likely to promote perseverance and demonstrate social-collaborative skills **(Figure 5)**. The next section characterizes teaching practices in the five selected cantons of BiH for each area

Figure 5: Distribution of Average Teach Primary Scores by Element
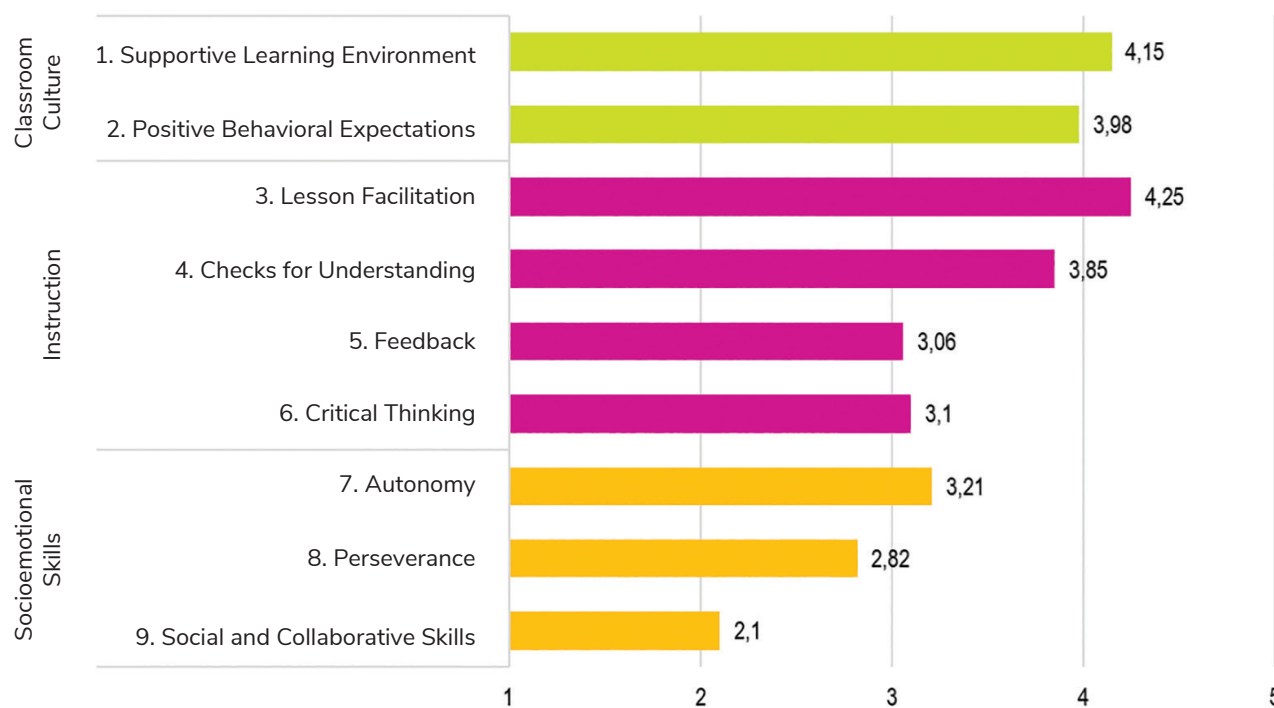
Source: Teach Primary BiH Database, 2022.

Area 1: Classroom Culture Results

Classroom Culture measures the extent to which the teacher creates a culture that is conductive to learning. The focus here is not on the teacher correcting students' negative behaviors but rather the extent to which the teacher creates: (i) a **supportive learning environment** by treating all students respectfully, consistently using positive language, responding to students' needs, and both challenging gender and disability stereotypes and not exhibiting gender and disability bias in the classroom; and (ii) **positive behavioral expectations** by setting clear behavioral expectations, acknowledging positive student behavior, and effectively redirecting misbehavior.

Overall, teachers in BiH[9] demonstrated high level practices in Classroom Culture. On average, they score 4 points on a 5-point scale in this element with 81% of teachers scoring between 4-5 in creating a supportive learning environment and 78% of teachers scoring between 4-5 in setting positive behavioral expectations **(Figure 2)**

Supportive Learning Environment. On average, teachers score 4 points out of the 5 points possible in this element **(Figure 5).** **Figure 6** shows the distribution of scores for supportive learning environment and its respective behaviors. Teachers generally treat their students with respect with 92% of teachers scoring a high. Most teachers use at least some positive language (95% use some or consistently uses positive language). This includes examples where teachers praised students for each completed activity using words such as "well done", "excellent", "super", "very good", "you did a great job", "you understood the lesson very well" 5 or more times. They also asked that the students be rewarded with applause for good work.

In 54% of the observations, a need was observed and 76% of those teachers responded to student needs when they emerged.[10] Observers highlighted many great examples of teachers responding to student needs. These included addressing material, physical and emotional needs of a student. For example, in one classroom a student was seen to be emotionally upset over not being able to complete a task. The teacher was seen addressing the student, providing her with emotional support, asking her peers to help her with her task (thus, also encouraging students' interpersonal skills) and moving the student to the front of the classroom to help her solve her task.

Finally, when it came to addressing gender stereotypes or addressing bias against students with disabilities, around 3% of teachers exhibited bias or reinforced stereotypes in some way. For example, when it came to gender stereotypes, a teacher was seen emphasizing the role of women as mothers and housewives and "women's occupations" were roles that revolved around taking care of others eg: a teacher. On the other hand, the teacher presented occupations, such as policeman, as being more suitable for boys. As another example, when it came to disability bias, in one class a teacher implied that students with disabilities have less capacity or potential to perform certain tasks.

It is important to note that while the vast majority of teachers do not explicitly show bias, the study shows that these teachers do not necessarily challenge the status quo related to biases either. Most teachers do not challenge gender or disability stereotypes (91% for gender and 93% for disability) with only 6% demonstrating practices which actively challene stereotypes. One reason behind this could be that teachers do not view such efforts to proactively challenge the status quo as being part of their responsibilities as teachers.

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9   For this report it is important to note that when the report cites BiH, the authors are referring to data collected from Zenica-Doboj, West Herzegovina, Sarajevo, Tuzla and Una-Sana cantons.
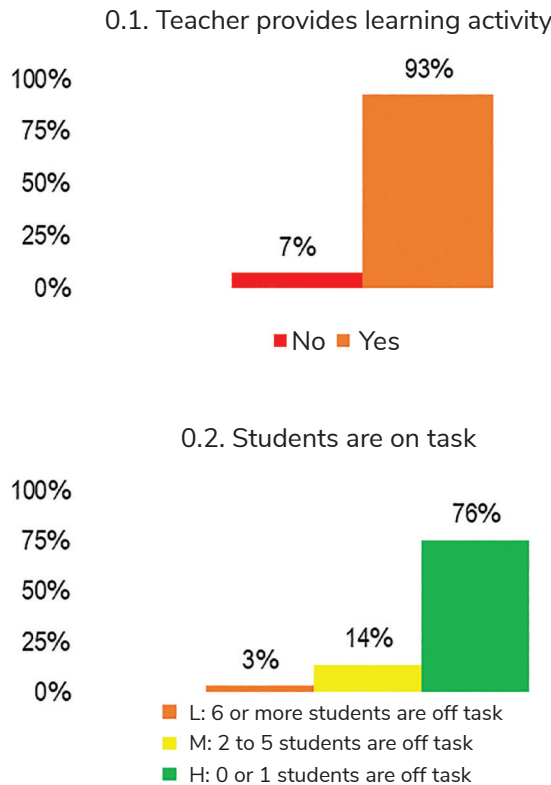
10 The N/A is excluded from the calculation

Figure 6: Supportive Learning Environment

1.1. Respects students

92%

7%

1%

- ■ L: Does not treat all respectfully
- ■ M: Treats all somewhat respectfully
- ■ H: Treats all respectfully

1.2. Uses positive language

78%

17%

6%

- ■ L: Does not use positive language
- ■ M: Uses some positive language
- ■ H: Consistently uses positive language

1.3. Responds to students needs

46%

41%

11%

3%

- ■ L: Is not aware or does not respond to needs
- ■ M: Responds but does not address the problem
- ■ H: Responds and addresses the problem
- ■ N/A

1.4. Bias and stereotypes

90%

3%

6%

- ■ L: Exhibits bias or reinforces stereotypes
- ■ M: Does not exhibit bias but doesn't challenge stereotypes
- ■ H: Does not exhibit bias and challenges stereotypes

1.4a. Gender bias and stereotypes

91%

3%

6%

- ■ L: Exhibits bias or reinforces stereotypes
- ■ M: Does not exhibit bias but doesn't challenge stereotypes
- ■ H: Does not exhibit bias and challenges stereotypes

1.4b. DIsability bias and stereotypes

93%

2%

5%

- ■ L: Exhibits bias or reinforces stereotypes
- ■ M: Does not exhibit bias but doesn't challenge stereotypes
- ■ H: Does not exhibit bias and challenges stereotypes

Table 2: Examples of Supportive Learning Environment behavior scores

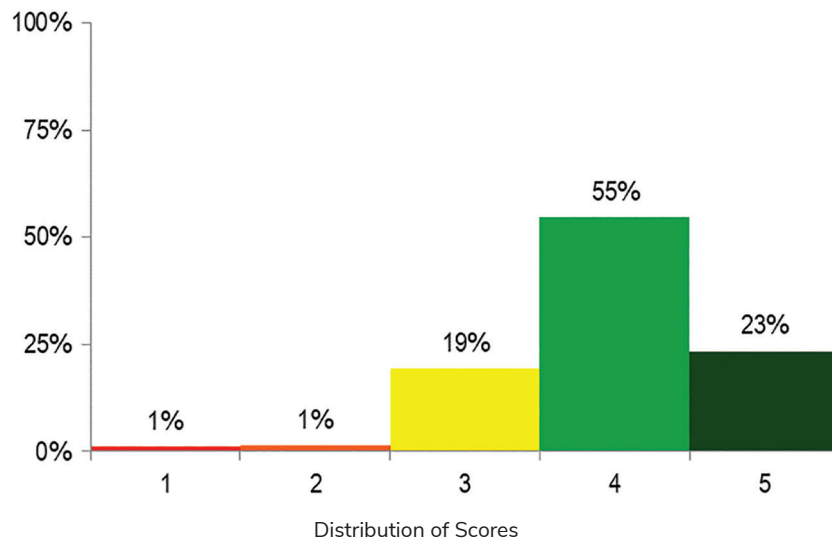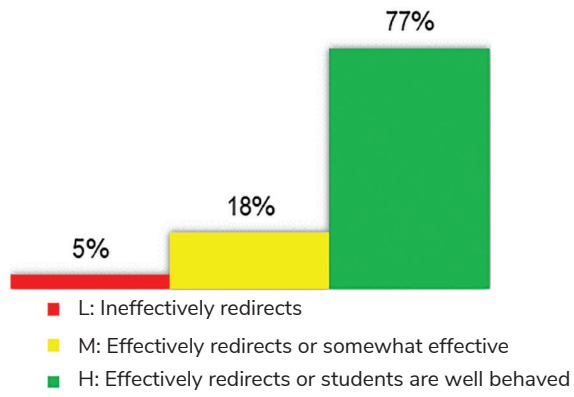| Score	1	2	3	4	5
Behavior quality range	Low	Moderate		High	
1.1 The teacher treats all students respectfully	The teacher does not treat all students respectfully. *For example: The teacher may yell at some students, scold them, shame/ridicule them, or use physical punishment to discipline them.*	The teacher treats all students somewhat respectfully. *For example, the teacher does not treat students disrespectfully (e.g., s/he does not yell at or ridicule students), but the teacher does not show outward signs of respect toward students either (e.g., call students by their names, say "please" or "thank you," or other culturally relevant signs of respect).*		The teacher treats all students respectfully. *For example: The teacher uses students' names, says "please" and "thank you," or shows some other culturally relevant sign of respect.*	
1.2 The teacher uses positive language with students[2]	The teacher does not use positive language in his/her communication with students.	The teacher uses some positive language in his/her communication with students. *For example: The teacher may say "well done" or "good", although this happens infrequently.*		The teacher consistently uses positive language in his/her communication with students. *For example: The teacher consistently uses encouraging phrases such as "Great job!" when students show their work to him/her, or "You can do this!", or "You are such a talented group of children."*	
1.3 The teacher responds to students' needs[3]	The teacher is not aware of students' needs OR does not address the problem at hand. *For example: A student may not have the required supplies for the lesson, and the teacher does not notice or sees it and ignores it. Alternatively, a student may be upset because of a bad grade or a personal problem, and the teacher ignores the student or is dismissive of the issue (e.g., the teacher tells the student to "get over it" or "pull yourself together").*	The teacher responds to students' needs but may not address the problem at hand. *For example: A student may be upset because s/he does not have a pencil, and the teacher asks another child to share his/her pencil, but s/he refuses. The teacher carries on with the lesson without solving the problem.*		The teacher promptly responds to students' needs in a way that specifically addresses the problem at hand. *For example: If a student does not have a pencil, the teacher allows the child to borrow one from his/her spare pencil box.*	
1.4 The teacher does not exhibit bias and challenges stereotypes in the classroom[4]	The teacher exhibits bias or reinforces stereotypes in the classroom.	The teacher does not exhibit bias but does not challenge stereotypes either.		The teacher does not exhibit bias AND challenges stereotypes in the classroom.	
1.4 a Gender	The teacher could show this by providing students with unequal opportunities to participate in classroom activities or by expressing unequal expectations for students' behaviors or capabilities. *For example: A teacher seats girls exclusively at the back of the classroom or only calls on boys to answer difficult questions. Alternatively, the teacher calls equally on students of all genders to answer difficult questions, but only assigns girls to clean the blackboard or hand out learning materials (e.g., textbooks) to the class.* Other examples of gender bias are teachers scolding boys but not girls after incorrectly answering a question or misbehaving. They may also give praise to girls but not boys after correctly answering a question.	The teacher provides students of all genders with equal opportunities to participate in the classroom and has similar expectations for all students. *For example: The teacher calls equally on all genders to answer difficult questions and praises both boys and girls after correctly answering questions. The teacher asks boys and girls to clean the blackboard and distribute learning materials (e.g., textbooks) to the class.*		The teacher provides students of all genders with equal opportunities to participate in the classroom, has similar expectations for all students, AND challenges gender stereotypes in the classroom. *For example: The teacher calls equally on all genders to answer difficult questions and praises both boys and girls after correctly answering questions. The teacher asks boys and girls to clean the blackboard and distribute learning materials (e.g., textbooks) to the class. In addition, the teacher uses examples and explanations that portray female rather than male scientists, doctors, and astronauts and/or encourages discussions with students about gender stereotypes and/or gender equality.* The teacher may also actively encourage equal participation through comments such as: "Let's hear more from the girls" or 'Now we have heard from a girl, let's hear from a boy."*	

1.4 b Disability	The teacher may provide students with unequal opportunities to participate in learning activities, use stigmatizing terms, or express low expectations for student's behaviors or capabilities. *For example: The teacher seats students with disabilities separately from other students. The teacher may use stigmatizing terms about people with disabilities, in general, or express bias towards students with disabilities in the classroom through low expectations for their behavior or capabilities.*	The teacher provides students of all ability levels with equal opportunities to participate in the classroom and has similar expectations for all students. *For example: The teacher enables students with disabilities to work with other class members during group work, provides opportunities for students with disabilities to ask questions, and participate in whole class learning activities. Alternatively, the teacher praises students with disabilities in the same manner as other students in the classroom*	The teacher provides students of all ability levels with equal opportunities to participate in the classroom, has similar expectations for all students, <u>AND</u> challenges disability stereotypes in the classroom. *For example: The teacher has students with disabilities work with others during group work AND uses examples and explanations that portray people with disabilities in important positions.*
2 Only verbal communication is counted as positive language; nonverbal displays of positive language would not count toward this behavior 3 This behavior is scored N/A if there are no observable emotional, material or physical needs. 4 The chances to participate should be considered proportionally to the ratio of different genders in the classroom; this behavior is only applicable in mixed-gender classrooms			
Source: Teach Primary Observer Manual.			

Positive Behavioral Expectations. On average, teachers score 3.98 points out of the 5-points possible in this element **Figure 5. Figure 7** shows the distribution of scores for the positive behavioral expectations' element and its respective behaviors. 81% of BiH teachers are highly skilled at setting clear behavioral expectations for their students. A few examples of how teachers in BiH do this includes using instructions such as "pay attention now", „listen carefully", „raise your hand if you want to say something." In addition, 77% of teachers are highly skilled at redirecting misbehavior. However, one of the least observed practices related to classroom culture and across all the observation metrics was acknowledging positive student behavior with only 20% of teachers using this effectively (such as, "Well done, you are being quiet and calm and have listened to my instructions"), and 44% of teachers never using this practice during the observation study.

Figure 7: Positive Behavioral Expectations

2.1. Clear behavioral expectations

- L: Does not set clear expectations
- M: Sets unclear or superficial expectations
- H: Sets clear expectations

2.2. Acknowledges positive behavior

- L: Does not acknowledge positive behavior
- M: Acknowledges some behavior
- H: Acknowledges positive behavior

2.3. Redirects misbehavior

- ■ L: Ineffectively redirects
- ■ M: Effectively redirects or somewhat effective
- ■ H: Effectively redirects or students are well behaved

Distribution of Scores

Source: Teach Primary BiH Database, 2022.

Table 3: Examples of Positive Behavioral Expectations behavior scores

Score	1	2	3	4	5
Behavior quality range	Low		Moderate		High
2.1 **The teacher sets clear behavioral expectations for classroom activities**	The teacher does not set behavioral expectations for classroom tasks and/or activities. *For example: The teacher says, "Work on your reading comprehension skills," without providing instruction on what the expected behavior is for the activity.*		The teacher sets unclear or superficial behavioral expectations for classroom tasks and/or activities. *For example: When introducing a group activity, the teacher says, "Please sit in your pre-assigned groups and behave," without clarifying what such behavior would entail.*		The teacher sets clear behavioral expectations throughout the lesson for classroom tasks and/or activities. *For example: Upon introducing a group activity to the class, the teacher explicitly states the expected behavior for students in the group. This may include, "Use a quiet indoor voice" or "Take turns speaking." If students are working independently, the teacher gives directions on what to do when they complete the activity. The teacher says, "Please quietly get up, bring your worksheet to me, and read while you wait for your classmates to finish." Alternatively, the teacher is not observed setting clear behavioral expectations, but students are well-behaved5 throughout the lesson.*
2.2 **The teacher acknowledges positive student behavior**	The teacher does not acknowledge student behavior that meets or exceeds expectations.		The teacher acknowledges some students' behavior, but is not specific about their expected behavior. *For example: If a group is following behavioral expectations, the teacher says, "This group is working well together" or "This group is doing a good job," without clarifying why or how.*		The teacher acknowledges students' positive behavior that meets or exceeds expectations. *For example: A teacher says to the class, "I just noticed that members of Group A are taking turns to speak and are proactively working on the next assignment."*
2.3 **The teacher redirects misbehavior and focuses on the expected behavior, rather than the undesired behavior[5]**	Redirection of misbehavior is ineffective and focuses on misbehaviors, rather than the expected behavior. *For example: If s/he notices a distracted student, the teacher stops lecturing and calls out the name of the student, asking her, "Why are you not paying attention in class?" Alternatively, the teacher continues to ignore the student who is distracted, but the distracted student begins to tease and argue with the peer sitting next to her. This shifts the focus of the entire class away from the lesson and onto those 2 students.*		Redirection of misbehavior is effective but focuses on misbehaviors rather than the expected behavior. Alternatively, redirection of misbehavior is somewhat effective and focuses on the expected behavior. *For example: Upon noticing that 3 students are not working on the assigned problems, the teacher says, "You 3 need to stop talking now, you are making too much noise." This statement focuses on the disruptive students' negative behavior, rather than on what is expected of them. Consequently, the disruptive students quiet down. In another scenario, the teacher redirects the students by asking them to "Focus on the task at hand." Even though the teacher focuses on the positive behavior expected from the students, for the most part, they continue to talk.*		When a problem arises, redirection of misbehavior effectively addresses the problem at hand and focuses on the expected behavior. *For example: If students are talking loudly and being disruptive during a lesson, the teacher says, "Remember to use quiet voices," and the students quiet down. Alternatively, the teacher is not observed redirecting students' behavior, but the students are well-behaved throughout the lesson.*

5 A misbehavior occurs when a student causes a disruption in the classroom that either interferes with the flow of the lesson, distracts other students, or upsets the teacher

Source: Teach Primary: Observer Manual.

Classroom Culture: Heterogeneity Analysis

Figure 8 shows the average scores across the two elements that constitute Classroom Culture. This information is broken down into two subcategories: urban and rural schools. Teach results indicate that there is a statistically significant difference between urban and rural teachers in creating a supportive learning environment, whereas there is no statistically significant difference between teachers in urban vs. rural schools for setting positive behavioral expectations. **(Figure 8)**. It should be noted that the study does not allow for statistical significance testing across grades in terms of Teach Primary scores, because there is not sufficient data in each grade represented in the study.

Figure 8: Classroom Culture – Heterogeneity Analysis

Classroom culture by urban/rural school
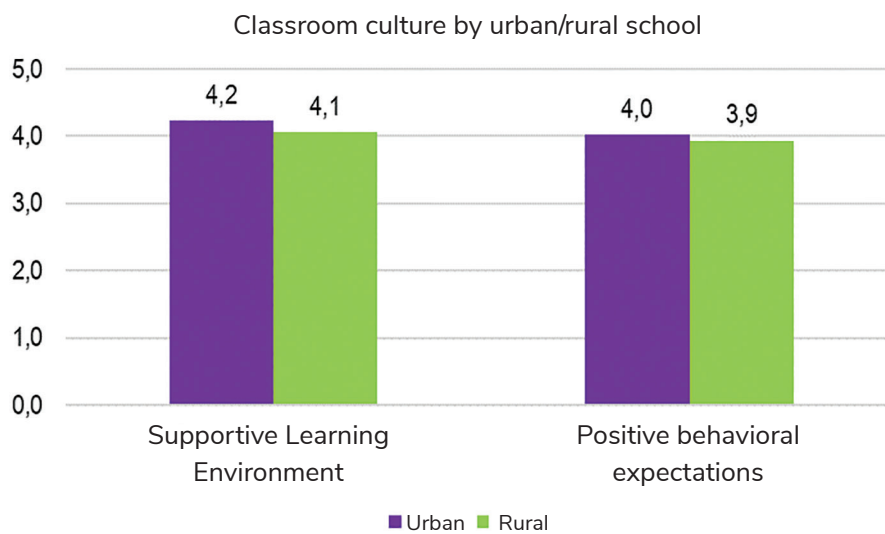
Source: Teach Primary BiH Database, 2022.

Area 2: Instruction Results

In the Teach tool, the second metric under Quality of Teaching Practices is Instruction. This area measures whether the teacher instructs in a manner that deepens student understanding and encourages critical thinking and analysis. The focus here is not on content-specific methods of instruction, but rather the extent to which the teacher: (i) **facilitates the lesson** to promote comprehension by explicitly articulating lesson objectives that are aligned to the learning activity, explains the content using multiple forms of representation, and connecting the learning activity to other content knowledge or students' experiences, and by modeling the learning activity through enacting or thinking aloud; (ii) does not simply move from one topic to the next but **checks for understanding** by using questions, prompts, or other strategies to determine students' level of understanding, by monitoring students during group and independent work, and by adjusting his/her teaching to the level of students; (iii) gives **feedback** by providing specific comments or prompts to help clarify students' misunderstandings or identify their successes; and (iv) encourages students to **think critically** by asking open-ended questions and providing students with thinking tasks that require them to actively analyze content. Students exhibit critical thinking ability by asking open-ended questions or performing thinking tasks.

Overall, teachers in the selected cantons of BiH are somewhat effective in Instruction. On average, they score 3.5 points out of the 5 points possible in this element. They were highly effective at lesson facilitation and somewhat effective at checking for understanding but were less effective in providing feedback and providing activities aimed at critical thinking skills in their classrooms **(See Figure 5)**.

Lesson Facilitation. Overall, teachers in this study are mostly effective in lesson facilitation during their lesson. On average, teachers score 4.25 points out of the 5 points possible in this element, with 80% of teachers scoring above 4 in this area. However, about 20% of teachers score 3 or below in lesson facilitation which highlights the need for continued support and strengthening in this area. **(Figure 2) Figure 9** shows the distribution of teachers' scores for the lesson facilitation element and the respective behaviors. A high share of teachers use lesson facilitation practices effectively during instruction – 80% of teachers state specific objectives for their classes, 77% of teachers use multiple forms of representation to explain lesson content. This included speech, text, various objects (e.g. figures of animals, examples of plants, geographical map, globe) and pictures placed on the board (e.g. pictures of food, deciduous and evergreen trees, domestic and wild animals, pictures of seasons). In some classes, especially language classes, students listened to music via the radio or YouTube videos to help with the lesson objective. In addition, 77% of teachers use modeling or think aloud strategies in their classrooms. Finally, around 77% of teachers at least superficially connect their lessons to their students' lives or other content knowledge.

Figure 9: Lesson Facilitation
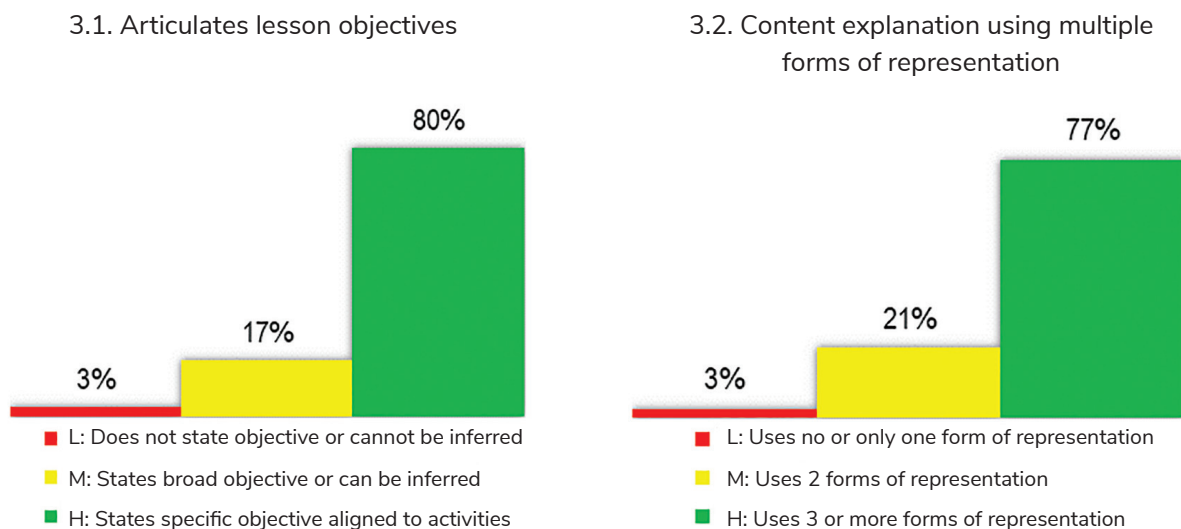
3.3. Connects lesson

3.4. Models by enacting or thinking aloud

3.3. Connects lesson

- 23% — L: Does not connect
- 22% — M: Superficially or unclear connects
- 55% — H: Meaningfully connects

3.4. Models by enacting or thinking aloud

- 8% — L: Does not model
- 15% — M: Partially models
- 77% — H: Completely models

% Proportions of Teachers

- 1: 0%
- 2: 1%
- 3: 19%
- 4: 32%
- 5: 48%

Distribution of Scores
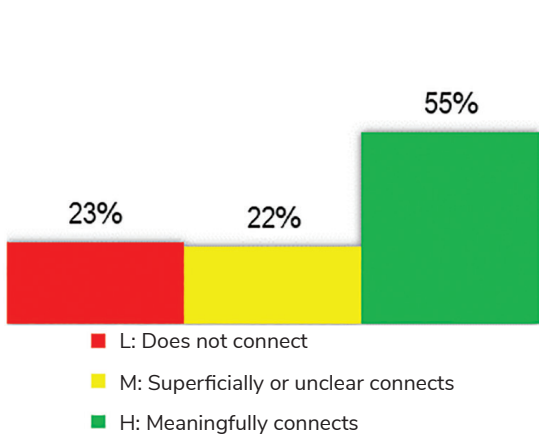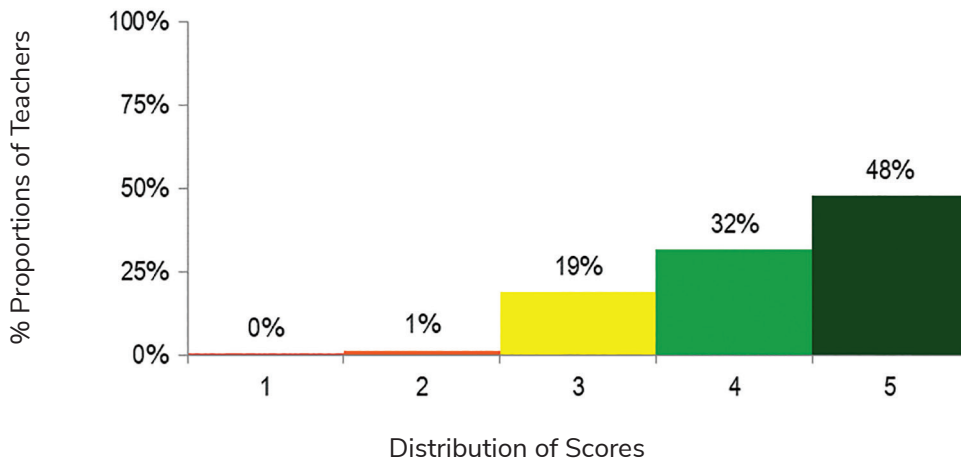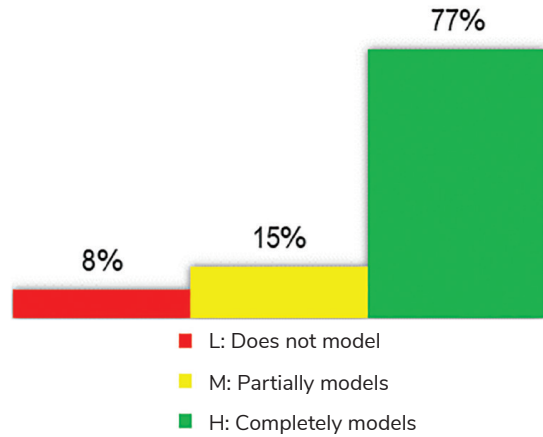
Source: Teach Primary BiH Database, 2022.

Table 4: Examples of Lesson Facilitation behavior scores

Score	1	2	3	4	5
Behavior quality range	Low		Moderate		High	
3.1 **The teacher explicitly articulates the objectives of the lesson and relates classroom activities to the objectives**	The teacher does not state the lesson objective(s), nor can one be inferred from the lesson activities. For example: The teacher asks students to take turns reading a text about planting and harvesting crops. S/he then spends the rest of the lesson discussing farming and the specific processes involved. The teacher does not state a lesson objective, and it is difficult to infer a lesson objective from the activities as the objective could be developing oral reading fluency, developing vocabulary, or learning about agriculture.	The teacher either explicitly states a broad lesson objective OR the objective is not explicitly stated, but can be inferred from the lesson activities. For example: The teacher says, "Today we're going to learn about multiplication," without further specification. Alternatively, the lesson activities may clearly work toward how to divide whole numbers, but this is not explicitly articulated by the teacher.		The teacher explicitly states a specific lesson objective (i.e. a learning goal) and the lesson activities align to the stated objective. For example: Near the beginning of class the teacher states, "Today we're going to learn to multiply fractions." Each lesson activity is clearly related to the objective of multiplying fractions.	

3.2 The teacher explains content using multiple forms of representation	The teacher explains content using one form of representation OR content is simply not explained. *For example: The teacher states, "A fraction is a combination of a numerator and denominator," without providing any written or other visual representation of a fraction during the lesson segment.* Alternatively, the teacher may not provide any explanation of content, uses too many technical terms without explaining what s/he means, and/or may explain ideas without a logical order or connection. Moreover, the teacher may say, "A fraction is a combination of a numerator and denominator," without defining those terms. Alternatively, the teacher may not provide any explanation of content.	The teacher explains content using two forms of representation. *For example: : The teacher states, "A fraction is a combination of a numerator and denominator," and writes an example of a fraction on the board. In a language arts lesson, the teacher states that a verb is an action word and writes a sentence which contains a verb which is underlined on the board.*	The teacher explains content using three or more forms of representation. *For example: : The teacher states, "A fraction is a combination of a numerator and denominator," and writes the example of ¼ on the board. Later in the lesson, the teacher uses a visual aide as part of his/her explanation of content by folding a piece of paper into quarters and coloring in one square. In a language arts lesson, the teacher states that a verb is an action word and writes a sentence which contains a verb which is underlined on the board. The teacher then mimes a series of actions and asks students to identify these examples of verbs.*
3.3 The teacher makes connections in the lesson that relate to other content knowledge or students' daily lives	The teacher does not connect what is being taught to other content knowledge or students' daily lives. The teacher may use examples that may be related to other content or students' lives, but the teacher does not attempt to connect it to the learning activity. *For example: During a lesson on fractions the teacher uses a picture of a cake and divides it into fourths, but does not make a connection to students' experience with slicing cake.* Alternatively, the teacher says, "Remember, yesterday we learned about whole numbers? Today, we are going to learn how to add fractions."	The teacher may attempt to connect the lesson to other content knowledge or students' daily lives, but the connections are superficial, confusing, or unclear. *For example: When introducing a lesson on fractions, the teacher says, "When we cut a cake, we use fractions" and go on to explain fractions. The connection to students' lives is superficial and nonspecific. Alternatively, the teacher says, "Remember yesterday we learned the rules for adding whole numbers? Now we are going to use those rules and apply them to adding fractions." However, when explaining how to add fractions, the teacher does not link the rules back to the rules for adding whole numbers.*	The teacher meaningfully connects the lesson to other content knowledge or students' daily lives. *For example: When teaching a class on fractions, the teacher relates the content to students' experiences by asking, "Who has had to slice a birthday cake? How did you make sure there were enough slices for everyone? Learning about fractions can help us divide a cake between people." The teacher also connects the lesson to a prior lesson on halves by saying, "Remember yesterday when we learned about halves? We learned that when we cut a cake in half, we can share it equally between 2 people. Today we will learn how to divide the cake into fourths, so 4 people can share the cake. When we were forming halves we made sure we had 2 halves of identical size. The same thing is true when we are forming fourths: we have to make sure to keep slices of the same size." The connection between the current lesson and other content knowledge and/or students' daily lives is clear.*

3.4 **The teacher models by enacting or thinking aloud**[6]	The teacher does not model. *For example: The teacher spends the entire class reading a passage and asking students questions about the text but does not present any procedure. In a math class, the teacher simply gives students problems to complete on their own and does not demonstrate a procedure to solve the problems.*	The teacher partially models the learning activity. *For example: In an English class where the objective of the activity is to write a paragraph, the teacher only demonstrates how to write a topic sentence. In a math class, the teacher shows (enacts) how to draw a bar graph, but does not clarify how s/he extracted the data from the text to create the bar graph.*	The teacher completely models the learning activity by enacting all parts of the procedure <u>OR</u> by enacting the procedure <u>AND</u> thinking aloud. *For example: The teacher demonstrates different ways to solve a math problem (enactment of a procedure) and while doing so, s/he says what s/he is thinking at each step of the equation (think aloud). Or if students are calculating the area of their desk, the teacher demonstrates each step in the process (full enactment of a procedure) through the use of pictures, and/or physical objects, or other materials that might be locally available. While doing so, the teacher says what s/he is thinking at each step of the process.*
6 Modeling can take place at any time in the lesson (including at the end). If the learning activity is procedural in nature, modeling will include an enactment of the procedure for children to observe; however, if the activity focuses on developing a thinking skill, a complete model will include a think aloud. An action is considered modeling so long as the teacher demonstrates/enacts procedures or thinking processes related to the learning activity.			
Source: Teach Primary: Observer Manual.			

Check for Understanding. Overall, teachers in this study are mostly effective in using checks for understanding during their lesson instruction. On average, teachers score 3.85 points out of the 5 points possible in this element **(Figure 5). Figure 10** shows the distribution of teacher's scores for the checks for understanding element and its respective behaviors. Teachers in the selected cantons of BiH displayed moderate level of practices in checking for understanding. 65% of teachers are seen to be asking questions, using prompts or worksheets to get information on student understanding.

However 68%[11] were observed to be monitoring their students which includes teacher actions such as walking over to the students desks, asking questions, clarifying student answers etc. About 75% of teachers make some form of adjustments during their lessons based on student understanding. This could include additional explanations, reteaching a concept, or brief prompts during the lesson.

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11 51% of 75% taking into consideration the N/A category.

Figure 10: Checks for Understanding

4.1. Uses questions and prompts

65%
30%
6%

- L: Does not ask questions
- M: Asks effectively only a few students
- H: Asks effectively of most students

4.2. Monitors during independent/group work

51%
25%
17%
7%

- L: Does not monitor students
- M: Monitors some students
- H: Systematically monitors most students
- N/A

4.3. Adjust teaching

49%
25%   25%

- L: Does not adjust
- M: Adjusts, but briefly and superficially
- H: Substantially adjusts

100%
75%
50%
25%
0%

2%   6%   31%   27%   34%

% Proportions of Teachers

1   2   3   4   5

Distribution of Scores

Source: Teach Primary BiH Database, 2022.

Table 5: Examples of Checks for Understanding behavior scores

Score	1		2	3	4	5
Behavior quality range	**Low**		**Moderate**		**High**	
4.1 The teacher uses questions, prompts, or other strategies to determine students' level of understanding	The teacher either does not ask questions/prompt students at all <u>OR</u> when s/he does, the class responds in synchrony, which is accepted without further clarifying for understanding. *For example: When explaining a concept, the teacher asks, "Have you all understood?" The students in the class respond in unison, "Yes, we have." Another example is that the teacher inquires, "This is correct, right?" after completing a problem set. The class or an individual student replies, "Yes, this is correct."*		The teacher uses questions, prompts, or other strategies that are effective at determining only a few students' level of understanding. *For example: The teacher asks, "What is 7+8?" Only a few students respond by raising their hand, a group from which the teacher calls upon 1 or 2 students to provide an answer. Alternatively, the teacher asks the question but does not ask students to raise their hands in response and simply allows students to willingly volunteer their answers.*		The teacher uses questions, prompts, or other strategies that are effective at determining most students' level of understanding. *For example: The teacher says, "Please put your thumb up if you agree or down if you disagree with this statement: Equilateral triangles have equal angles." The teacher also asks students to demonstrate their knowledge by having all students share their answers, e.g., by asking each student to read out the sentence s/he wrote using past tense verbs.*	
4.2 The teacher monitors most students during independent/group work[7]	The teacher does not monitor students when they are working independently or in groups. *For example: The teacher sits at his/ her desk or remains standing in front of the class when students are working.*		The teacher monitors some students when they are working independently or in groups to check their understanding. *For example: The teacher observes some student work for accuracy, clarifies concepts, or asks questions.*		The teacher systematically monitors most students by circulating the classroom and approaching individual students or groups to check their understanding. *For example: When students are working, the teacher walks around the classroom, making sure to approach students or groups in a systematic way. The teacher observes most students' work, clarifies concepts, and asks questions.*	
4.3 The teacher adjusts teaching to the level of students	The teacher does not adjust teaching for students.[8] *For example: The teacher may notice that many students are getting the wrong answer but does not re-explain the concept or provide additional opportunities to learn.*		The teacher slightly adjusts teaching, but this adjustment is brief and superficial. *For example: As students complete an alphabet worksheet, the teacher notices they are not dotting their 'i's. In response, s/he briefly reminds the class to dot their 'i's. Or, when solving the multiplication problem 7 x 3, a student confuses the process with addition and answers '10' on their worksheet. In response, s/he reminds the student that they are doing multiplication and not addition equations.*		The teacher substantially adjusts teaching for students. When students have misconceptions, the teacher may initiate back and forth exchanges to help them understand all points of misunderstanding, which provides students with more opportunities to learn. The teacher may also provide more challenging tasks for those who already have an advanced understanding. *For example: As students complete an alphabet worksheet, the teacher notices they are not dotting their 'i's. In response, s/he briefly stops the activity and reviews the differences between capital and lower case 'i's before continuing with the alphabet activity. Alternatively, if the teacher notices that a student has already completed the worksheet, s/he may give that student another activity to complete while waiting for the rest of the class.*	

7 This behavior is scored as N/A if there is no observable group or independent work.
8 Even if there is no perceived need for adjusting, if the teacher does not adjust teaching, this behavior is scored as low.

Source: Teach Primary: Observer Manual.

Feedback. Overall, teachers in this study are somewhat effective in providing feedback to students during their lesson instruction. On average, teachers score 3.06 points out of the 5 points possible in this element **(Figure 5). Figure 11** shows the distribution of teacher's scores for the feedback element and its respective behaviors. Only around 44% of teachers provide students with specific and substantive comments to address misunderstandings, leaving 56% of teachers providing superficial or no comments at all to aid students. An example of superficial comments is when in an English class, a student makes a mistake when asked to provide an example of regular and irregular verbs. The student responds saying that the verb Play is irregular. The teacher tells the student that the answer is incorrect and that "play" is a regular verb. However, the teacher does not further explain the difference between regular and irregular verbs. Similarly, 79% of teachers provide only superficial[12] or in some cases no comments at all to aid students with identifying successes.

Figure 11: Feedback

5.1. Provides comments to clarify misunderstandings

- ■ L: Does not provide comments or comments are simple
- ■ M: Provides general or superficial comments
- ■ H: Provides specific and substantive comments

5.2. Provides comments to identify successes

- ■ L: Does not provide comments or comments are simple
- ■ M: Provides general or superficial comments
- ■ H: Provides specific and substantive comments
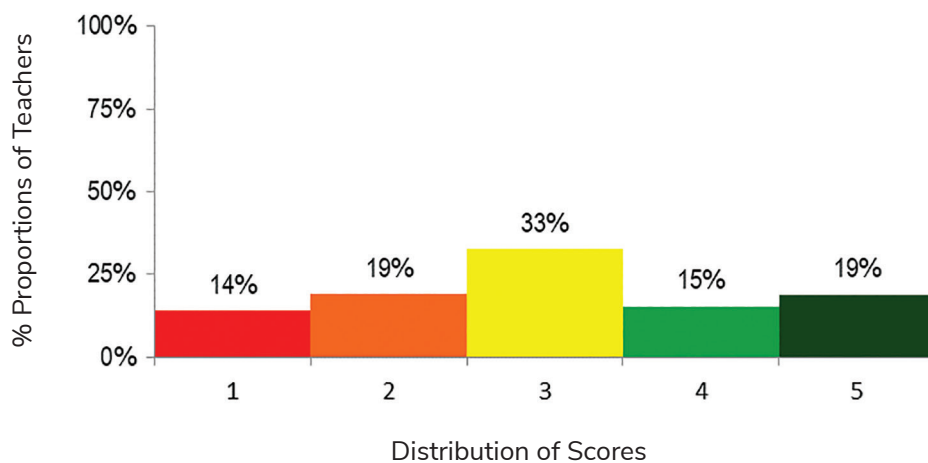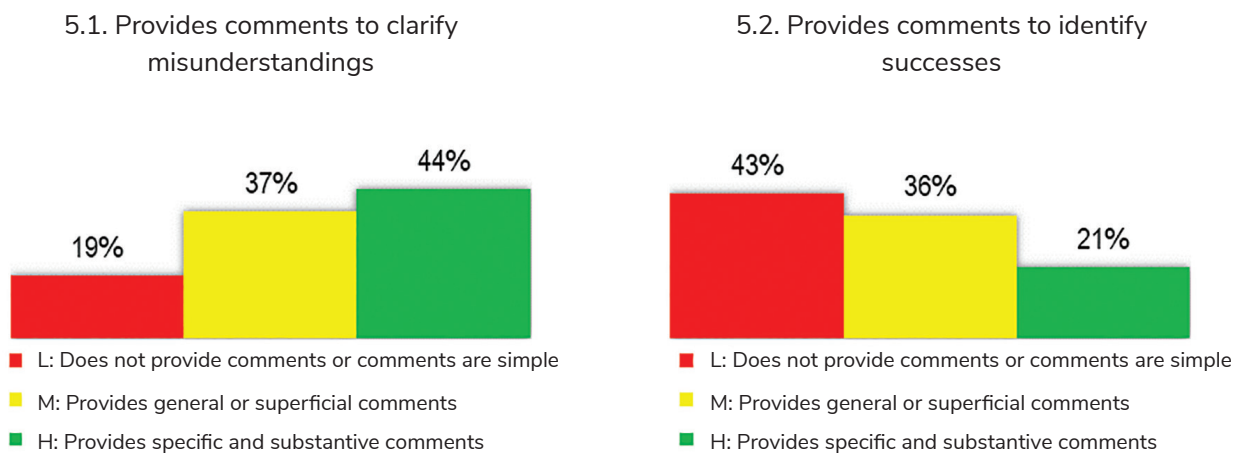
Source: Teach Primary BiH Database, 2022.

12 An example of this is when a student is assigned to write a story based on a given set of pictures, and the teacher responds saying "the story looks wonderful, keep it up." This type of comment is superficial in nature because it does not provide the student with an understanding of what she has done specifically to meet or exceed expectations.
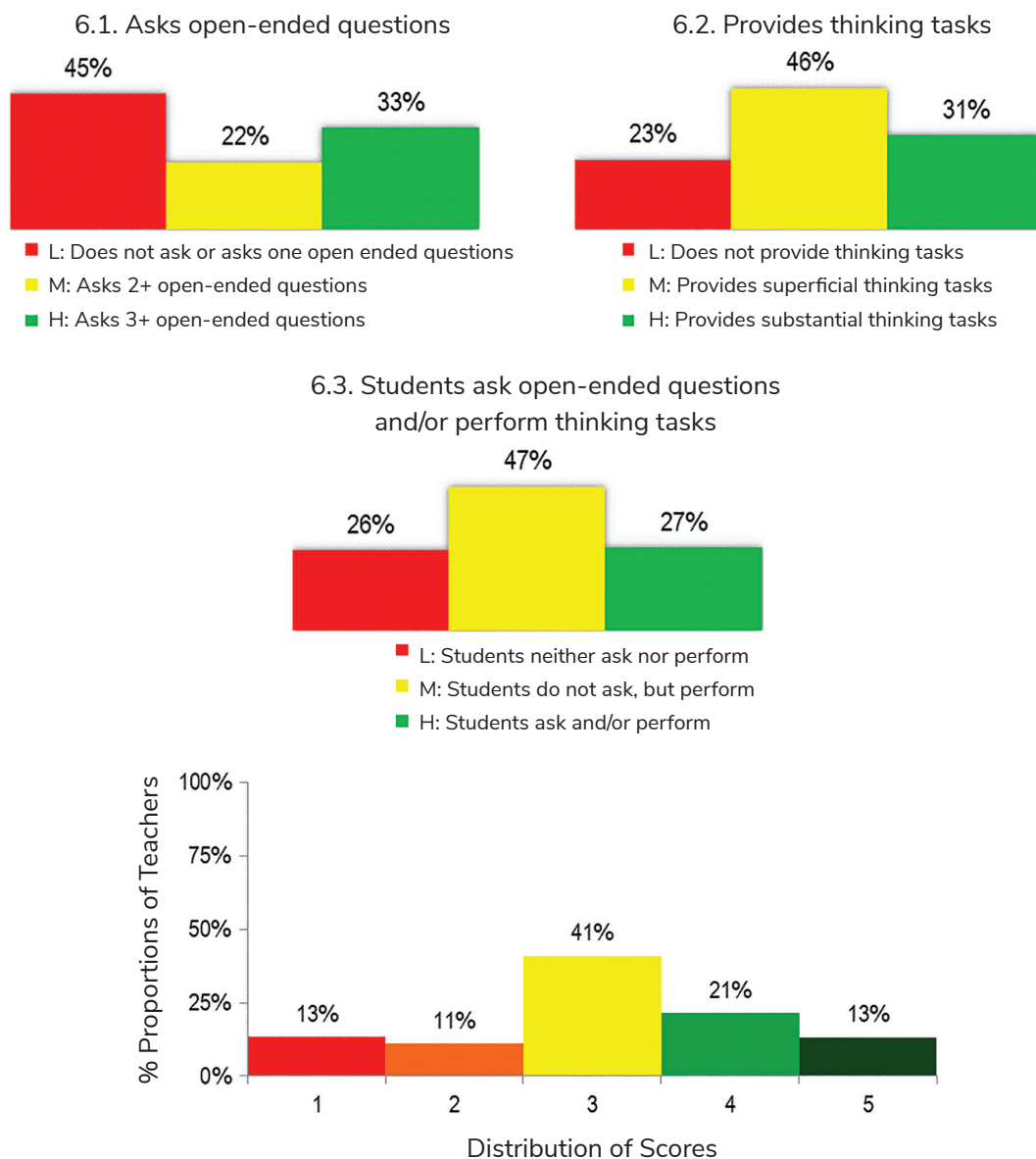
Table 6: Examples of Feedback behavior scores

Score	1	2	3	4	5
Behavior quality range	Low	Moderate		High	
5.1 **The teacher provides specific comments or prompts that help clarify students' misunderstandings**	The teacher either does not provide students with comments/prompts about their misunderstandings <u>OR</u> the comments provided are simple, evaluative statements (e.g., "That is incorrect"). *For example: When a student answers a teacher's question incorrectly, the teacher responds by saying, "That is not the correct answer," and moves on.*	The teacher provides students with general or superficial comments/prompts about their misunderstandings. *For example: In a math class, the teacher says, "You forgot to include the negative sign," without providing further information or prompts.*		The teacher provides students with specific comments/prompts that contain substantive information that helps clarify students' misunderstandings. *For example, the teacher says, "Do you remember what happens when we multiply a positive and a negative number? Let's look at your notes. Now, let's look at your answer. What do you need to change to find the correct answer?"*	
5.2 **The teacher provides specific comments or prompts that help identify students' successes**	The teacher either does not provide students with comments/ prompts about their successes <u>OR</u> the comments provided are simple, evaluative statements (e.g., "That is correct"). *For example: When a student answers a teacher's question incorrectly, the teacher responds by saying, "That is correct," and moves on.*	The teacher provides students with general or superficial comments/prompts about their successes. *For example: If students are writing stories as part of an assignment, the teacher says, "Good job on the third paragraph," without specifying what that particular student did that made it good.*		The teacher provides students with specific comments/prompts that contain substantive information that helps identify students' successes. *For example: If students are writing stories, the teacher says, "You do a good job getting the reader interested in this paragraph when you write 'no one knew what would happen.' This sentence makes me want to read more." Alternatively, the teacher highlights one student's work and say to the class, "Look at the work of this classmate, see how s/ he used the number line to solve this subtraction problem?," and then proceed to explain how the student solved it.*	
9 Prompts are pieces of information, such as guiding hints or questions, which are given by the teacher and encourage students to think through misunderstandings or identify successes.					
Source: Teach Primary: Observer Manual.					

Critical Thinking. On average, teachers score 3.1 points out of the 5 points possible in this element **(Figure 5). Figure 12** shows the distribution of teacher's scores for the critical thinking element and its respective behaviors. The distribution of scores shows that only about one-third (34%) of teachers in the study are highly effective at promoting critical thinking during their instruction with a score of 4 or 5.

While teachers sometimes ask two or more thinking or open-ended questions (22%), they do not build upon student responses nor ask three or more questions as often (33%). Teachers provide superficial thinking tasks (46%), like comparing and contrasting content. An example of this was when a teacher assigned simple thinking tasks, e.g. students are asked to identify the characteristics of deciduous and coniferous forests, to state what is living and what is non-living nature, to state the characteristics of different seasons. 46% of teachers were engaging students with superficial thinking tasks such as the stated example rather than tasks that require students to analyze content at a higher level (31%). This trend is reflected in students as well, as half of students neither do not ask thinking task questions (47%) and 26% do not ask open ended questions or perform thinking tasks.

Figure 12: Critical Thinking

6.1. Asks open-ended questions

45%   22%   33%

- L: Does not ask or asks one open ended questions
- M: Asks 2+ open-ended questions
- H: Asks 3+ open-ended questions

6.2. Provides thinking tasks

23%   46%   31%

- L: Does not provide thinking tasks
- M: Provides superficial thinking tasks
- H: Provides substantial thinking tasks

6.3. Students ask open-ended questions and/or perform thinking tasks

26%   47%   27%

- L: Students neither ask nor perform
- M: Students do not ask, but perform
- H: Students ask and/or perform

% Proportions of Teachers

Distribution of Scores	1	2	3	4	5
	13%	11%	41%	21%	13%

Source: Teach Primary BiH Database, 2022.

Table 7: Examples of Critical Thinking behavior scores

Score	1	2	3	4	5
Behavior quality range	Low	Moderate		High	
6.1 **The teacher asks open-ended questions** that require reasoning, explanation, or generalization or have more than 1 correct answer	The teacher does not ask open-ended questions <u>OR</u> asks only 1 open-ended question. The teacher may ask closed-ended questions that have a predetermined answer. *For example: The teacher asks, "Who is the main character in this story?" or "Which is greater, -2 or -6?"*	The teacher asks students at least 2 open-ended questions but does not build on student responses, <u>OR</u> the teacher asks 2 open-ended questions and 1 of them is a follow-up to a student response. *For example: The teacher asks, "Why was the character unhappy? What makes you think that?" OR "Why is -2 greater than -6?" And then asks, "How do you use the number line to determine if -8 or -4 is greater?"*		The teacher asks students 3 or more open-ended questions <u>AND</u> at least 1 of them builds upon student responses by asking students to justify their reasoning, further explain, or clarify their ideas. *For example: The teacher asks, "How do you think the main characters in the story would prepare for the competition?" After a student responds, the teacher then follows up by asking, "What facts or ideas make you think that?" Then s/he asks another student, "What do you think happens next?" In a math class, the teacher asks, "How do you know -2 is greater than -6?" After the student responds, the teacher follows up by asking, "What would happen if the numbers were positive?" Later in the lesson, the teacher asks, "How do you use the number line to determine if –8 or –4 is greater?"*	
6.2 **The teacher provides thinking tasks** that require students to actively analyze content, as opposed to simply receiving information or building fluency (i.e., rote learning)	The teacher does not provide thinking tasks. Classrooms with no thinking tasks include those where students simply listen to the teacher or perform rote tasks.	The teacher provides superficial thinking tasks. Superficial thinking tasks are tasks such as matching sets of items, identifying concepts or key pieces of information, and comparing and contrasting characteristics. They also include applying learned information or techniques to tasks similar to those the teacher has already demonstrated.		The teacher provides substantial thinking tasks. Substantial thinking tasks are tasks such as making predictions, identifying patterns, explaining thinking, making connections, and interpreting information. They also include applying learned information or techniques to new tasks the teacher has not demonstrated.	
6.3 **The students ask open-ended questions or perform thinking tasks**	Students do not ask open-ended questions nor do they perform thinking tasks.	Students do not ask open-ended questions; however, they do perform superficial thinking tasks.		Students ask open-ended questions. *For example, after working on subtraction problems, a student asks, "Why does 6 – 9 equal a negative number?" Alternatively, they perform substantial thinking tasks.*	
Source: Teach Primary: Observer Manual.					

Instruction: Heterogeneity Analysis

Figure 13 shows the average scores across the four elements that constitute Instruction. This information is broken down into two subcategories: urban/rural. For lesson facilitation, there is a statistically significant difference between practices of urban and rural teachers, with rural teachers demonstrating slightly higher-level practices on average. The opposite is the case with Feedback, where urban teachers demonstrate higher level practices.

Figure 13: Instruction – Heterogeneity Analysis

Instruction by Urban/Rural
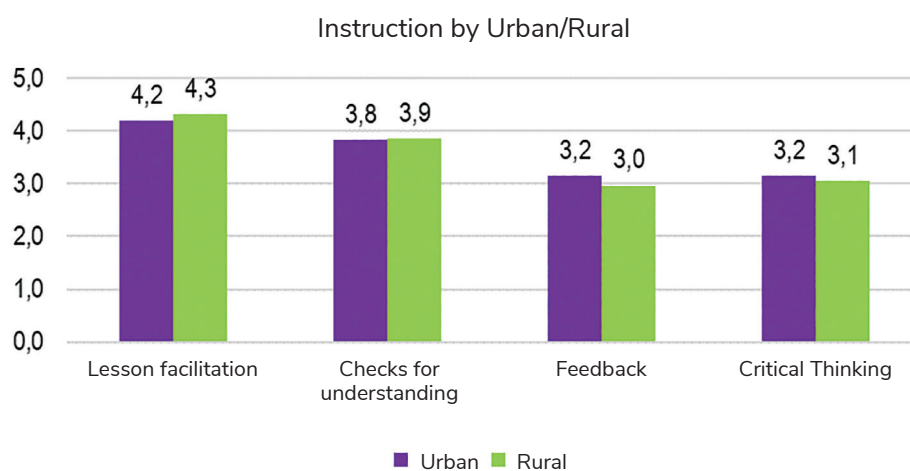
Source: Teach Primary BiH Database, 2022.

Area 3: Socioemotional Skills Results

Socioemotional Skills measures whether the teacher fosters the social and emotional skills that encourage students to succeed both inside and outside the classroom. To develop these skills, the teacher (i) instills **autonomy** by providing students with opportunities to make choices and take on meaningful roles in the classroom. Students exhibit their autonomy by volunteering to participate in classroom activities; (ii) promotes **perseverance** by acknowledging students' efforts, rather than focusing solely on their intelligence or natural abilities, by having a positive attitude toward students' challenges by framing failure and frustrations as part of the learning process, and by encouraging students to set short- and long-term goals; and (iii) fosters **social and collaborative skills** by encouraging collaboration through peer interaction and by promoting interpersonal skills, such as perspective taking, empathizing, emotion regulation, and social problem solving. Students exhibit social and collaborative skills by collaborating with one another through peer interaction.

Overall, teachers in the selected cantons of BiH do not commonly use practices that promote students' socioemotional Skills. On average, they score 2.7 points out of the 5 points possible in this element **(Figure 5)**. Within this area, practices for promoting student autonomy are more common as about 33% of teachers are highly effective in fostering autonomy (scoring 4 or 5) **(Figure 2)**. However, only about 20% of teachers are highly effective in fostering perseverance and social and collaborative skills **(Figure 2)**.

Autonomy. On average, teachers score 3.2 points out of the 5-points possible in this element **(Figure 5)**. **Figure 14** shows the distribution of teacher's scores for the autonomy element and its re-

spective behaviors. Student autonomy mostly reflects in a high share of classes (66%) where most students volunteered to participate and another 25% where at least a few students volunteered. However, 60% of students were not provided with choices and 58% of students were provided limited or in some cases not provided any opportunity to take on a role in the classroom.

One example of when the teacher did provide substantive choice was during an English class while the class was discussing a play, the students could choose which of the several offered plays they would act out, after which they anal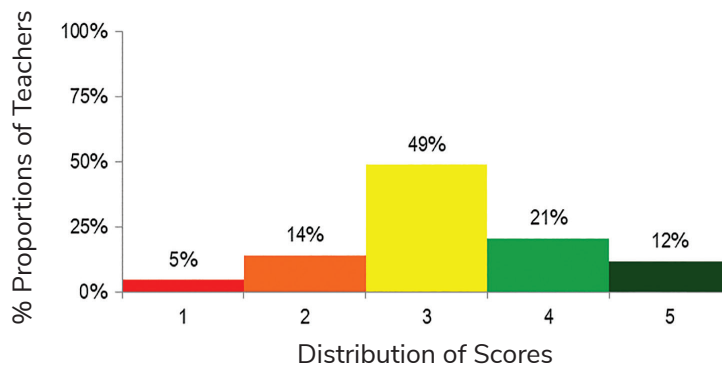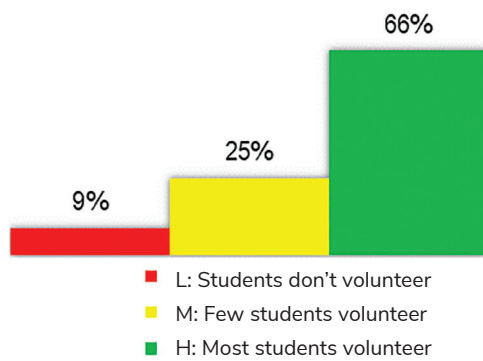yzed the point of that play. For providing students with respon-sibilites and roles, one way in which a teacher performed this behavior well was when the teacher provided students the opportunity to take on important roles in the class, for example students could read a passage from the textbook for the larger class, students did math problems on the board and explained their understanding to their peers, students present their work in front of the board about how they take care of body hygiene or hygiene of the living space.

Figure 14: Autonomy

7.1. Provides students with choices

- ■ L: Does not provide choices
- ■ M: Provides with at least one superficial choice
- ■ H: Provides with a least one substantive choice

7.2. Provides opportunities to take on roles

- ■ L: Does not provide opportunities
- ■ M: Provides opportunities to take limited roles
- ■ H: Provides opportunities to take meaningful roles

7.3. Students volunteer to participate

- ■ L: Students don't volunteer
- ■ M: Few students volunteer
- ■ H: Most students volunteer
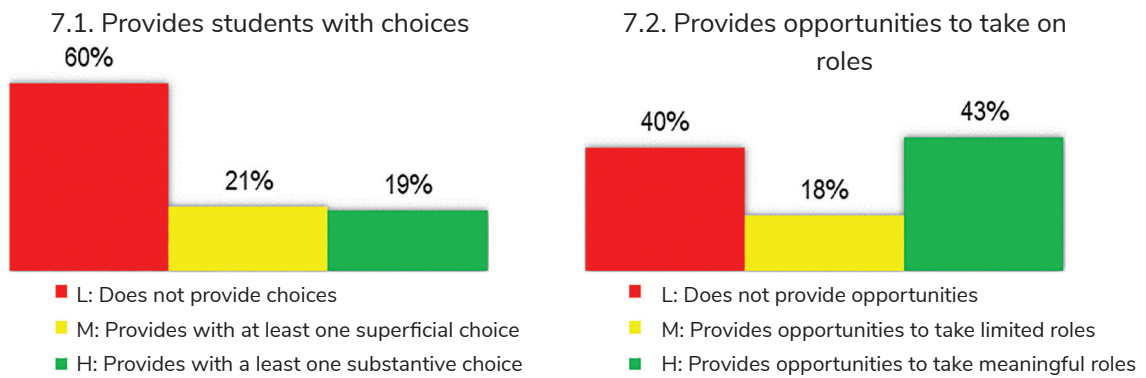
Source: Teach Primary BiH Database, 2022.

Table 8: Examples of Autonomy behavior scores

Score	1	2	3	4	5
Behavior quality range	Low		Moderate		High	
7.1 **The teacher provides students with choices**	The teacher does not explicitly provide students with choices. The teacher decides how learning activities should be completed, without providing different options for how students can approach the task. *For example: Students are asked to complete a set of math problems following a prescribed set of steps. Alternatively, the teacher tells students to write sentences without providing intentional choices.*		The teacher explicitly provides students with at least 1 superficial choice that is not related to the learning objective. *For example: The teacher allows students to choose between different colored pencils to complete an assignment, decide where to sit in the classroom when completing a task, choose the order in which to complete the activities, or vote on which student presentation was the best.*		The teacher explicitly provides students with at least 1 substantive choice that is related to the learning objective. *For example: The teacher allows students to choose between writing an essay or doing a presentation about their favorite sport. In a science class, the teacher lets students choose an animal to investigate.*	
7.2 **The teacher provides students with opportunities to take on roles in the classroom**	The teacher does not provide students with opportunities to take on roles in the classroom. *For example: The lesson is primarily lecture-based and highly structured; subsequently, students' participation is limited to copying down information. In this lesson, students never get the chance to come to the board or read a text.*		The teacher provides students with opportunities to take on limited roles in the classroom. *For example: Students take attendance, assign tasks, pass out materials, or write on the board. Limited roles also include housekeeping tasks such as fetching water, wiping the board, or cleaning the classroom.*		The teacher provides students with opportunities to take on meaningful roles in the classroom, in which they are responsible for parts of a learning activity. *For example: The teacher gives a student the opportunity to solve an equation on the board and explain to the class how s/he tackled the main challenges of the problem.*	
7.3 **The students volunteer to participate in the classroom**	Students do not volunteer to participate in the classroom.		Only a few students volunteer to participate by expressing their ideas and taking on roles. *For example: When the teacher asks a question, only a few students put their hand up to answer; later when the teacher asks another question, the same few students put their hand up.*		Most students volunteer to participate by expressing their ideas and taking on roles. *For example: When the teacher asks a question, many students put their hand up to share their answers. The students could also volunteer without the teacher asking (e.g., a student offers to share a related experience when the teacher is explaining a concept).*	
	Source: Teach Primary: Observer Manual.					

Perseverance. On average, teachers score 2.8 points out of the 5-points possible in this element **(Figure 5). Figure 15** shows the distribution of teachers' scores for the perseverance element and its respective behaviors. 41% of teachers do not acknowledge student efforts and when 32% do, most praise is focused on outcomes or student intelligence. 69% of observed teachers generally have a neutral attitude toward student challenges and only 19% explicitly display a positive attitude towards challenges. Finally, only 25% of observed teachers are seen encouraging students to set short or long term goals and only 15% do both.

For acknowledging student efforts, whle a majority of teachers are lacking this specific skill. An example of when a teacher did exhibit this behavior is when a group of students had a task to complete which included writing the characteristics of the characters from the passage they were reading. The teacher repeatedly emphasizes how the students made an excellent effort to complete and present the task and identified individual student actions that led them to complete the task well.

An example of when a teacher had a positive attitude to a challenge is seen when one student cried in a math class because she didn't know how to do the assignment. The teacher told her that it was important not to give up right away, to read the assignment again and try again. The teacher says: "It doesn't matter that you didn't do the assignment now." There is no person in this world who knows everything and manages to achieve all goals on the first try. It is important that you work continuously and you will see how you will succeed."

Figure 15: Perseverance

8.1. Acknowledges students efforts

- L: Does not acknowledge efforts
- M: Sometimes acknowledges efforts
- H: Frequently acknowledges efforts

8.2. Positive attitude toward students challenges

- L: Has a negative attitude
- M: Has a neutral attitude
- H: Has a positive attitude

8.3. Encourages goal setting

- L: Does not encourage short or long term goal-setting
- M: Encourage short or long-term goal-setting
- H: Encourage short and long-term goal-setting

Source: Teach Primary BiH Database, 2022.

Table 9: Examples of Perseverance behavior scores

Score	1	2	3	4	5
Behavior quality range	Low		Moderate		High
8.1 **The teacher acknowledges students' efforts** rather than focusing only on results, intelligence, or natural abilities	The teacher does not acknowledge student efforts. Although the teacher may praise students for "being smart" or "intelligent," the teacher does not focus on students' efforts or work. *For example: The teacher says, "Very good! You're the smartest student in the class" or "Well done! You're so smart!"*		In this classroom, the teacher sometimes acknowledges student efforts, but most praise is focused on outcomes or student intelligence. *For example: When a student does well on a test, the teacher says, "I know you put so much hard work into this!," but most times, the teacher praises students by saying they are "smart" or "intelligent."*		In this classroom, the teacher frequently acknowledges students' efforts toward mastering new skills or concepts, and identifies these efforts explicitly. *For example: When students solve a difficult problem they had been struggling with, the teacher praises and highlights the efforts they made to solve the problem. The teacher says, "You have progressed so much on our multiplication problem sets! I'm glad you asked me for help. If you keep practicing and using the strategies we learned in class, you'll master them all very soon!"*

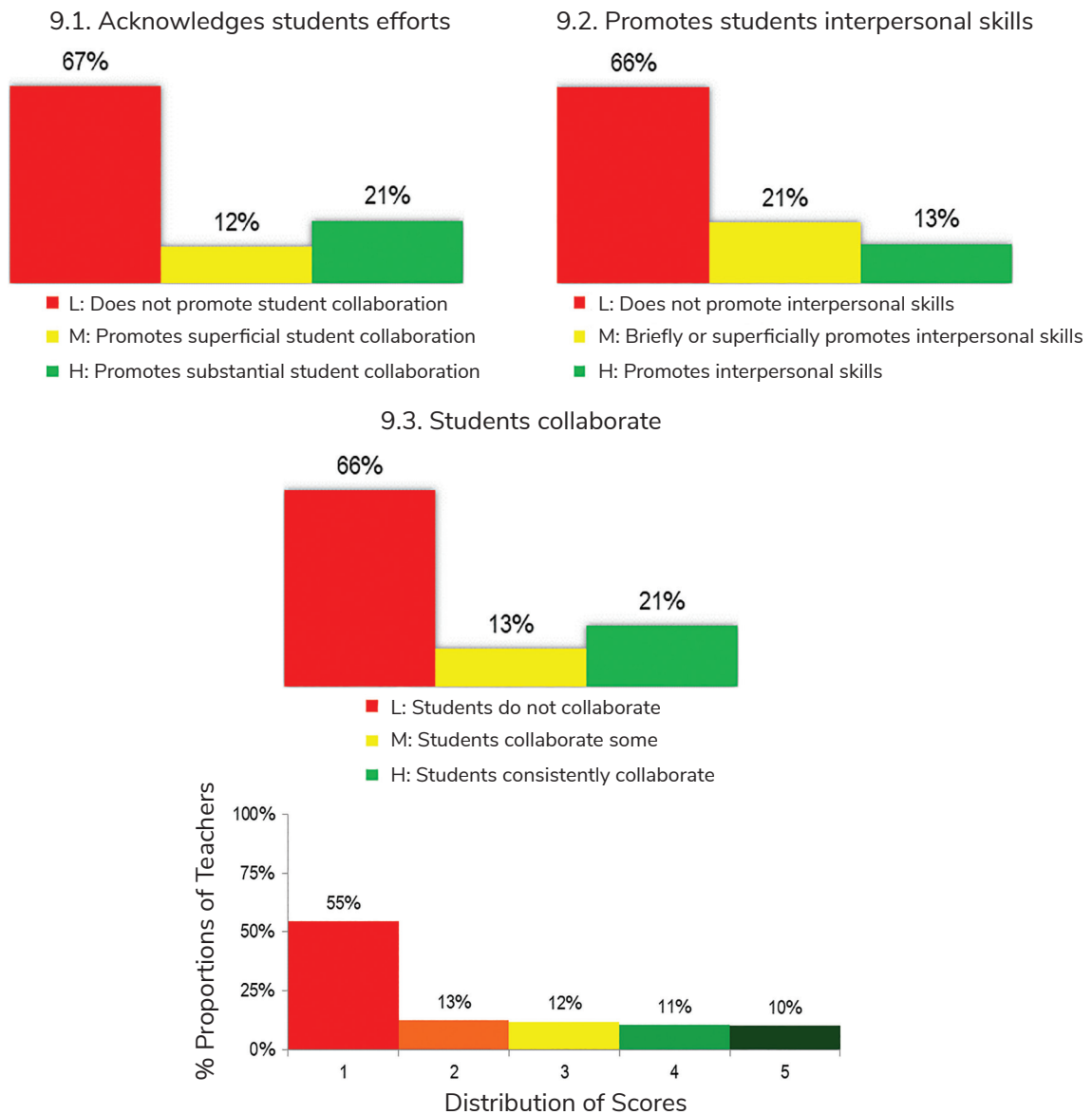|			
8.2 **The teacher has a positive attitude towards students' challenges**[10]	The teacher has a negative attitude toward students' challenges. *For example: The teacher explicitly scolds students for making mistakes or becomes impatient with a student for taking time to understand a new concept.*	The teacher has a neutral attitude toward students' challenges. Although the teacher does not penalize a student for making mistakes or struggling with a new concept, the teacher does not make it clear that failure and frustration are normal parts of the learning process either. *For example: When a student is struggling to solve a math problem on the board, the teacher simply gives the student the answer in a neutral manner (i.e., not in an angry or impatient manner).*	The teacher has a positive attitude toward students' challenges, and helps students understand that failure and frustration are normal parts of the learning process. *For example: When a student is struggling with a problem set, the teacher says, "Remember, it's okay to feel frustrated when we're trying to do something new! Let's think about how we can go about this." The teacher also encourages students to think through different resources they could turn to for help (e.g., asking a friend for advice, looking for answers in the textbook).*
8.3 **The teacher encourages goal setting**	The teacher does not encourage students to set short- or long-term goals.[11]	The teacher encourages students to set either short- OR long-term goals.[11] *For example: For short-term goal setting, the teacher says, "How many pages of the book will you read each day this week?" For long-term goal setting, the teacher says, "I want you to write down how much progress you've made on the goals we set at the beginning of the school year."* Alternatively, the teacher may talk about the importance of setting goals in a general way. *For example: The teacher says, "It's important to think about what you want to be when you grow up." In addition, the teacher highlights how characters in a story set a short- or long- term goal for themselves and how they worked toward it.*	The teacher encourages students to set short- AND long-term goals.[11] The teacher may reference both long- and short-term goals at the same time, particularly when encouraging students to set a short-term goal that would help them achieve a long-term goal. *For example: The teacher says, "Let's think about the goals we set for ourselves at the beginning of the school year. What is one thing you will do this week that will get you closer to that goal?" Alternatively, the teacher talks about the short- and long-term goals separately (as in the examples for "Medium").*

10 These challenges may include making mistakes, scoring low on a test, or feeling frustrated when trying to understand a concept.
11 Short-term goals are goals that students aim to achieve within a month or less, and long-term goals are goals that span a longer timeframe (e.g., over the school year, when they grow up).

Source: Teach Primary: Observer Manual.

Social & Collaborative Skills. On average, they score 2.1 points out of the 5-points possible in this element **(Figure 5). Figure 16** shows the distribution of teacher's scores for the social and collaborative skills element and its respective behaviors. Overall, teachers are relatively less effective at promoting social and collaborative skills while teaching. 67% of teachers do not offer opportunities for student collaboration, and 66% do not promote student interpersonal skills. Consequently, students are infrequently observed collaborating with each other in some manner (in only 34% of observations). When collaboration was highlighted, actions were superficial. For examples, students shared materials with each other but they completed their learning tasks independently.

Although in general the teachers observed for this study did not exhibit actions related to promotion of social and collaborative skills in their classrooms, there are still good examples in which teachers were observed to promote such skills. For example, to build student interpersonal skills, a teacher in a mother tongue class says "Tongue has no bones, but it breaks bones." He asks the students to interpret this. After the student says that we can hurt others a lot with words, the teacher asks if they have ever offended someone. Students then gave examples from everyday life, followed by the teacher asking what they think about how the other person felt about it.

Figure 16: Social & Collaborative Skills

9.1. Acknowledges students efforts

- L: Does not promote student collaboration
- M: Promotes superficial student collaboration
- H: Promotes substantial student collaboration

9.2. Promotes students interpersonal skills

- L: Does not promote interpersonal skills
- M: Briefly or superficially promotes interpersonal skills
- H: Promotes interpersonal skills

9.3. Students collaborate

- L: Students do not collaborate
- M: Students collaborate some
- H: Students consistently collaborate

Source:Teach Primary BiH Database, 2022.

Table 10: Examples of Social and Collaborative Skills behavior scores

| Score	1	2	3	4	5
Behavior quality range	Low		Moderate		High
9.1 **The teacher promotes students' collaboration through peer interaction**	The teacher does not promote collaboration among students. *For example: The teacher does not provide any opportunities to work in groups or pairs.*		The teacher promotes superficial student collaboration through sharing opinions, materials, or ideas. *For example: The teacher asks students to read their neighbor's work or share crayons with each other.*		The teacher promotes substantial student collaboration by asking them to work together to produce a product, solve a problem, complete a worksheet, or present a new idea. *For example: The teacher asks students to form pairs or groups to complete a task that requires collaboration, such as creating a diagram of the water cycle or coming up with skits to illustrate a set of vocabulary words. The teacher asks students to read their neighbor's work and then provide feedback on how their neighbor can improve their work.*
9.2 **The teacher promotes students' interpersonal skills,** such as perspective taking, empathizing, emotion regulation, and social problem solving[12]	The teacher does not promote students' interpersonal skills.		The teacher promotes students' interpersonal skills in a brief or superficial manner. *For example: The teacher tells students to "Help each other" during a group exercise, asks a child to "Say you're sorry" to a classmate, or encourages children to take turns during an activity. However, the teacher does not explain why these behaviors are important.*		The teacher promotes students' interpersonal skills by encouraging perspective taking, empathizing, emotion regulation, or social problem solving. *For example: The teacher asks a student, "How do you think that made him/her (classmate or character in a book) feel?" After reading a story about a character who is blind, the teacher asks students to imagine what it would be like if they couldn't see.*

9.3 **Students collaborate with one another through peer interaction**	Students do not collaborate OR when students interact with one another, they display negative behaviors. *For example: When asked to pick partners for an activity, students purposefully exclude one or more of their peers.*	Students collaborate superficially; there may also be minimal instances where students display negative behaviors (e.g., teasing, pushing, bullying); however, these behaviors are isolated and minor or playful (i.e., no student is upset) and are not a core characteristic of the classroom. *For example: Students share materials among themselves in a group, but they complete the activity independently and do not collaborate with one another on problem sets.*	Students collaborate with one another by working together to produce a product, solve a problem, complete a worksheet, or present a new idea. There are no displays of negative behavior. *For example: Students work in groups to complete a task that requires collaboration, such as creating a diagram of the water cycle or coming up with skits to illustrate a set of vocabulary words.*
12 Perspective taking: The ability to consider a situation from a different point of view. Empathizing: The ability to recognize and share another's emotions. Emotion regulation: The ability to effectively manage and respond to an emotional experience. Social problem solving: The process that an individual goes through to solve an interpersonal problem. This may involve applying aspects of perspective taking, empathizing, or emotion regulation to a social situation.			
Source: Teach Primary: Observer Manual.			

Socioemotional Skills: Heterogeneity Analysis

Figure 17 shows the average scores across the three elements that constitute Socioemotional Skills. This information is broken down into two subcategories: urban/rural
While there is no statistically significant difference between rural and urban teachers in promoting autonomy, there is a statistically signifcant difference between both in promoting perseverance and social and collaborative skills, with urban teachers scoring higher in both.

Figure 17: Socioemotional Skills – Heterogeneity Analysis

Socioemotional Skills by Urban/Rural

■ Urban ■ Real
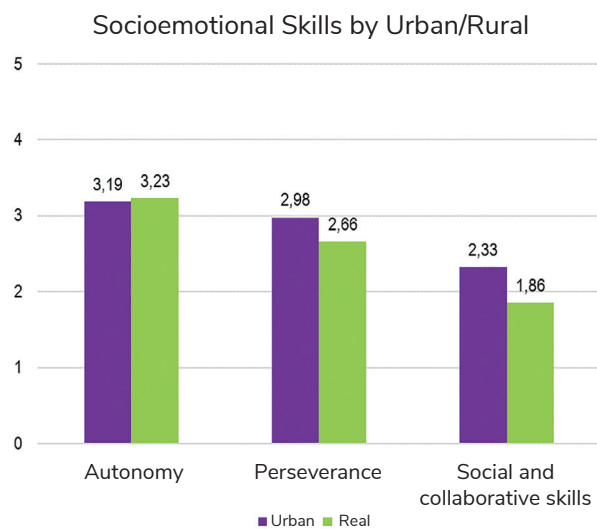
Source: Teach Primary BiH Database, 2022.

Understanding teachers' implementation of inclusive practices

In order to understand the extent to which observed teachers in BiH are implementing effective inclusive teaching practices, we undertook a focused examination of behaviors within Teach Primary that are linked to principles associated with the Universal Design for Learning (UDL) framework. The UDL, which has been internationally acknowledged as an authoritative framework of inclusive education, consists of three main principles as well as a set of guidelines and checkpoints that encourage teachers to apply resources, flexible instructional strategies and curricula design in a way that helps support the needs of diverse learners (CAST, 2018; Rao, Ok, & Bryant, 2014). These principles, which are applicable across levels of schooling, are as follows:

- **Providing multiple means of representation** (how students best learn) entails the importance of presenting information in different ways to maximize learning opportunities for all students, including students with disabilities.

- **Providing multiple means of action and expression** (how students communicate what they learn) highlights the need for teachers to provide students with alternative ways to demonstrate their learning and understanding.

- **Providing multiple means of engagement** (what motivates students to learn) recognizes that pupil motivation and engagement in learning can occur in multiple ways. As such, teachers need to use different strategies and forms of learning, such as kinesthetic, visual, or oral approaches to sustain student interest.

The methodological approach applied for this part of the study followed previous analytical techniques used by Molina et al. (2021) and involved mapping the content of the Teach Primary tool to the UDL framework. This process constituted mapping specific behaviors of Teach Primary to specific components associated with UDL principles, an exercise that was followed by a two-way validity check involving, first, the review of four experts on inclusion and, second, a subsequent review of three experts on Teach Primary (see Molina et al., 2021 for further details). **Table 11** presents the resulting mapping of Teach Primary behaviors in the UDL framework.

Table 11: UDL Principles, Sub-Principles and Teach Behaviors

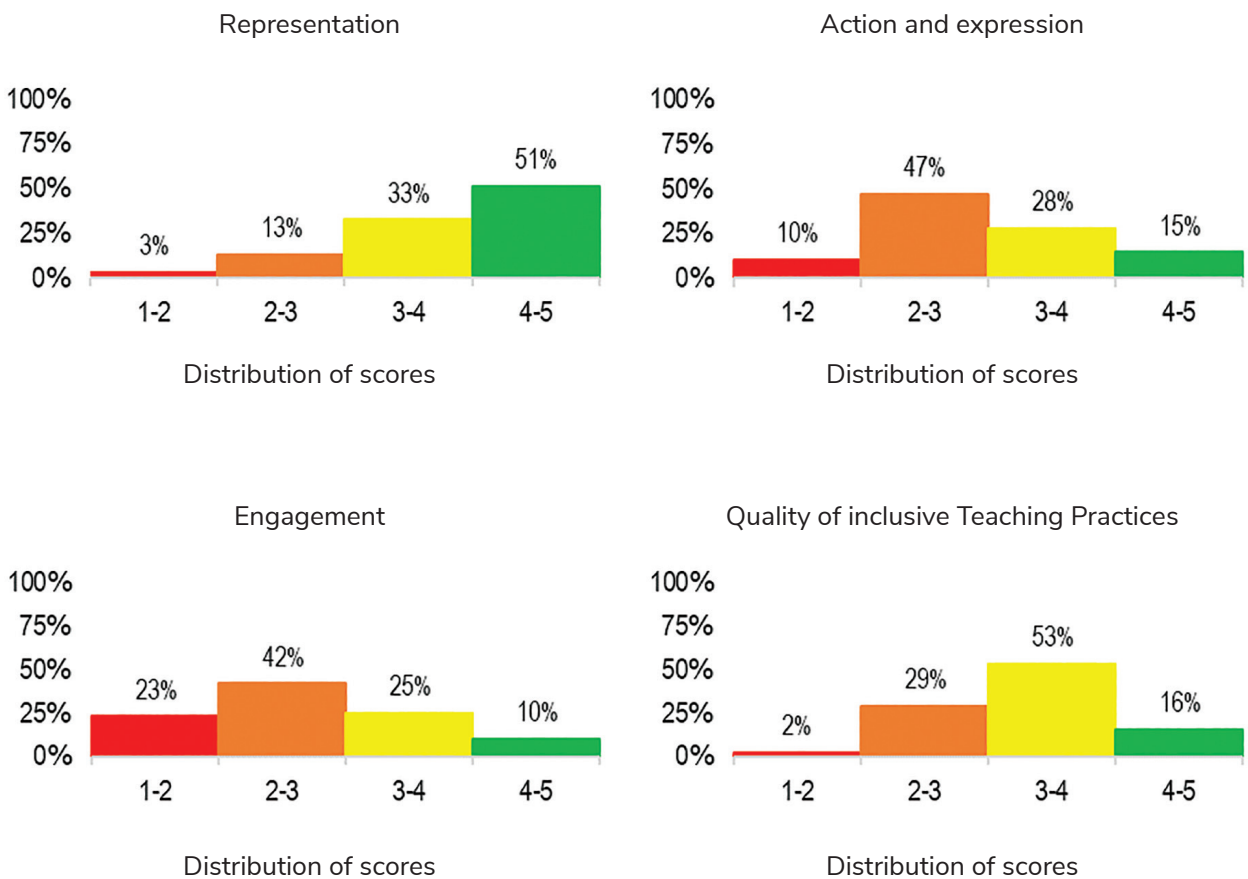| UDL Principle	UDL Sub-principle	Teach behaviors
1.Multiple means of representation	**1.1. Provide options for perception:** This includes offering ways to customize the display of information, offering alternatives for auditory and visual information.	1.3: The teacher responds to students' needs 3.1: The teacher articulates the objectives of the lesson and relates classroom activities to the objectives
	1.2 Provide options for language & symbols: This includes clarifying vocabulary and symbols, syntax and structure, supporting decoding of text, mathematical notation, and symbols, promoting understanding across languages, and illustrating through multiple media.	3.2: The teacher explains content using multiple forms of representation 4.3: The teacher adjusts teaching to the level of the student
	1.3 Provide options for comprehension: This includes activating or suppling background knowledge, highlighting patterns, critical features, big ideas, and relationships, guiding information processing and visualization, and maximizing transfer and generalization.	3.3: The teacher makes connections in the lesson that relate to other content knowledge or students' daily lives
2.Multiple means of action & expression	**2.1 Provide options for physical action:** This includes varying the methods for response and navigation, and optimizing access to tools and assistive technology.	8.2: The teacher has a positive attitude towards students' challenges
	2.2 Provide options for expression & communication: This includes using multiple media for communication, using multiple tools for construction and composition, and building fluencies with graduates levels of support for practice and performance.	3.4: The teacher models by enacting or thinking aloud 7.1: The teacher provides students with choices
	2.3 Provide options for executive functions: This includes guiding appropriate goal-setting, supporting planning and strategy development, facilitating managing information and resources, and enhancing capacity for monitoring progress.	5.1: The teacher provides specific comments or prompts that help clarify student misunderstandings 5.2: The teacher provides specific comments or prompts that help identify student successes 8.3: The teacher encourages goal setting
3.Multiple means of engagement	**3.1 Provide options for recruiting interest:** This includes optimizing individual choice and autonomy, optimizing relevance, value, and authenticity, and minimizing threats and distractions.	2. 1: The teacher sets clear behavioral expectations 2.2: The teacher acknowledges positive student behavior
	3.2 Provide options for sustaining effort & persistence: This includes heightening salience of goals and objectives, varying demands and resources to optimize challenge, fostering collaboration and community, and increasing mastery-oriented feedback.	8.1: The teacher acknowledges students' efforts 9.1: The teacher promotes students' collaboration through peer interaction 9.2: The teacher promotes students' interpersonal skills 9.3: Students collaborate with one another through peer interaction
	3.3 Provide options for self-regulation: This includes promoting expectations and beliefs that optimize motivation, facilitating personal coping skills and strategies, and developing self-assessment and reflection.	No behavior in Teach

Analytical approach

The team used the mapping described above to compute the Quality of Inclusive Teaching Practices score and derived descriptive statistics on the overall score, areas, and elements described in **Table 11**.

Results: Inclusive teaching practices

Figure 18 presents the distributions of the overall Quality of Inclusive Teaching Practices score as well as scores for each UDL principle. This figure shows that just over two-thirds of all teachers that were observed (69%) demonstrate high-quality inclusive teaching practices, which is defined here as scores above 3.

Figure 18: Descriptive Statistics for UDL Principles and Overall Quality of Inclusive Teaching Practices Scores

Representation — Distribution of scores

Action and expression — Distribution of scores

Engagement — Distribution of scores

Quality of inclusive Teaching Practices — Distribution of scores

Conclusion and Recommendations

This report has shown that observed teachers in the five selected cantons of BiH demonstrate a wide range of pedagogical practices in their classrooms, including many which are associated with effective teaching. For example, results from TEACH Primary indicate that observed teachers demonstrate effectivenessin fostering classroom culture, with over 90% of teachers scoring above 3 out of 5 on the Teach scale. This shows that observed teachers use effective practices when it comes to creating a supportive learning environment and setting positive behavioral expectations. However, these teachers are somewhat effective at using practices linked to instruction of lesson content which includes lesson facilitation, using checks for understanding, providing feedback to students and promoting critical thinking. Among these areas, teachers demonstrate a high level of effectiveness in lesson facilitation during their observations, and moderate effectiveness at checking for understanding but were less effective in providing feedback and providing activities aimed at developing critical thinking skills in their classrooms **(Figure 5)**. Finally, when it comes to Socio-emotional skills, the most common practices were observed in relation to providing and instilling autonomy for students, whereas the least observed practices are building perseverance and social and collaborative skills. A relatively low share of observed teachers (11%) scored between 4-5 on a 5 point Teach scale in perseverance and social and collaborative skills **(Figure 2)**.

Regarding observed teachers' implementation of effective inclusive teaching practices, as determined through mapping Teach Primary behaviors to the UDL framework, this analysis has revealed that teachers, in general, could benefit from greater support in this area **(Figure 18)**. Of all principles associated with the UDL, teachers' strongest area of effectiveness is observedin using multiple means of representation to explain lesson content which relates to the provision of options for perception, language and symbols as well as comprehension in the classroom. Observed teachers were less effective, however, in providing multiple means of engagement which here is defined by the teachers' capacity to provide options for recruiting students' interest and sustaining effort and persistence in the classroom. Teachers also can improve in providing multiple means of action and engagement which is characterized through the UDL framework as providing options for physical action, expression, and communication as well as executive function within lessons.

Within this context, the report puts forward four main recommendations for next steps and further action by education policymakers and practitioners in BiH. These are described in more detail below.

1. **Promote socioemotional learning as a priority, both in teaching practices in the classroom and in teacher training programs.**

   Through the TEACH Primary classroom observation study in 5 cantons of BiH, one area that stands out as a definite area of improvement, is the need to build stronger social and emotional skills through classroom teaching. "Social and emotional skills" refer to the abilities to regulate one's thoughts, emotions and behaviour. These skills differ from cognitive abilities such as literacy or numeracy because they mainly concern how people manage their emotions, perceive themselves and engage with others, rather than indicating their raw ability to process information. Social and emotional learning (SEL) has been shown to influence many important life outcomes, but also to influence the development and use of cognitive skills. Social and emotional skills have also been found to be good predictors of educational, labour and social outcomes. The benefits of developing children's social and emotional skills go beyond cognitive development and academic outcomes; they are also important drivers of mental health and labour mar-

ket prospects. Social and emotional skills are an important developmental outcome in their own right. The ability of citizens to adapt, be resourceful, respect and work well with others, and to take personal and collective responsibility is increasingly becoming the hallmark of a well-functioning society. Skills such as co-operation, empathy, and tolerance are key for citizens and nations to achieve sustainable development goals and to effectively participate and contribute towards building democratic institutions.[13]

The results from the TEACH Primary study described in this report show that observed teachers require more support to integrate SEL into their teaching and learning activities. These skills can ensure that students not only build strong and healthy relationships with their peers, but also can lead to improved academic learning. A recent OECD Survey (OECD, 2021) assessing students' SEL skills found that students' social and emotional skills are strong predictors of school grades across students' background, age cohorts, and cities. Additionally, evidence also suggests that the relationship between social and emotional skills and school performance is nuanced- some skills are essentially uncorrelated with school performance but other skills, most notably persistence and curiosity, are strongly related to higher school performance for both 10- and 15-year-olds (OECD, 2021).

Teachers and schools are expected not only to raise student academic performance, as measured through learning assessments, but to provide emotionally supportive environments that contribute to students' social and emotional development (Blazar & Kraft, 2017). In recent years, two research approaches have examined this issue using empirical evidence. The first focused on estimating teachers' contribution to student outcomes, often referred to as "teacher effects" or "teacher value-added" (Chetty, Friedman, & Rockoff, 2014). These studies found that, as with test scores, teachers vary considerably in their ability to impact students' social and emotional development in a variety of observed school behaviours (Gershenson, 2016). The second research approach focused on classroom observations as a means of identifying aspects of teaching practices that affect students' cognitive as well as social and emotional outcomes (Blazar & Kraft, 2017). Teachers' interactions with students, classroom organisation, and emphasis on critical thinking in specific subjects were found to support students' development in areas beyond their core academic skills (Blazar & Kraft, 2017). Studies linking data on teachers and students suggest that teachers have an impact on students' social and emotional skills.

Given this evidence it will be imperative to provide BiH teachers the tools to build spaces in their classroom that encourage SEL skills such as building student autonomy, perseverance and providing opportunities for collaboration. Additionally, Social and Emotional Learning is a relatively new area and less common topic in teacher training and competency frameworks for teachers. Given the research evidence on the importance of SEL in teaching and learning process, it becomes imperative to support education systems to develop a holistic strategy at national, regional and local levels. A set of specific teacher competencies related to SEL could be integrated within the existing teacher qualification framework for BiH which provides strategic guidance to different cantons on developing SEL-based training modules. A two-fold approach to introduce SEL-oriented teaching practices in pre-service training as well as in continuous professional development program is important. As the education systems in BiH train new teachers through pre-service teacher education programs, it will be important that SEL techniques are explicitly included in the pre-service teacher education curriculum and that SEL is seen as a priority for teacher development. This will help to ensure that teachers are able to apply SEL techniques in the classroom. Training modules on SEL should focus on building relevant competencies and

13 https://www.oecd-ilibrary.org/docserver/92a11084-en.pdf?expires=1676947171&id=id&accname=ocid195787&checksum=8D0238B608680E-16C4F63FA3CF02D759

supporting teachers to apply SEL practices in their everyday teaching, beyond knowledge building. Classroom observations and providing teachers with formative feedback could further inform the impact of SEL-focussed training on teachers' practices.

2. **Support teachers to be highly effective in instruction:**

Teach results highlight that there remains an immense scope for teachers to enhance their effectiveness in instruction, especially in providing students' with feedback and encouraging critical thinking during lessons. Instruction of content is the core curricular activities led by teachers and most pre-service and in-service training is focused on enhancing teachers pedagogical knowledge. However, classroom observations data could signal "what teachers' actually do" during a typical teaching and learning activity, irrespective of "what teachers know" about pedagogical content. Teach results indicate that a majority of the observed teachers effectively use practices related to lesson facilitation such as sharing objective of their lesson with students, explaining content in different ways beyond text and verbal instruction such as, through graphics, videos, concrete objects etc, making connections with everyday life of students. However, teachers could be supported further in applying practices related to checks for understanding, providing students with feedback and encouraging critical thinking such that these practices become more integrated into regular instructional activities of teachers.

One-on-one coaching could be one of the methods through which teacher professional development on instruction can be effectively conducted, especially because the focus is the bring about a shift in the practices of teachers and effectively apply their existing knowledge on instruction into teaching practices (Wilichowski and Arrange 2022). One important consideration is that Teach results signal at least a moderate effectiveness in teachers' instruction, therefore, it is important that TPD is a reflective process for the teacher which can support teachers in cultivating a positive mindset towards instructional change and growth (Thomas, Knowland, and Rogers 2020).

A review of Teaching and Learning Material (TLM) provided to teachers could also help in identifying whether teachers receive enough guidance in using instructional practices effectively in their classrooms. The use of additional Teaching Guides along with existing materials may also help.

3. **Utilize educational technologies (EdTech) to improve teacher training mechanisms**

Evidence illustrates the important role that teachers' play in student learning. However, many teachers do not receive effective in-service professional development support and often teach without appropriate tools and/or resources (Hanushek, 2011). Yet education systems tend to deliver teacher professional development that is ad-hoc, is not equitably available, and employs a one-size-fits-all approach that is theoretical and often unrelated to teachers' needs (Popova, Evans, Breeding, & Arancibia, 2018) Furthermore, teachers often work in isolation in under resourced classrooms and schools, with restricted support from peers, school leaders and other leaders within the community. Given this, many teachers struggle to apply effective teaching practices. Subsequently, student learning is adversely affected. Given that the TEACH tool provides evidence of what skills are prominent amongst teachers in observed classrooms and what skills are less common, it calls into attention the importance of efficient teacher professional development (TPD) that would allow for missing skills to be built and nurtured. The data described in this report clearly show that teachers in the observed cantons of BiH require additional TPD tools that will help them build skills and further develop effective teaching practices, especially in the areas of providing feedback, stimulating critical thinking, promoting perseverance, and developing socioemotional skills.

TPD enhances student learning by supporting and improving teachers' adoption of effective teaching and learning practices. As outlined by the World Bank Coach principles (World Bank, 2021), high-quality in-service TPD is characterized by providing tailored, focused, practical, and ongoing support that will improve student-teacher interactions. These programs use data to tailor learning opportunities to align with teachers' needs. They are practical, enabling teachers to practice, reflect, and receive feedback, as opposed to theoretical programs in which teachers do not get a chance to practice new teaching strategies. These high-quality TPD programs are focused on mastering skills and knowledge by providing sufficient time to learn. Last, these programs offer ongoing support to teachers in the form of follow-up opportunities to practice new skills and knowledge.

Delivering high-quality in-service TPD that improves teacher-student interactions is a challenge that education systems have struggled to address adequately, especially at scale (Beteille & Evans, 2019). A plethora of experience with traditional models of face-to-face training that takes teachers out of the classroom have not made the desired transformations in teaching practices that improve student learning (Popova et al., 2018). However, one way countries around the world are addressing TPD challenges is by the effective use of technology (Quota, Cobo, Wilichowski, & Patil, 2022). When well integrated in the system, technology can enable high-quality TPD and lead to changes in teaching and learning outcomes. With its unique attributes of connectivity, interactivity, multimedia, and data processing, technology can enhance the design and delivery of TPD, especially in low-resource contexts.

For example, there are different ways that TPD methods can effectively leverage technology to increase participation, address scale, and account for capacity constraints. A review of global evidence for example highlighted six main methods, as shown in the table below. Further consideration of these methods and integration of tech-enabled delivery formats could help in BiH to increase participation, share best practices, and disseminate knowledge amongst teachers and practitioners.

TPD Methods	Technology-Enabled Delivery Methods
Communities of Practices	Internet-based group chats, video-conferencing Low-Tech: short message service (SMS), voice valls, cloud storage and file-sharing platforms
Modeling Best Practices	Audio-visual materials, vidoconferencing <u>Low-Tech</u>: Pre-loaded offline content on devices, photos
Coaching	AV materials, videoconferencing, internet-based chats Low-Tech: SMS, voice calls
Digital Resources for Learning	AV materials, open educational resources (OER), websites Low-Tech: Pre-loaded offline content on devices
Digital Resources for Teaching	AV materials, teaching software applications Low-tech: pre-loaded offline content on devices
Instructional Tips and Strategies	Low-Tech: SMS, internet-based chats

Source: World Bank (2021). Technology for Teacher Professional Development: Navigation Guide, A Summary of Methods.

4. **Standardize and strengthen classroom observation strategies**

One of the many ways in which teachers learn is through consistent and effective feedback mechanisms. While new strategies and actions can be taught during pre-service or in-service training workshops and other means of support, teachers also require consistent feedback on their skills inside the classroom. Having a standardized tool that is sufficiently aligned to teacher standards and to their in-service curriculum can aid with teacher progress. Currently, while there are classroom observations that take place as part of TPD in BiH, the process is not standardized or consistent.

Evidence shows that classroom observations when done effectively can lead to increased student outcomes (Bruns, Costa, & Cunha, 2017). A randomized evaluation of an education program in the Brazilian state of Ceara which focused on improving teacher effectiveness by increasing their professional interaction and sharing of classroom practices is one such example. In 175 of 350 secondary schools, teachers were provided with benchmarked feedback from classroom observations and access to expert coaching. Schools' uptake of the coaching program was high (85 percent). Over a single school year, the program increased teachers' time on instruction and student engagement and produced statistically significant gains in student learning on the Ceara state assessment and the national secondary school exit exam.

Classroom observations that provide teachers with feedback and an opportunity to practice certain skill sets is imperative. Effective pedagogical strategies related to instruction such as checking for understanding, providing feedback, and critical thinking, as well as SEL strategies are often included as topics in teacher-training, however, TEACH results in the observed BiH classrooms indicate that teachers may still struggle to apply them in their everyday teaching. Therefore, more practicum opportunities, and mentoring should target teachers' applying these skills in a lesson.

This also ties into areas where teacher behaviors are strong. In areas such as classroom culture and lesson facilitation, while there is strong evidence that teachers are displaying strong practices, having effective classroom observation strategies that can highlight evidence may be an effective way for teachers to learn from each other.

5. **Build and strengthen teaching practices focused on inclusion**

TEACH results in observed classrooms indicate that there is a need to build better inclusion practices. Ensuring that all students are supported to learn and succeed in the classroom has never been more important. Regarding BiH teachers' implementation of effective inclusive teaching practices, as determined through mapping Teach Primary behaviors to the UDL framework, this analysis has revealed that teachers, in general, could benefit from greater support in this area. Of all principles associated with the UDL, observed teachers require more support in providing multiple means of engagement which here is defined by the teachers' capacity to provide options for recruiting students' interest and sustaining effort and persistence in the classroom. Teachers also can improve in providing multiple means of action and engagement which is characterizes through the UDL as providing options for physical action, expression, and communication as well as executive function within lessons.

Given this, incorporating specific teacher actions in the classroom could greatly benefit both students and teachers. To build stronger practices for providing multiple means of engagement, it is important to understand that students have different learning styles and have markedly

different ways in which they can be engaged and motivated to learn. Some learners are highly engaged by spontaneity and novelty while others are disengaged, even frightened, by those aspects, preferring strict routine. Some learners might like to work alone, while others prefer to work with their peers. In reality, there is not one means of engagement that will be optimal for all learners in all contexts; providing multiple options for engagement is essential (UDL, 2023).

Using the UDL framework, it will be important then to equip teachers with skills to:

- Recruit interest - teachers devote considerable effort to recruiting learner attention and engagement. But learners differ significantly in what attracts their attention and engages their interest. It is, therefore, important to have alternative ways to recruit learner interest;

- Sustain effort and persistence - teachers have to be trained on providing options that can equalize accessibility by supporting learners who differ in initial motivation, self-regulation skills, etc and;

- Self regulation – It is also important to develop learners' intrinsic abilities to regulate their own emotions and motivations. Teachers need to be trained on how to support their students to self regulate to manage their own engagement and affect (UDL, 2023).

To build stronger practices in providing multiple means of action and engagement, it is important to understand that learners differ in the ways that they can navigate a learning environment and express what they know (UDL, 2023). there is not one means of action and expression that will be optimal for all learners; providing options for action and expression is essential. To do this, teachers need to be trained on; (i) Physical Action- Tt is important to provide materials with which all learners can interact. Teachers need to be encouraged to use multiple forms of teaching materials to engage multiple learners; (ii) Expression and Communication - There is no medium of expression that is equally suited for all learners or for all kinds of communication. Teachers should be encouraged to provide their students multiple modalities for expression (UDL, 2023).

Finally, teachers also need to be supported to promote learning and resilience in classrooms with learners with disabilities. The COVID-19 pandemic has forced us to rethink how to promote learning and resilience in education systems, especially given clear signs of growing inequity. Learners with disabilities are among the most marginalized groups and the risks the pandemic poses for them are still essentially sidelined or considered as an afterthought. The role of teachers in inclusive education is fundamental. Inclusive education should not be a special skillset owned by only a few professionals, even if it is important to educate some teachers to become experts in individualized approaches to support learners with disabilities and provide effective support to other teachers and learners within general education classrooms. All teachers and school leaders need to be supported in understanding that every learner matters and matters equally. (Alasuutari & Wodon, 2021). Training that supports teachers to create inclusive learning spaces in BiH is imperative.

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Annex 1: Summary Table of Results

Time on learning	Teacher provides learning activity	No	Yes	
		7%	93%	
	Students are on task 6 or more students are of taks 3%	Low	Medium	High
		2 to 5 students are off task	0 or 1 students are off task	
		14%	76%	

Classroom Culture

Element Description & Distribution			Behaviors	Low Description	Low	Medium Description	Med	High Description	High	N/A
SUPPORTIVE LEARNING ENVIRONMENT: The teacher creates a classroom environment where students can feel emotionally safe & supported. Moreover, all students feel welcome, as the teacher treats all students respectfully.	1	0%	1.1: Respect	Does not treat all respectfully	1%	Treats all somewhat respectfully	7%	Treats all respectfully	92%	
	2	1%	1.2: Positive Language	Does not use positive language	6%	Uses some positive language	17%	Consistently uses positive language	78%	
	3	14%	1.3: Responds to Needs	Is not aware or does not respond to needs	3%	Responds but does not address the problem	11%	Responds & addresses the problem	41%	46%
	4	54%	1.4: Bias and Stereotypes	Exhibits bias or reinforces stereotypes	3%	Does not exhibit bias but does not challenge stereotypes either	90%	Does not exhibit bias and challenge stereotypes	6%	
	5	31%	1.4a Gender bias and challenges stereotypes	Exhibits gender bias or reinforces stereotypes	3%	Does not exhibit gender bias but does not challenge stereotypes either	91%	Does not exhibit gender bias and challenge stereotypes	6%	
			1.4b Disability bias and challenges stereotypes	Exhibits disability bias or reinforces stereotypes	2%	Does not exhibit disability bias but does not challenge stereotypes either	93%	Does not exhibit disability bias and challenge stereotypes	5%	
POSITIVE BEHAVIORAL EXPECTATIONS: The teacher promotes positive behavior by acknowledging students' behavior that meets or exceeds expectations. Moreover, the teacher sets clear behavioral expectations for different parts of the lesson.	1	1%	2.1: Behavioral Expectations	Does not set clear expectations	3%	Sets unclear or superficial expectations	16%	Sets clear expectations	81%	
	2	1%	2.2: Acknowledges Positive Behavior	Does not acknowledge positive behavior	44%	Acknowledges some behavior	35%	Acknowledges positive behavior	20%	
	3	19%	2.3: Redirects Misbehavior	Ineffectively redirects	5%	Effectively redirects or somewhat effective	18%	Effectively redirects or students are well-behaved	77%	
	4	55%								
	5	23%								

Instruction

Element Description & Distribution			Behaviors	Low Description	Low	Medium Description	Med	High Description	High	N/A
LESSON FACILITATION: The teacher facilitates the lesson to promote comprehension by explicitly articulating the objectives, providing clear explanations of concepts, & connecting the lesson with other content knowledge or students' experiences.	1	0%	3.1 Articulates Lesson Objectives	Does not state objective or cannot be inferred	3%	States broad objective or can be inferred	17.0%	States specific objective that's aligned to activities	80%	
	2	1%	3.2 Explains content using multiple forms of representation	Explains content using one form of representation	3%	Explains content using two forms of representation.	21%	Explains content using three or more forms of representation	77%	
	3	19%	3.3 Connects Lesson	Does not connect	23%	Superficially or unclearly connects	22%	Meaningfully connects	55%	
	4	32%	3.4 Models by Enacting or Thinking Aloud	Does not model	8%	Partially models	15%	Completely models	77%	
	5	48%								
CHECKS FOR UNDERSTANDING: The teacher checks for understanding to ensure most students comprehend the lesson content. Moreover, the teacher adjusts the pace of the lesson to provide students with additional learning opportunities.	1	2%	4.1 Uses Questions & Prompts to Determine Understanding	Either does not ask or the class responds in synchrony	6%	Asks effectively only of a few students	30%	Asks effectively of most students	65%	
	2	6%	4.2 Monitors During Independent / Group Work	Does not monitor students	7%	Monitors some students	17%	Systematically monitors most students	51%	25%
	3	31%	4.3 Adjusts teaching	Does not adjust	25%	Adjusts, but briefly and superficially	25%	Substantially adjusts	49%	
	4	27%								
	5	34%								
FEEDBACK: The teacher provides specific comments or prompts to help identify misunderstandings, understand successes, & guide thought processes to promote learning.	1	14%	5.1 Provides Comments / Prompts to Clarify Misunderstandings	Does not provide comments about misunderstandings or comments are simple	19%	Provides general or superficial comments about misunderstandings	37%	Provides specific & substantive comments about misunderstandings	44%	
	2	19%	5.2 Provides Comments / Prompts to Identify Successes	Does not provide comments about successes or comments are simple	43%	Provides general or superficial comments about successes	36%	Provides specific & substantive comments about successes	21%	
	3	33%								
	4	15%								
	5	19%								
CRITICAL THINKING: The teacher builds students' critical thinking skills by encouraging them to actively analyze content.	1	13%	6.1 Asks Open-ended Questions	Do not ask OR asks one open-ended question	45%	Asks two or more but does not build on student responses or 1 is a follow-up to a response	22%	Asks 3+ & at least 1 builds upon student responses	33%	
	2	11%	6.2 Provides Thinking Tasks	Does not provide thinking tasks	23%	Provides superficial thinking tasks	46%	Provides substantial thinking tasks	31%	
	3	41%	6.3 Students ask Open-Ended Questions &/or Perform Thinking Tasks	Students neither ask nor perform	26%	Students do not ask, but perform superficial thinking tasks	47%	Students ask &/or perform substantial thinking tasks	27%	
	4	21%								
	5	13%								

Socioemotional Skills

Element Description & Distribution			Behaviors	Low Description	Low	Medium Description	Med	High Description	High	N/A
AUTONOMY: The teacher provides students with opportunities to make choices & take on meaningful roles in the classroom. Students make use of these opportunities by volunteering to take on roles & expressing their ideas & opinions throughout the lesson.	1	5%	7.1 Provides Students with Choices	Does not explicitly provide choices	60%	Explicitly provides with at least 1 superficial choice	21%	Explicitly provides with at least 1 substantive choice	19%	
	2	14%	7.2 Provides Opportunities to Take on Roles	Does not provide opportunities	40%	Provides opportunities to take on limited roles	18%	Provides opportunities to take on meaningful roles	43%	
	3	49%	7.3 Students Volunteer to Participate	Students don't volunteer	9%	Few students volunteer by expressing their ideas and taking on roles	25%	Most students volunteer by expressing their ideas and taking on roles	66%	
	4	21%								
	5	12%								
PERSEVERANCE: The teacher promotes students' efforts toward the goal of mastering new skills or concepts, instead of focusing solely on results, intelligence, or natural abilities. In addition, the teacher has a positive attitude toward challenges, framing failure & frustrations as useful parts of the learning process. The teacher also encourages students to set short- &/or long-term goals.	1	7%	8.1 Acknowledges Students' Efforts	Does not acknowledge efforts	41%	Sometimes acknowledges efforts	32%	Frequently acknowledges & identifies efforts	28%	
	2	36%	8.2 Positive Attitude Toward Students Challenges	Has a negative attitude	13%	Has a neutral attitude	69%	Has a positive attitude	19%	
	3	35%	8.3 Encourages Goal-Setting	Does not encourage short or long-term goalsetting	59%	Encourages short or long-term goalsetting, or discusses their importance	25%	Encourages short & long-term goalsetting	15%	
	4	13%								
	5	9%								
SOCIAL & COLLABORATIVE SKILLS: The teacher encourages students' collaboration with one another and promotes students' interpersonal skills. Students respond to the teacher's efforts by collaborating with one another in the classroom, creating an environment free from physical or emotional hostility.	1	55%	9.1 Promotes students collaboration	Does not promote collaboration among students	67%	Promotes superficial student collaboration	12%	Promotes substantial student collaboration	21%	
	2	13%	9.2 Promotes Students Interpersonal Skills	Does not promote interpersonal skills	66%	Briefly or superficially promotes interpersonal skills	21%	Promotes interpersonal skills	13%	
	3	12%	9.3 Students collaborate with one another	Students don't collaborate or display negative behaviors	66%	Students collaborate some & rarely display negative behaviors	13%	Students consistently collaborate & display no negative behavior	21%	
	4	11%								
	5	10%								

Annex 2: Observer Feedback

It is also interesting to note, that during observer interviews conducted by proMENTE during the TEACH training process, observers noted that critical thinking was a skill they felt teachers needed more training on. Based on anecdotal evidence during these interviews, observers pointed out that classroom lessons are often delivered with a strong focus on rote learning. Observers noted that teaching is lecture-based, and is mainly based on encouraging students to memorize facts. Additionally, observers postulated that the feedback teachers provide to students to support them in identifying successes or resolving ambiguities is insufficient. The lack of evidence on appreciation of the positive behavior of students is also noticeable and reflected in the related Teach scores (under Behavior 2.2) of observed cantons of BiH . Finally, observers also mentioned that while Socio Emotional Learning is extremely important, there is not enough sufficient trainng for teachers to exhibit the required skills in their classrooms to support students.

On the other hand, observers state that aspects of class culture are mostly satisfactory. Teachers treated students with respect, used positive language in class, often responded to students' needs. However, behaviors where teachers either supported the existence or encouraged challenging of stereotypes related to gender or students' difficulties were less frequently observed. Also, they were faced with examples where ethnocentrism was encouraged through the teaching process. Ethnic identity is one of the primary identities in Bosnia and Herzegovina, which results in the division of the Bosnian-Herzegovinian society on the ethnic principle. Therefore, observers suggest that the Teach Primary tool captures the challenging of stereotypes related to ethnicity if it is going to be used as a standardized observation tool.

Finally, observers also believe that the Teach Primary tool should be adapted for observations of combined classes, given that the dynamics of the educational process in such classrooms are complex. Most students complete their primary education in single grade classrooms. Nevertheless, a significant number of students attend combined classes, i.e. teaching for several classes at the same time which the tool does not take into consideration in its current form.