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Teach

Foundational Learning Compact

TEACHER PRACTICES IN INDONESIA

Results of the *Teach* Primary Classroom Observation Study

World Bank

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Teacher Practices in Indonesia: Results of the *Teach* Primary Classroom Observation Study

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TABLE OF CONTENTS

List of Acronyms

CLASS	Classroom Assessment Scoring System
FFT	Framework for Teaching
KTSP	Kurikulum Tingkat Satuan Pendidikan (School-Based Curriculum)
MoECRT	Ministry of Education, Culture, Research, and Technology
MoRA	Ministry of Religious Affairs
SDI	Service Delivery Indicator
SD	Standard Deviation

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Data collection was undertaken by SurveyMeter. Data was collected by ten enumerators who were chosen by SurveyMeter and passed the *Teach Primary* certification exam, a prerequisite to take part in the study.

Finally, the team would like to extend its sincerest gratitude to all the teachers who allowed us to record their classrooms for the *Teach Primary* training.

This publication was designed by Nuriza Saputra.

EXECUTIVE SUMMARY

What is *Teach* and How It Used in This Study

Teach Primary (hereafter "*Teach*") is a classroom observation tool developed by the World Bank that has been used in over 30 middle income countries across the world. It captures the quality of teaching practices by measuring (i) **time on task**: the time teachers spend on learning and the extent to which students are on task, and (ii) the **quality of teaching practices** measured by three primary areas: Classroom Culture, Instruction, and Socio-emotional Skills. The tool underwent a rigorous development and validation process which has met the appropriate psychometric criteria of reliability.[1]

As part of the Time on Task component, three "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 is evaluated in three areas: **Classroom Culture, Instruction, and Socio-emotional 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.

This study employs *Teach* to investigate the current landscape of teaching practices in Indonesia. A total of 993 observations were collected, encompassing 501 teachers at two time points during their classes—the first and last 15 minutes. It included 405 primary schools, with 54 percent from the Ministry of Education, Culture, Research, and Technology (MoECRT) and 46 percent from the Ministry of Religious Affairs (MoRA), strategically chosen to ensure national representativeness. Grade 4 primary school classrooms were observed across subjects, including Mathematics (46%), Language (Bahasa Indonesia, 31%), and other subjects (23%). These sample schools were selected based on the 2019 Service Delivery Indicators (SDI) survey, with necessary adjustments to ensure a nationally representative sample (See Appendix 1 for details on the sampling process and the sample breakdown) (World Bank, 2023).

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[1] *Teach* Primary: Helping Countries Track and Improve Teaching Quality

Summary of Key Findings

Time on Task

1 **Teachers spend their time in the classroom on teaching activities although students pay attention only about half of the time during classes.** Teachers in Indonesia provide a learning activity to students for 96 percent of the time. However, when teachers provide a learning activity, all students are on task only 48 percent of the time.

Quality of Teaching Practices

2 **Indonesian teachers generally perform well on Classroom Culture (88 percent of teachers score three or higher) but moderate on Instruction (26 percent score three or higher) and low on Socioemotional Skills (10 percent of teachers score three or higher).** This pattern aligns with findings from other developing countries worldwide (World Bank, 2021) and the East Asia and Pacific Region where less than one-third of teachers achieve a score of three or above, indicates ineffective teaching practices, resulting in inferior learning outcomes (Afkar et.al., 2023).

- **Classroom Culture (scoring 3.4 out of 5):** Teachers were somewhat effective in creating a supporting learning environment (3.5/5) and somewhat effective in setting positive behavioral expectations (3.4/5).
- **Instruction (scoring 2.5 out of 5):** Teachers were somewhat effective at facilitating lessons (3.2/5), less effective at checking for understanding (2.7/5), less effective in encouraging students to think critically (2.4/5), and poor at providing feedback (1.8/5).
- **Socioemotional Skills (scoring 2.1 out of the 5):** Teachers were less effective at Autonomy (2.5/5), also less effective at Perseverance (2.2/5), but were poor at Social and Collaborative Skills (1.6/5 – lowest among nine elements).

Disparity in Teaching Quality Among Different Groups

3 **MoECRT educators displayed slightly stronger teaching practices than MoRA educators across multiple dimensions, with notable expertise in providing clear and constructive feedback in the Instruction area.**

- MoECRT teachers achieved slightly higher average Teach scores (2.7) compared to MoRA teachers (2.6).
- In the Instruction area, MoECRT teachers showed a relatively higher proficiency in providing feedback, with a difference in average score of 0.16, translating into 0.2 standard deviation (SD). This indicates that MoECRT teachers tend to deliver clearer and more constructive feedback.

4 **Urban teachers outperform their rural counterparts in several teaching elements, including Classroom Culture (Urban 3.6, Rural 3.4) and Instruction (Urban 2.7, Rural 2.5) indicating disparities in the classroom environment and instructional approaches.**

- The most notable difference is observed in the critical thinking component, where urban teachers (2.8) outpace rural teachers (2.3). This highlights the urban teachers' ability to encourage open-ended thinking and thought-provoking tasks, indicating a potential area for improvement in rural educational settings.

5 **Female and highly educated teachers outperform other groups.**

- Female teachers outperform male teachers, particularly in Socioemotional Skills. This suggests that female educators excel in fostering social and collaborative learning among students (Female 1.7, Male 1.5).
- Teachers with higher education levels also consistently achieve higher Teach scores. This trend is especially noticeable in the areas of Instruction and Socioemotional Skills. It emphasizes the importance of targeted teacher training programs to improve teaching practices, particularly for educators with lower levels of education.

6 **Curriculum and type of subject influence teaching practices.**

- Some schools in Indonesia continue to implement the old Kurikulum Tingkat Satuan Pendidikan (KTSP) 2013 Curriculum (i.e. School-Based Curriculum), while others have updated to the latest curriculum called the Merdeka Curriculum.
- Our study finds that **curriculum choices correlate with teaching effectiveness**, with teachers under the Merdeka Curriculum showing strengths in particular areas. Specifically, they show enhanced capabilities in the Teach elements of lesson facilitation (0.3 points higher, 0.25 SD) and critical thinking (0.4 points higher, 0.40 SD) compared to those adhering to the KTSP 2013 Curriculum.
- **Mathematics classes** exhibit higher performance compared to language and other subjects, with higher scores in areas such as Classroom Culture and Instruction. Given that a single classroom teacher typically handles all subjects in primary schools in Indonesia, the significant variations in Teach scores across academic subjects underscores the need to enhance teaching methodologies.

Suggestions and Recommendations from *Teach* Results

1 **Tailored teacher development is essential for Indonesia.**

- In line with trends in similar countries, Indonesian teachers excel in fostering a positive classroom culture but require significant improvements in Instruction and Socioemotional skills areas. This underscores the need for targeted teacher training programs aimed at enhancing instruction and socioemotional skills, ultimately benefiting students' cognitive and socioemotional development.

2 **Curriculum and school differences should align more closely with modern teaching methods.**

- The substantial differences in *Teach* scores across curriculum choices, school types (e.g., MoECRT and MoRA), and academic subjects may suggest the need for educational policymakers to consider aligning curricula with modern teaching methodologies. Additionally, teacher training programs should be tailored to specific curricular requirements, focusing on areas where each curriculum may need improvement. This alignment can enhance overall teaching quality and improve students' critical thinking abilities.

3 **Educational divides need to be bridged.**

- The notable disparities between urban and rural teachers, particularly in terms of fostering critical thinking among students, highlight the need for targeted support and professional development initiatives in rural educational settings. Policymakers should invest in training programs that equip rural teachers with strategies to encourage open-ended thinking and thought-provoking tasks, bridging the urban-rural divide in teaching quality.
- The positive correlation between higher education levels and teaching proficiency emphasizes the significance of teacher education. Policies should encourage teachers to pursue advanced degrees and provide opportunities for ongoing professional development to elevate teaching practices, particularly among educators with lower levels of education.

1 INTRODUCTION

School enrollment has increased substantially over the last 25 years in low and middle-income countries. However, despite this growth, the quality of schooling, such as basic skills like reading, writing, and arithmetic, remains a challenge (*World Development Report,* 2018). The expansion of access to school has also seen a rise in Indonesia over the last three decades, but the concern for the quality of education persists. According to the World Bank Human Capital Index (2020), although Indonesian students spend an average of 12.4 years in school, they acquire only 7.8 years' worth of learning, indicating a gap between time spent in school and actual learning outcomes. Furthermore, 35 percent of Indonesian children at late primary age struggle with reading proficiency. This is higher compared to neighboring countries such as Malaysia (25 percent), the Philippines (20 percent), Thailand (15 percent), and Vietnam (10 percent) (World Bank, 2019). 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 Indonesia as captured by the high-inference classroom observation tool, *Teach*.

Identifying effective teaching is not straightforward. 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 standard deviation (SD) increase in teacher quality, as measured by teachers' scores on the CLASS observation tool[2], 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, 2012; Hamre et al., 2014; Holtzapple, 2003; Milanowski, 2004). However, it is not simply teacher 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 teacher practices (0.58 SD) also resulted in increased student learning (0.15 SD) (Kraft et al., 2018).

[2] The Classroom Assessment Scoring System (CLASS) is a classroom observation tool for analyzing the quality of teacher-student interactions in the classroom on a scale from 1-7 across three broad domains: emotional support, classroom organization, and instructional support.

Background of This Study

There are over three million teachers in Indonesia who are devoted to educating approximately 54 million students (World Bank, 2023). This study aims to comprehensively analyze teaching practices using *Teach* classroom observation tool in Indonesia classrooms. This report is part of the World Bank's broader Indonesia Learning Loss research initiative. In the context where the education system faces diverse challenges, ranging from education governance between ministries to teacher quality and resource disparities in rural and urban areas, understanding and measuring teaching practices can recommend effective strategies, ultimately contributing to the ongoing efforts to recover from learning loss, improving student learning outcome and enhancing overall educational quality.

This Report

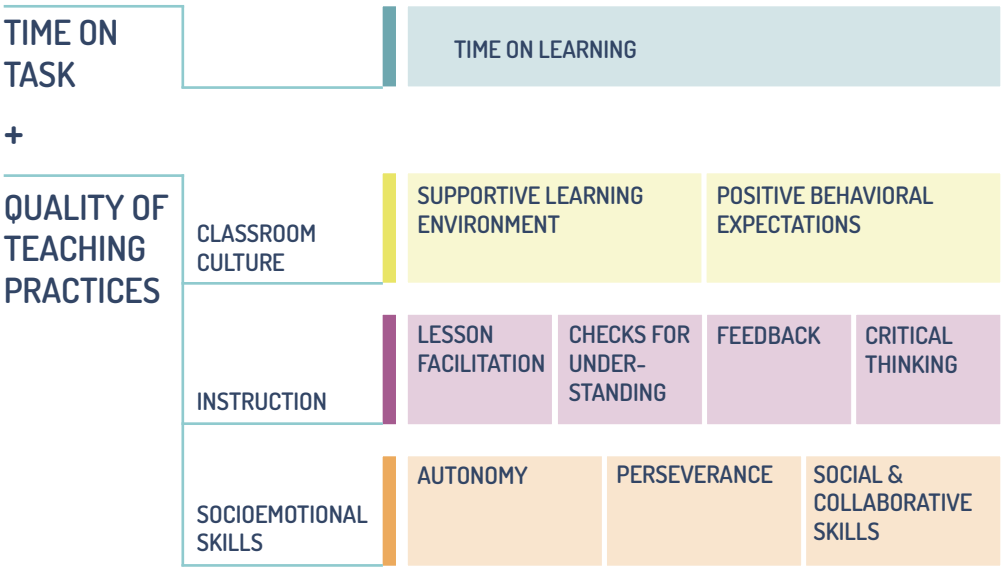
This report is organized as follows: Section 2 describes the *Teach* theoretical framework, content, and development process. Section 3 provides an overview of teaching practices in Indonesia using *Teach*, while Section 4 is a comparative analysis across school types, environments, teacher characteristics, academic subjects, and curricula.

2 THEORETICAL FRAMEWORK: CAPTURING TEACHER PRACTICES

Over the course of a teacher's lesson, *Teach* measures: (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, three "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 three primary areas: Classroom Culture, Instruction, and Socio-emotional Skills.[3]

Figure 2.1: *Teach* Framework



Source: World Bank (2022)

[3] It should be noted that it is impossible to draw a clear line between teacher practices linked to academic versus socio-emotional learning. Many teacher 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 teacher 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.

Table 2.1. Description of *Teach* Instrument

Area	Element (Score: 1-5)	Behavior (Score: Low, Medium, High)
Time on Task		
	0. Time on Learning	0.1 Teacher provide activities to most students 0.2 Students are on task
Quality of Teaching Practices		
A. Classroom culture	1. Supportive Learning Environment	1.1 Teacher treats all students respectfully 1.2 Teacher uses positive language with students 1.3 Teacher responds to students' needs 1.4 Teacher does not exhibit bias and challenges stereotypes in the classroom
	2. Positive Behavioral Expectations	2.1 Teacher sets clear behavioral expectations for classroom activities 2.2 Teacher acknowledges positive student behavior 2.3 Teacher redirects misbehavior and focuses on the expected behavior, rather than the undesired behavior
B. Instruction	3. Lesson Facilitation	3.1 Teacher explicitly articulates the objectives of the lesson and relates classroom activities to the objectives 3.2 Teacher explains content using multiple forms of representation 3.3 Teacher makes connections in the lesson that related to other content knowledge or students' daily lives 3.4 Teacher models by enacting or thinking aloud
	4. Checks for Understanding	4.1 Teacher uses questions, prompts or other strategies to determine students' level of understanding 4.2 Teacher monitors most students during independent/group work 4.3 Teacher adjusts teaching to the level of students
	5. Feedback	5.1 Teacher provides specific comments or prompts that help clarify students' misunderstandings 5.2 Teacher provides specific comments or prompts that help identify students' successes
	6. Critical thinking	6.1 Teacher asks open-ended questions 6.2 Teacher provides thinking tasks 6.3 Students ask open-ended questions or perform thinking tasks
C. Socio-emotional skills	7. Autonomy	7.1 Teacher provides students with choices 7.2 Teacher provides students with opportunities to take on roles in the classroom 7.3 Students volunteer to participate in the classroom
	8. Perseverance	8.1 Teacher acknowledges students' efforts 8.2 Teacher has a positive attitude towards students' challenges 8.3 Teacher encourages goal setting
	9. Social and collaborative skills	9.1 Teacher promotes student collaboration through peer interaction 9.2 Teacher promotes students' interpersonal skills 9.3 Students collaborate with one another through peer interaction

Source: World Bank (2022)

The three quality of teaching practices' areas have nine corresponding elements that point to 30 behaviors (*See Figure 2.1*). The behaviors are characterized as low, medium, or high, based on the quality of teacher practices observed. These behavior scores are translated into a five-point scale that quantifies teaching practices as captured in a series of two, 15-minute lesson observations.

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 on the extent to which the teacher creates: (Element 1) 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 (Element 2) positive behavioral expectations by setting clear behavioral expectations, acknowledging positive student behavior, and effectively redirecting misbehavior.

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: (Element 3) 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; (Element 4) 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; (Element 5) gives feedback by providing specific comments or prompts to help clarify students' misunderstandings or identify their successes; and (Element 6) 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.

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: (Element 7) 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; (Element 8) promotes perseverance by acknowledging students' efforts, rather than focusing solely on their intelligence or natural abilities, showing 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 (Element 9) 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.

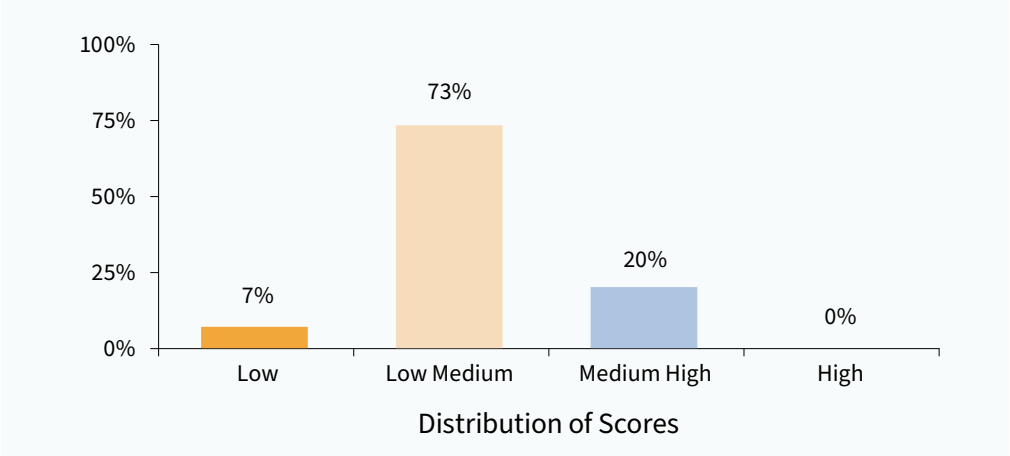
3 TEACH RESULTS: INSIGHTS INTO TEACHER PRACTICES

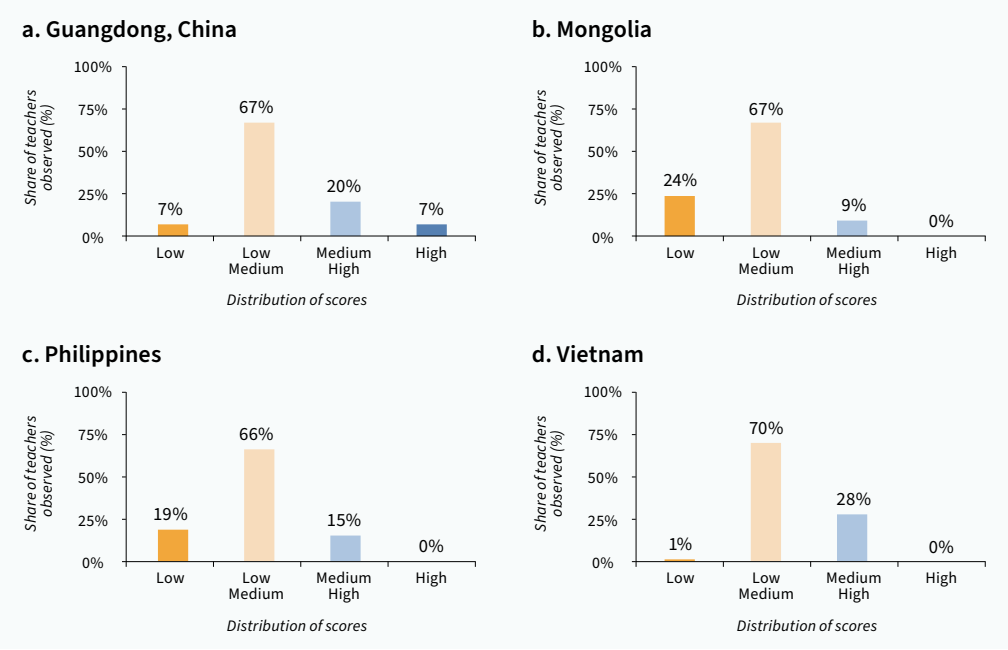
3.1 Overview of *Teach* Results in Indonesia

The study encompassed 500 teachers from 405 primary schools, comprising 54 percent MoECRT and 46 percent MoRA schools. Grade 4 primary school classrooms were observed across subjects, including Mathematics, Language (Bahasa Indonesia), and other subjects (e.g., science, religion). These sample schools were selected based on the 2019 Service Delivery Indicators (SDI) survey, with necessary adjustments to ensure a nationally representative sample (World Bank, 2023) (*See Appendix 1 for more details about the sampling design*).

Data collected from *Teach* indicates that a significant portion of Indonesian teachers face challenges in various aspects of their teaching practice areas, such as creating a conducive classroom culture, delivering engaging instruction, and fostering socioemotional skills in students. Figure 3.1.1, displayed below, illustrates that only 20 percent of teachers throughout Indonesia manage to achieve scores exceeding three out of a possible five points. This result is notably lower compared to the performance of teachers who took specific teacher training program in Indonesia as observed through a teacher training impact evaluation study conducted by the World Bank among selected high-performing teachers in Java, where 64 percent attain scores of three or higher (Khairina, et.al., 2024). However, data from regions such as Guangdong, Mongolia, the Philippines, and Vietnam also indicates a similar pattern, where less than one-third of teachers score three and above. These scores translate into the use of ineffective and weak teaching practices, which lead to poorer learning outcomes (Afkar et al., 2023).

Figure 3.1.1. *Teach* Score in All Areas (Overall *Teach* Score) in Indonesia and Other Countries

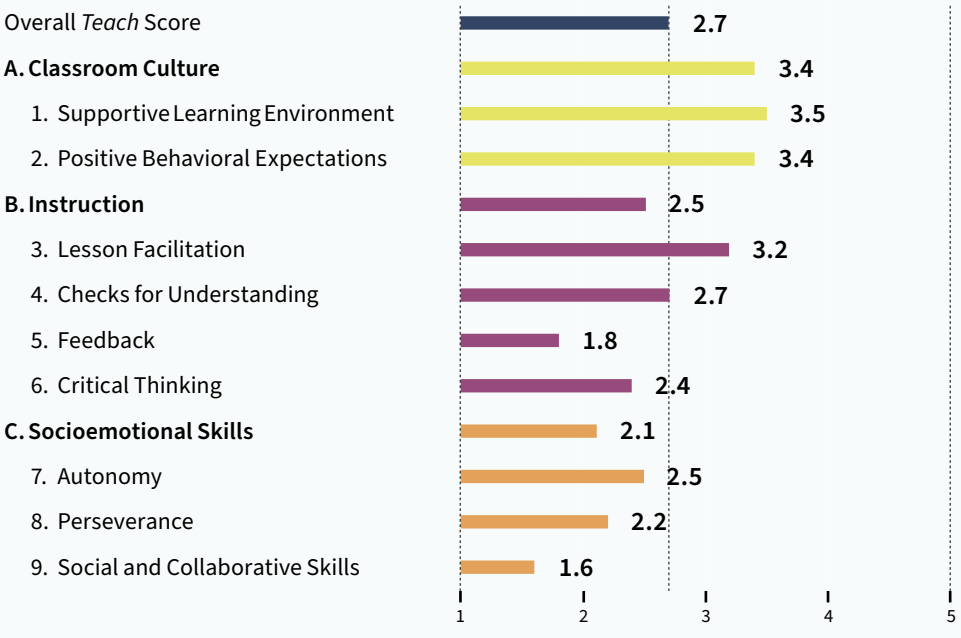




Source: *Teach* Indonesia 2023 and Afkar et. al., 2023

Figure 3.1.2 below describes the teachers' competency related to classroom culture, instruction, and socio-emotional skills. Teachers in Indonesia are somewhat effective (score 3.4 out of the 5 possible points) at creating a positive classroom culture. With regard to Instruction, Indonesian teachers score around the medium range in facilitating the lesson; but are less skilled at checking for understanding, encouraging students to think critically and poor at providing feedback. Lastly, in the Socioemotional Skills area, teachers are less skilled at promoting student autonomy and fostering perseverance. Furthermore, they also scored low (1.6) in providing students opportunities to practice social and collaborative skills. Similarly, the *Teach* findings in other countries (Molina et al., 2021; 2020) also found that teachers have strong ability in Classroom Culture and weak ability in Instruction and Socio-emotional Skills.

Figure 3.1.2. Distribution of Average *Teach* Scores by Element



Notes: Scores are weighted to account for student and school populations across different educational institutions. The vertical line shows the average Teach element score (Overall *Teach* Score).

3.2 Time on Task

As discussed, *Teach* captures (i) the time teachers spend on learning and the extent to which students are on task, and (ii) the quality of teaching practices. The *Time on Task* element measures the quantitative aspect of teaching practices and records both the teacher's actions and the number of students who are on task throughout the observation.

Teachers on Task: For the time on learning section (See Figure 3.2), teachers in Indonesia provide learning activities to students 96 percent of the time. These observations encompass any learning activity related to class content, regardless of quality. *Teach* took three snapshots during the observation at minutes 4, 9, and 14, to determine whether teachers were providing activities or not. In our findings, it was observed that 96 percent of the time, teachers were engaging students in various learning activities, such as lecturing, assigning worksheets, and facilitating independent or group work. In the remaining four percent of the time, teachers did not engage in any learning activities, which included tasks such as taking attendance, silently reading or writing on the board without instructing students to copy, addressing misbehavior, or other non-learning activities that left students waiting.

Students on Task: When teachers provide a learning activity, all students are on task only 48 percent of the time. During these instances, at least two students did not participate in the task assigned by the teachers. This can be attributed to either students being quiet but distracted or because they are causing disruptions in the classroom. For instance, in the first scenario, students may be seen gazing out of the window, resting their heads on their desks, looking down at the floor or towards the observer, or even sleeping. In the second scenario, students might be passing notes, whispering, conversing with a peer when the activity does not require discussion, moving around the classroom, shouting, or engaging in any other behavior that disrupts the class.

Figure 3.2. Distribution of Time on Task variables

<table>
<tr><td rowspan="4">Time on Learning</td><td rowspan="2">Teacher provides learning activity</td><td>No</td><td colspan="3">Yes</td></tr>
<tr><td>4%</td><td colspan="3">96%</td></tr>
<tr><td rowspan="2">Students are on task</td><td>Low</td><td>Medium</td><td>High</td></tr>
<tr><td>6 or more students are off task</td><td>2 to 5 students are off task</td><td>0 or 1 students are off task</td></tr>
<tr><td colspan="2"></td><td>10%</td><td>39%</td><td>48%</td></tr>
</table>

3.3 Area A: Overview of the Classroom Culture Area Result

Indonesian teachers are somewhat effective in Classroom Culture. Figure 3.1.2 indicates that 88 percent of teachers score three and above. On average, they score 3.4 points out of the 5 points possible in this element (*See Figure 3.1.1*). Among the Classroom Culture Area elements, teachers performed consistently well and were more effective in providing students with a supportive learning environment (3.5) than setting positive behavioral expectations (3.4). Overall, compared to the other two areas explained later, teachers did perform somewhat effectively in the Classroom Culture area.

Figure 3.3.1. Average of Classroom Culture Area and Elements Score

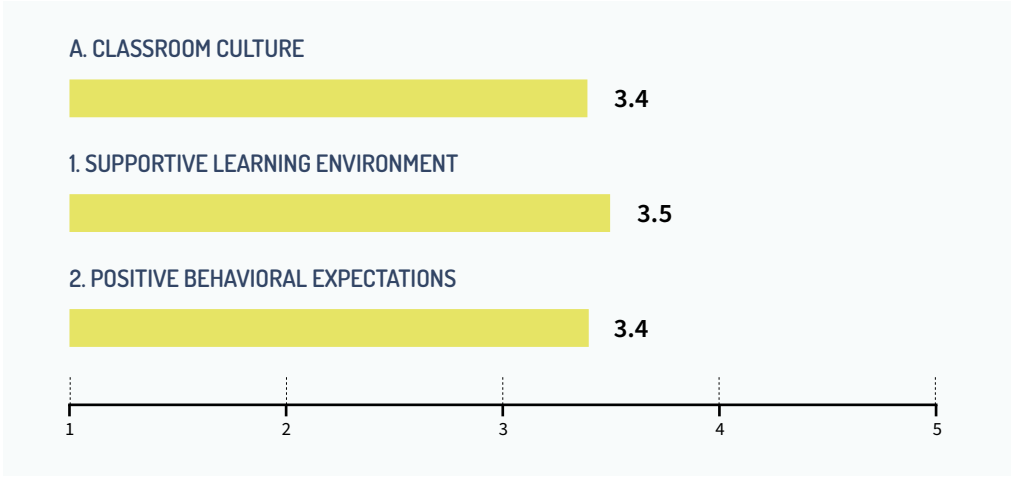


Figure 3.3.2. Distribution of Classroom Culture Area Score

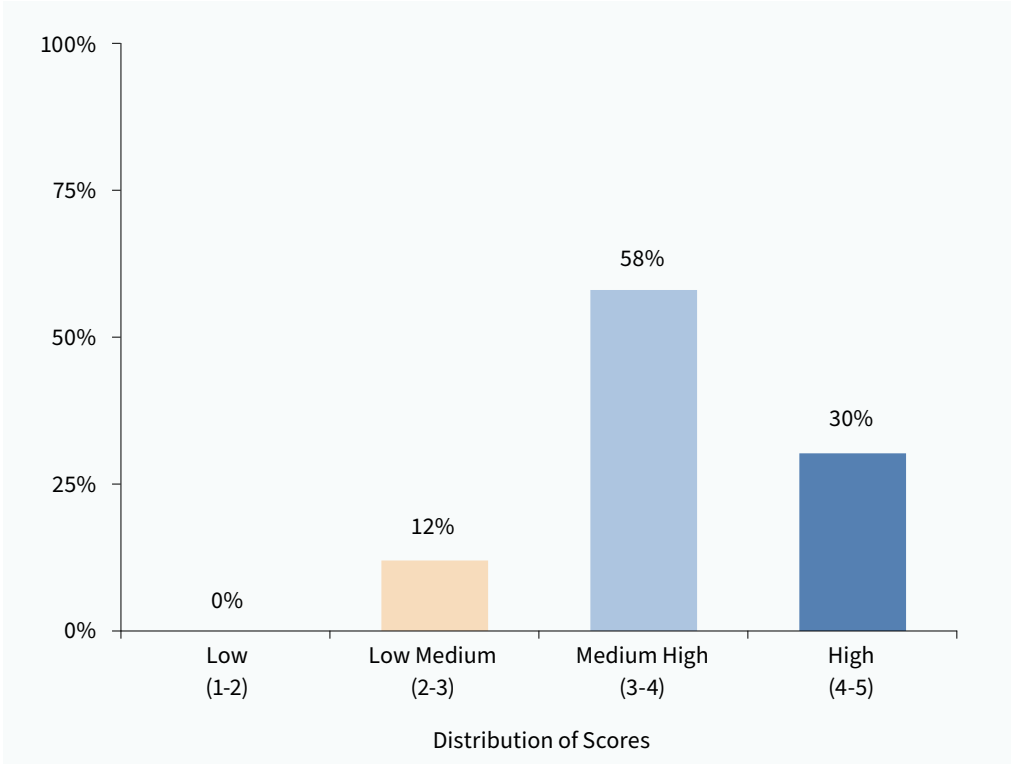
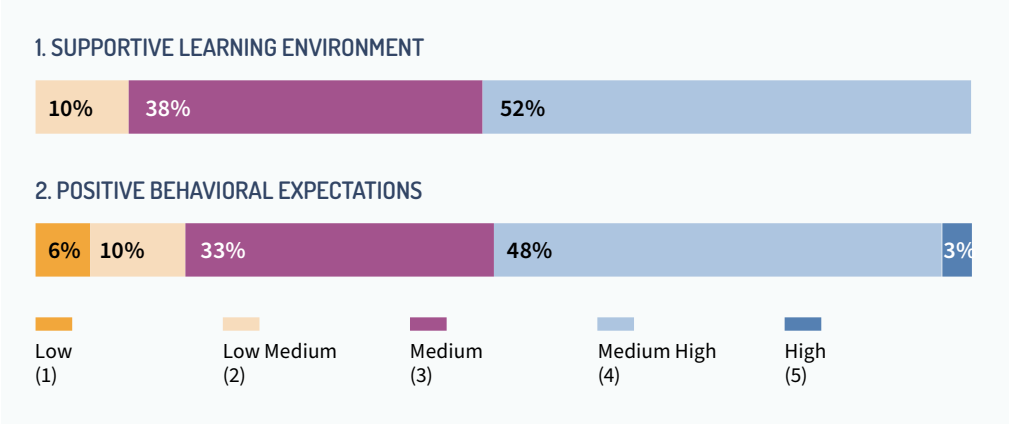


Figure 3.3.3 below shows the score distribution within the Classroom Culture area. The Supporting Learning Environment element reflects a generally positive trend, emphasizing medium (38 percent) to medium-high (52 percent) levels of supportiveness. Likewise, the Positive Behavioral Expectation element distribution highlights a cumulative 84 percent at medium to high levels, indicating success in clearly defining expected student behavior in the classroom.

Figure 3.3.3. Distribution of Classroom Culture Elements Scores



The following section will provide a detailed examination of the two pivotal elements influencing the Classroom Culture score.

Element 1: Supportive Learning Environment.

Figure 3.3.4 Distribution of Supportive Learning Environment by Behaviors

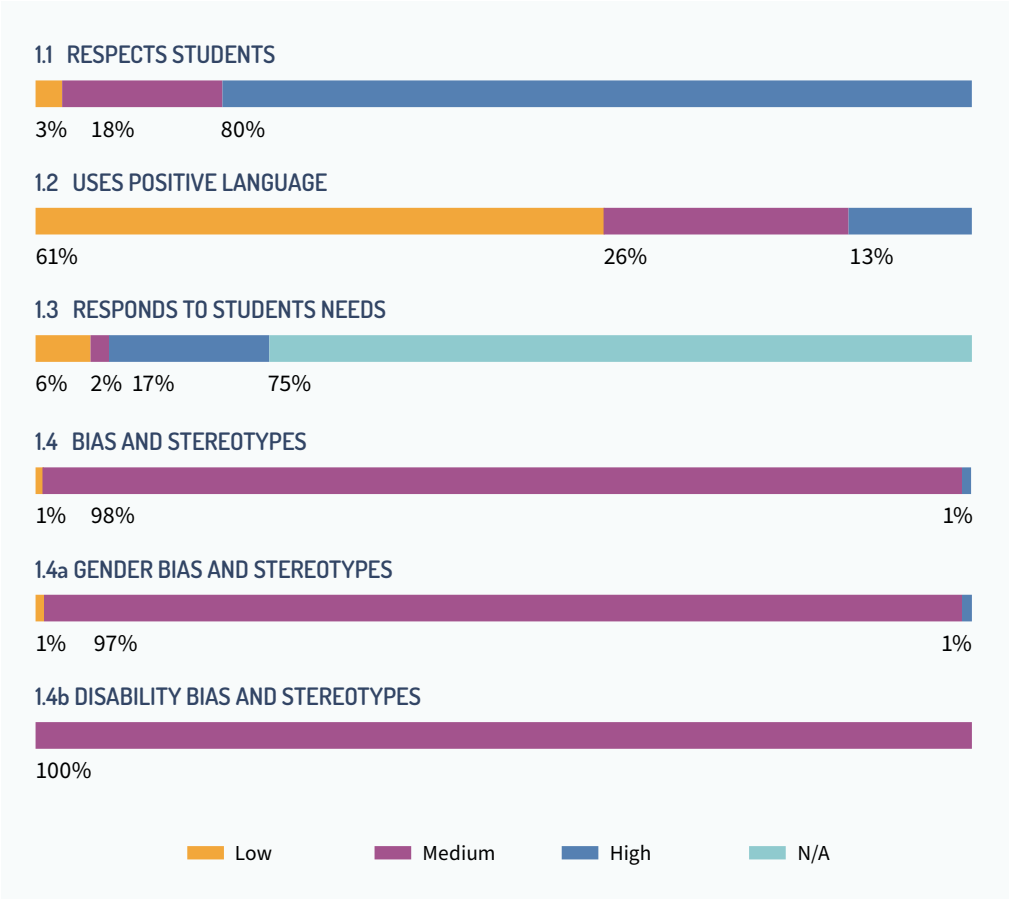


Figure 3.3.4 displays the distribution of scores for supportive learning environment and its respective behaviors. Indonesian teachers treat all students respectfully (80 percent). They call students by their name, and in some areas of Java teachers use the polite female and male prefixes of "Mbak" and "Mas" before students' names. Most teachers also say "please" and "thank you" to students when students answer questions which shows sign of respect. However, many teachers (61 percent) do not use positive language when they communicate with students. Some teachers (26 percent) say "good job" or "nice", although this happens infrequently, and only a few teachers (13 percent) consistently use positive language when the students show their work or encourage the class with phrases such as, "you are such a talented group of students" or "you can do this, I'm so proud of you". In scenarios where students communicate their needs, teachers promptly address them (1.3), ensuring a supportive environment. 75 percent scored as N/A (not applicable) because there are no observable emotional, material, or physical needs and no students ask help from teachers. Finally, concerning bias and stereotypes (behavior 1.4), 1 percent of teachers exhibit instances of bias or stereotyping. The majority of teachers refrain from such behavior, providing equal opportunities for students of all genders and abilities, thus fostering inclusive and equitable learning.

Element 2: Positive Behavioral Expectations.

Figure 3.3.5 Distribution of Positive Behavioral Expectations by Behaviors

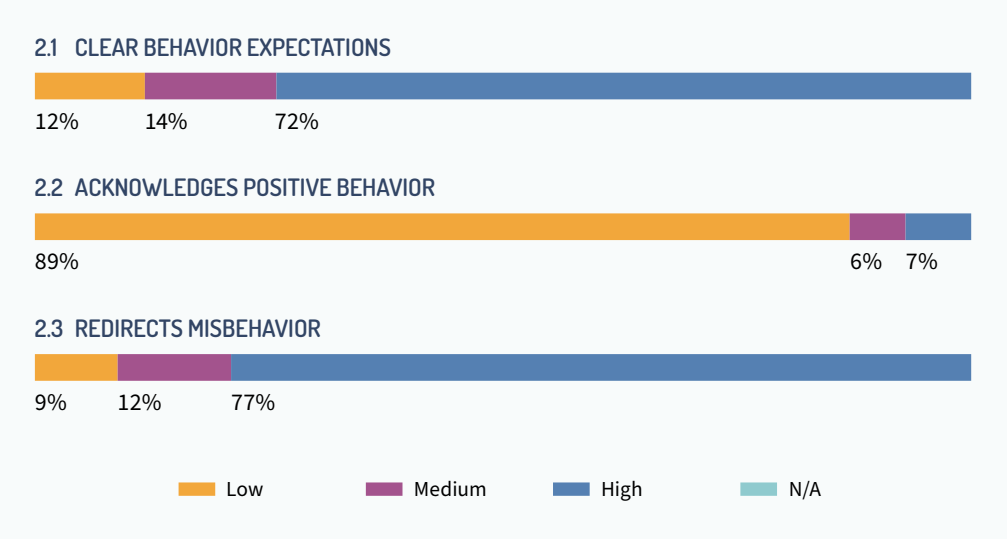


Figure 3.3.5 shows the distribution of scores for the positive behavioral expectation element and respective behaviors. Teachers generally set clear expectations (72 percent), but 90 percent do not acknowledge students' positive behavior. For instance, at the beginning of session, teachers explain that they want students to do the worksheet in silence by themselves. However, once students finish the task and follow the expected behavior by not talking to friends, the teachers do not acknowledge the positive behavior that meets or exceeds their expectations. In the case of classrooms where students misbehave, many teachers (78 precent) effectively redirect the misbehavior. For instance, teachers address the problem at hand and focus on the expected behavior such as saying "remember, we need to keep quiet while working on the worksheet" instead of "stop talking and don't be noisy". In this example, the teacher is stating the expected behavior rather than focusing on the misbehavior.

3.4 Area B: Overview of the Instruction Area Result

Indonesian teachers are less effective in Instruction (26 percent of teachers score medium high to high level). On average, they score 2.5 points out of the 5 points possible in this element. In the Instruction area, teachers were most effective at facilitating lessons (3.2), somewhat effective at checking students' understanding (2.7), less effective in encouraging students to think critically (2.4), and poor at providing feedback (1.8).

Figure 3.4.1. Average Instruction Area Elements Scores

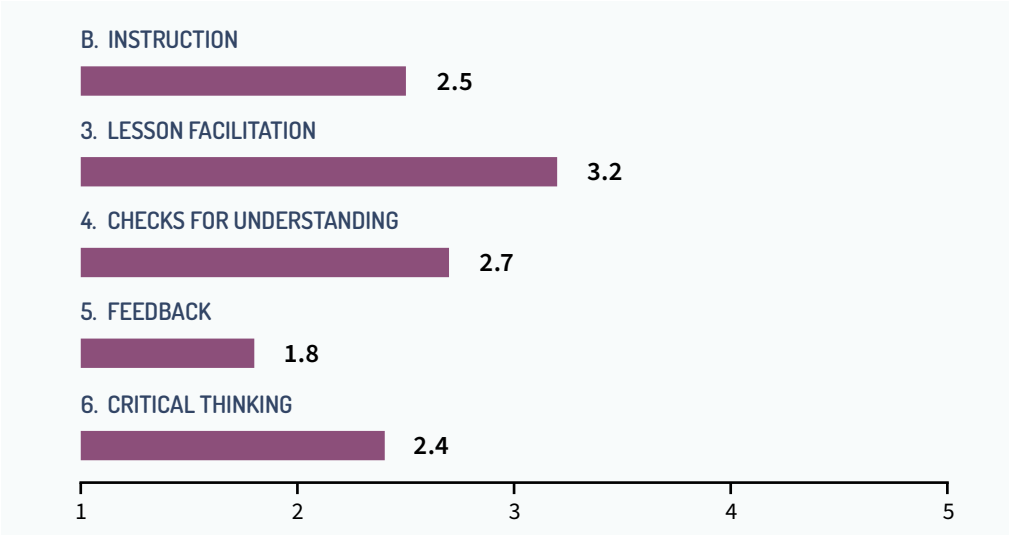


Figure 3.4.2. Distribution of Instruction Area Scores

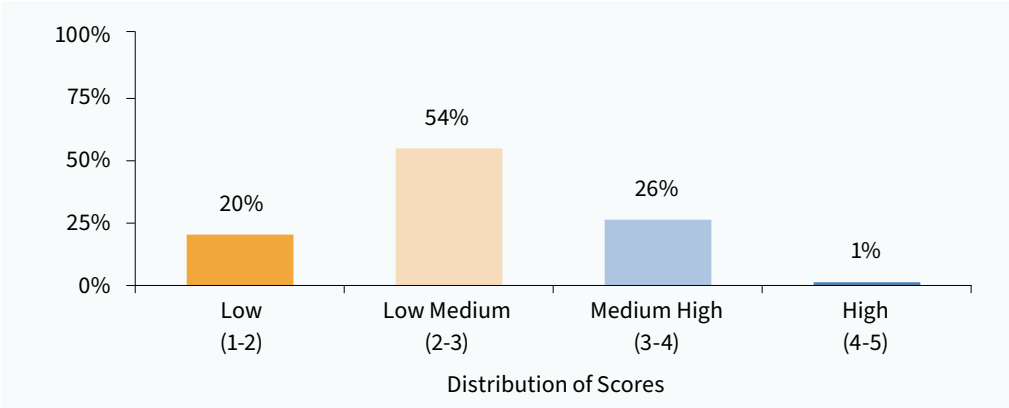
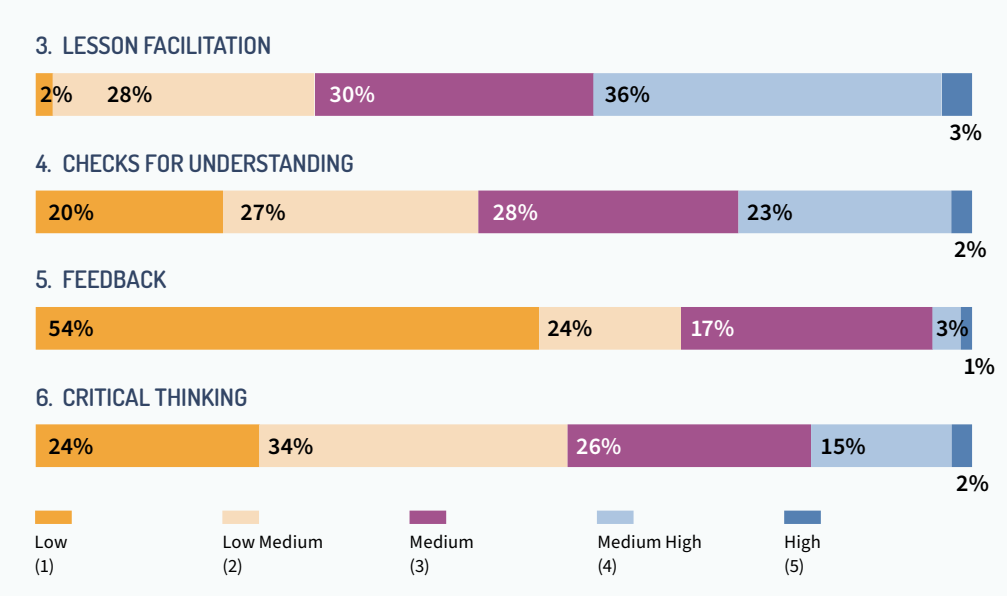


Figure 3.4.3 below shows the score distribution within the Instruction area. The lesson facilitation element displays a positive trend towards higher levels, indicating proficient topic explanation in the classroom. Conversely, feedback scores are notably skewed towards the lowest end of the scale, suggesting a need for teacher interventions or training to enhance feedback provision skills, as only a minority of teachers demonstrate exemplary practices. Meanwhile, the check for understanding and critical thinking shows varied teacher performance. Roughly half of the teachers score 1 or 2, signaling a lower proficiency in ensuring students understand the topic discussed and use critical thinking skills, and half of teachers received a score of 4 or 5, demonstrating a relatively higher degree of success in checking student's understanding and encouraging them to use critical thinking skills.

Figure 3.4.3. Distribution of Instruction Elements Scores



Element 3: Lesson Facilitation.

Figure 3.4.4. Distribution of Lesson Facilitation by Behaviors

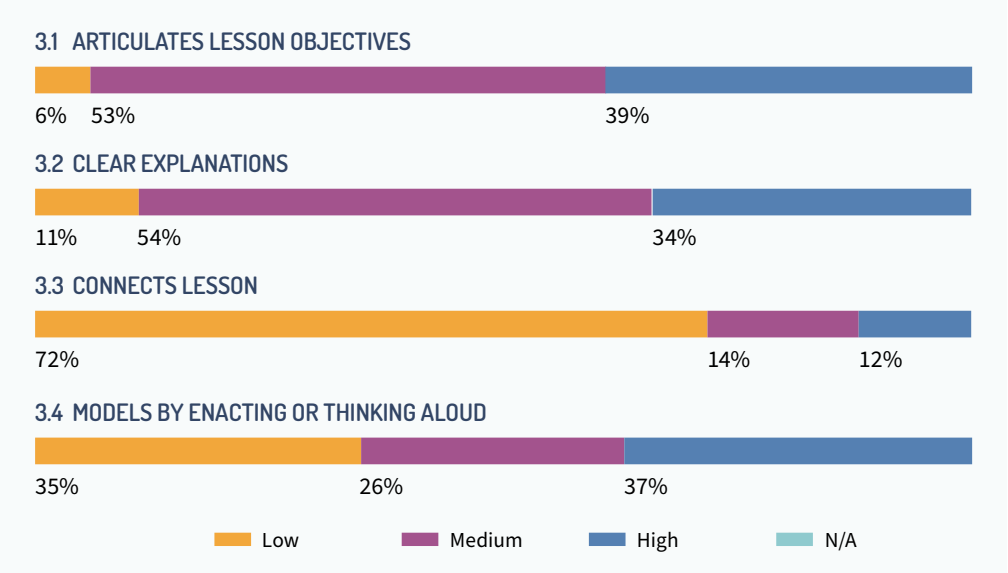
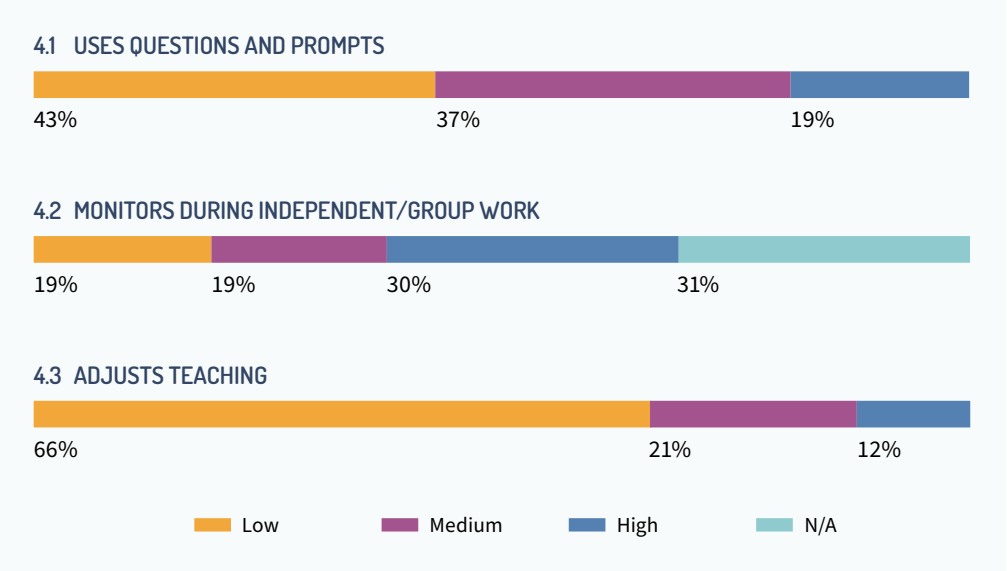


Figure 3.4.4 shows the distribution of teacher's scores for the lesson facilitation element and the respective behaviors. Teachers are moderately good at articulating lesson objectives. More than half of the teachers (54 percent) explicitly state a general lesson objective such as, "Today we are going to learn about two dimensional shapes" without further explanation. Others do not state it explicitly, but it can be inferred from the lesson. For example, after giving an example of different type of formula to calculate the area of different shapes the teachers clearly explain the activity when she says, "Now I will give you the quantity of width and height of each shape and you have to apply the formula". From this, it can be inferred they are working on calculating the areas of two-dimensional figures; however, the teacher does not make an explicit lesson objective statement. 39 percent teachers explicitly state a specific lesson objective, and the lesson activities align to the stated objective, while seven percent do not state the lesson objective, nor can one be inferred from the lesson activities.

Half of teachers are providing somewhat clear explanations of the lesson. Although part of these explanations may be clear, others are confusing or superficial. For example, while explaining fractions, teachers explain verbally and write the sample on the board. Only 34 percent use other forms of representation in addition to verbal and written such as using figures, visuals, and others to explain the topic. Meanwhile 12 percent of teachers use only one form of explanation, or content is simply not being explained. Moreover, many Indonesian teachers (73 percent) do not connect the lesson taught to other content knowledge or students' daily lives. While 15 percent of teachers may attempt to connect the lesson to other content knowledge or students' daily lives, the connections are superficial, confusing, or unclear. For example, when introducing a lesson on types of triangles, the teacher says, "Yesterday we learned how to calculate the area of a rectangle, today we will learn different type of triangle shapes" and go on to explain triangles and present the formula. The connections to other content knowledge or students' lives are superficial and nonspecific. Lastly, 35 percent of teachers model by enacting procedures or thinking aloud, but 37 percent do not model at all. Although they ask students to read a text, answer specific questions, or complete activities, they rarely walk them through the process of how to solve a task.

Element 4: Check for Understanding.

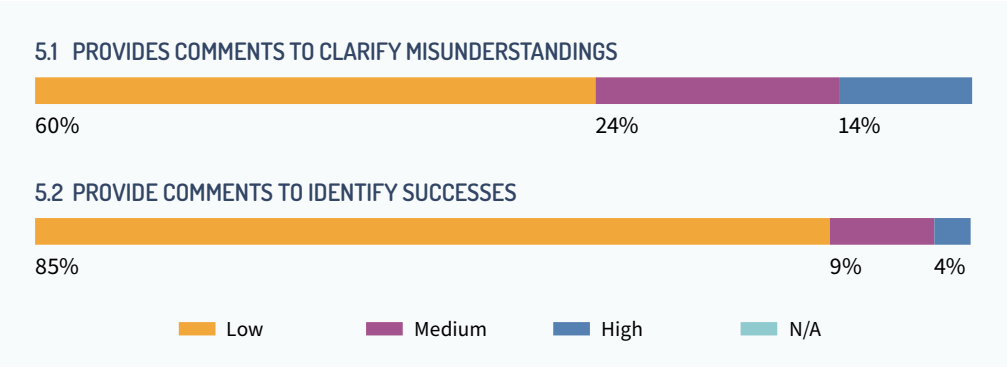
Figure 3.4.5. Distribution of Checks for Understanding by Behaviors



On average, teachers score 2.6 points out of the 5 points possible in this element (*See Figure 3.4.1*). Figure 3.4.5. shows the distribution of teacher's scores for the checks for understanding the element and its respective behaviors. When teachers explain a topic, almost half of the teachers (43.2 percent) do not ask questions, prompt, or use other strategies to clarify students understanding. When they do ask, "is this correct?" students chorus "yes", which is accepted without further clarification for understanding. However, when students work independently or in groups, many teachers (30.6 percent) monitor students systematically by circling the classroom and approaching individual students or groups to check their understanding. Finally, when many students get the wrong answer or misunderstand a concept, most teachers (66.5 percent) may notice but do not re-explain the concept or provide additional opportunities to learn by adjusting the lesson.

Element 5: Feedback.

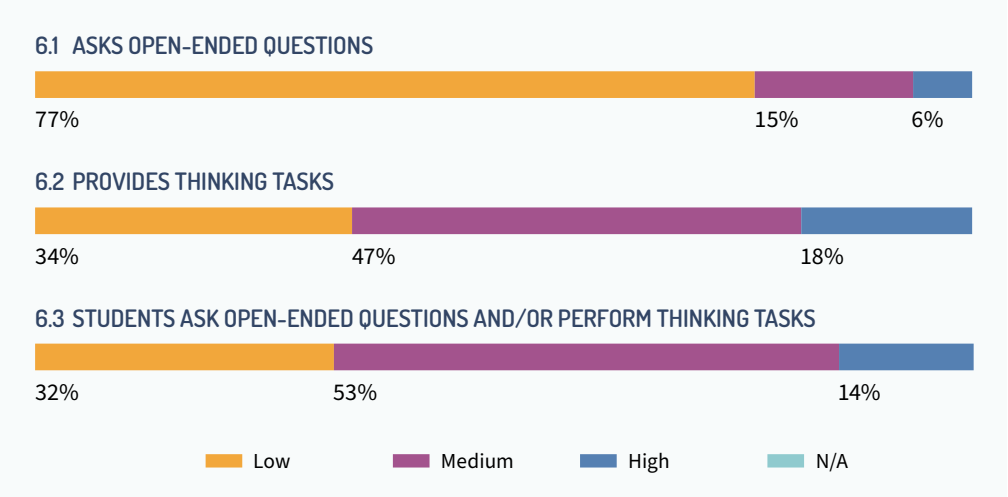
Figure 3.4.6. Distribution of Feedback by Behaviors



On average, teachers score 1.7 points out of the 5 points possible in this element (*See Figure 3.4.1.*). Figure 3.4.6 shows the distribution of teacher's scores for the feedback element and its respective behaviors. A notable 60 percent of teachers landed in the 'Low' proficiency range. For instance, when a student answers a question incorrectly, these teachers might simply state, "That is not the correct answer," and move on without offering further guidance. The second criteria evaluated the ability of teachers to provide comments that identify student successes. Alarmingly, 85 percent scored in the 'Low' category, often giving feedback as basic as, "That is correct," without elaboration on a student's accurate response. A mere 4 percent excelled in offering detailed feedback. In essence, while many educators may find it challenging to provide constructive feedback for clarifications, the result suggests they face even greater challenges in highlighting student successes. The following figure presents the distribution of overall feedback scores, ranging from 1 to 5. More than half (54 percent) of educators, received the lowest feedback score of 1, suggesting that there is a predominant area of concern or deficiency in their feedback mechanisms. 24 percent of the educators were scored at 2, indicating that while they performed better than the majority, there is still considerable room for improvement in their feedback provision. Approximately five percent of the surveyed educators achieved high feedback scores, underscoring the rarity of top-tier feedback practices.

Element 6: Critical Thinking.

Figure 3.4.7. Distribution of Critical thinking by Behaviors



On average, teachers scored 2.4 out of a possible 5 points in the critical thinking element. This average is comparably higher than their scores in the feedback element. Figure 3.4.7 shows the distribution of teachers' scores for the critical thinking element and its respective behaviors. Overall, there is a varied distribution in critical thinking proficiencies among participants. 78 percent demonstrated a 'Low' proficiency in asking open-ended questions, which suggests a tendency to opt for simpler, closed-ended inquiries. This pattern contrasts sharply with the 15 percent who achieved a 'Medium' proficiency and the even smaller seven percent who excelled in this domain. Delving into the provision of thinking tasks, the landscape appears slightly more diverse. About 34 percent of educators were in the 'Low' category, often presenting students with straightforward tasks. Still, a notable 48 percent fell into the 'Medium' bracket, hinting at periodic challenges posed to students. An encouraging 18 percent consistently performed thinking tasks. However, when looking at how often students asked open-ended questions or took on challenging tasks, 32 percent of classrooms were in the 'Low' category, showing that students rarely ask questions. Slightly over half of classrooms (54 percent) were in the 'Medium' range, where students sometimes took part actively. Only 14 percent of classrooms were in the 'High' category, where students frequently asked deep questions and tackled hard tasks.

3.5 Area C: Overview of the Socioemotional Skills Area Result

Indonesian teachers exhibit poor ability in Socioemotional Skills (10 percent of teachers score 3 and above). On average, they score 2.1 out of the 5 points. Among the elements of Socioemotional Skills, they were less effective at instilling autonomy (2.5) and in promoting perseverance (2.2), and poor in fostering social and collaborative skills in their students (1.6). Overall, teachers showed the greatest room for improvement in Socioemotional Skills.

Figure 3.5.1. Average of Socioemotional Skills Area and Elements Scores

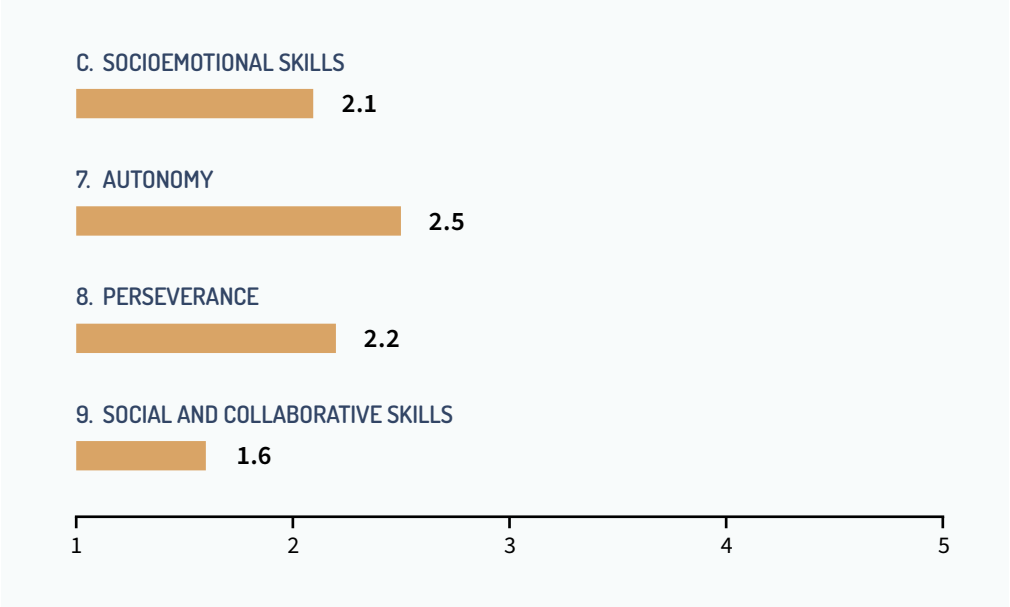


Figure 3.5.2. Distribution of Socioemotional Skills Area Scores

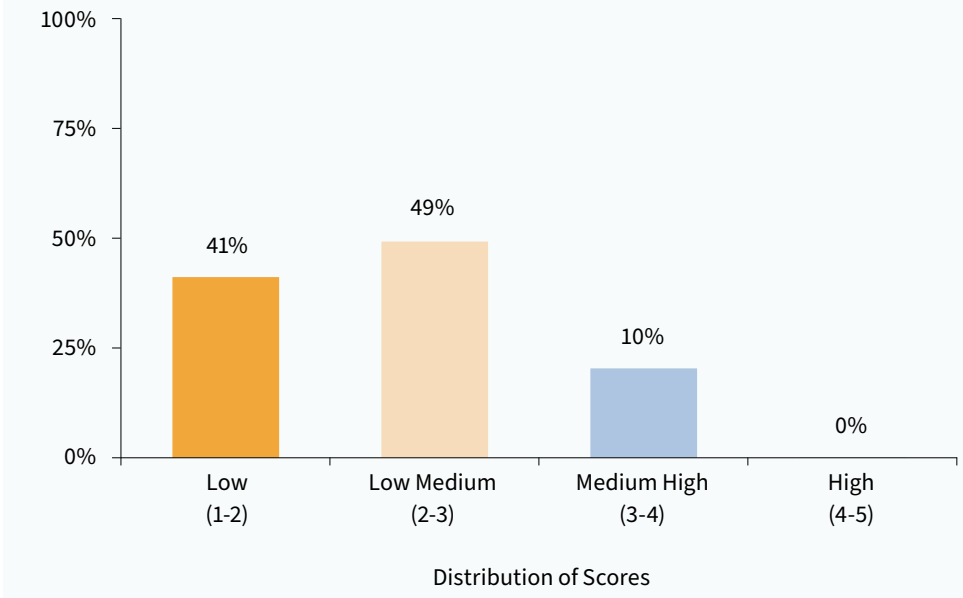
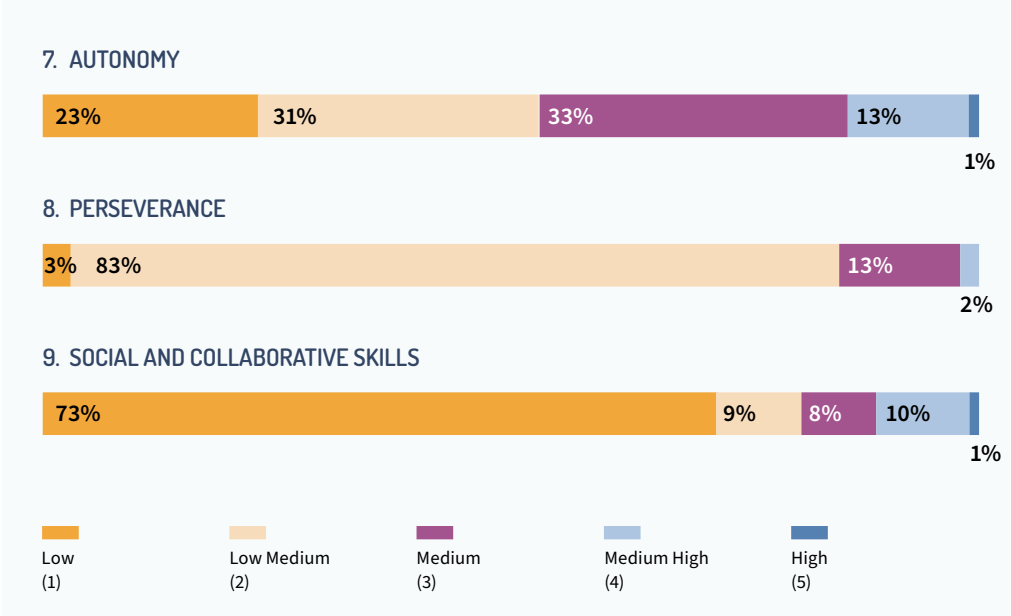


Figure 3.5.3 below illustrates the score distribution within the Socioemotional Skills area. The distribution of scores for the Autonomy element reveals a complex pattern of teacher performance. Among the assessed educators, more than half (54 percent) received a score of 1 or 2, indicating a lower proficiency in nurturing students' autonomy in learning. In the Perseverance element, an overwhelming 86 percent of teachers received a score of 1 or 2, signaling a low level of proficiency in fostering students' perseverance. Similarly, 73 percent of teachers received a score of 1 in social and collaborative skills element, highlighting challenges in teacher proficiency to cultivate collaborative and social abilities among students. In summary, the distribution scores among the three elements in this area emphasize the significant need for improvement in teachers' approaches to nurturing autonomy, perseverance, and social and collaborative skills in students.

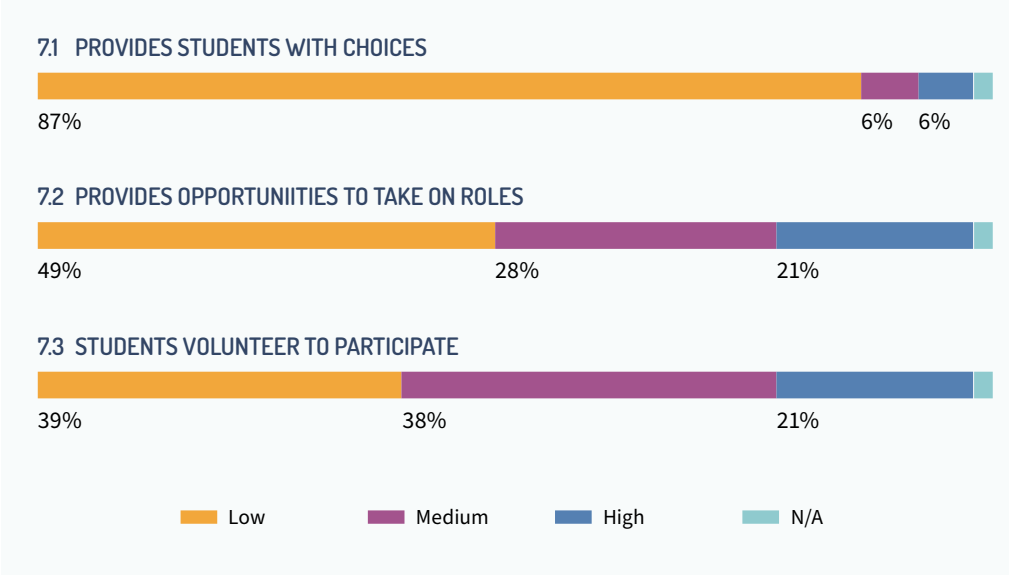
Figure 3.5.3. Distribution of Socioemotional Skills Elements Scores



The following section will provide a comprehensive examination of the three elements influencing the overall Socioemotional Skills Area score.

Element 7: Autonomy.

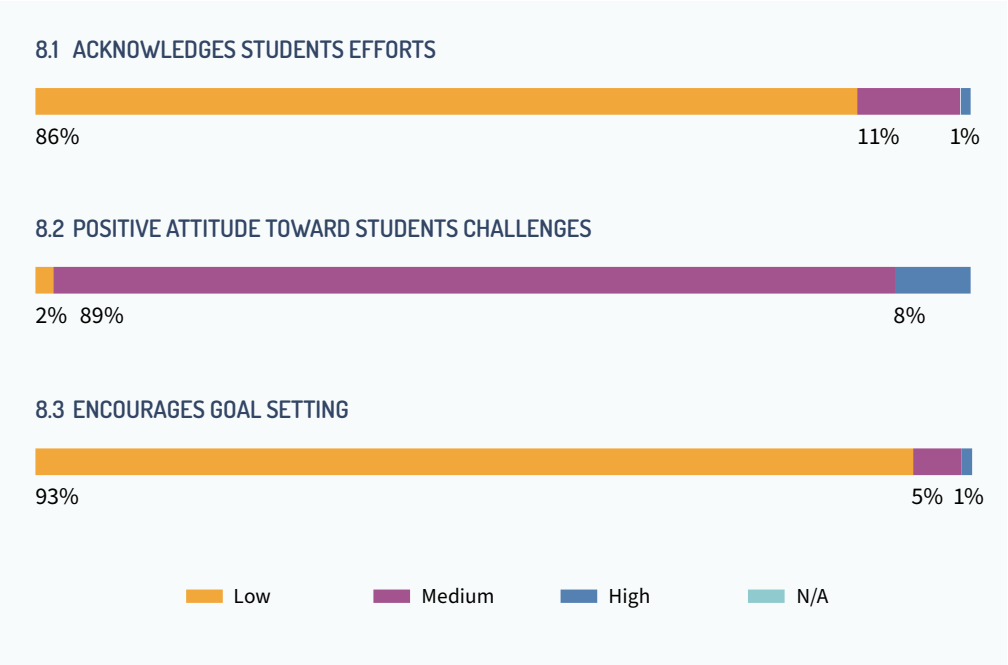
Figure 3.5.4. Distribution of Autonomy by Behaviors



On average, teachers achieve a score of 2.4 out of 5 possible points in this particular element, which stands out as relatively high compared to the other Socioemotional elements (*See Figure 3.5.1*). Figure 3.5.4. illustrates the distribution of teacher's scores for the autonomy element and its respective behaviors. In terms of providing students with choices, a significant number of teachers (87 percent) fell into the 'Low' category, indicating a prevalent tendency to offer limited decision-making opportunities, thereby potentially hindering student autonomy. In contrast, only a small portion (6 percent) demonstrated a 'Medium' proficiency, and only seven percent of teachers fostered a more independent learning environment. Examining "Provides opportunities to take on roles," approximately half of the teachers (49 percent) were in the 'Low' range, implying a lack of diverse roles for students in the classroom. However, a substantial 29 percent embraced a 'Medium' approach, suggesting intermittent involvement of students in meaningful roles. About 22 percent achieved a 'High' level, effectively promoting active participation and responsibility among students. In terms of "Students volunteer to participate", 40 percent of teachers encountered a 'Low' scenario, with limited student initiative. Notably, 38 percent experienced a 'Medium' scenario, indicating a more active involvement, while a commendable 22 percent achieved a 'High' level, reflecting proactive student engagement. These results underscore the varied landscape of teachers' ability to cultivate autonomy, role participation, and student engagement within the Socioemotional Skills context.

Element 8: Perseverance.

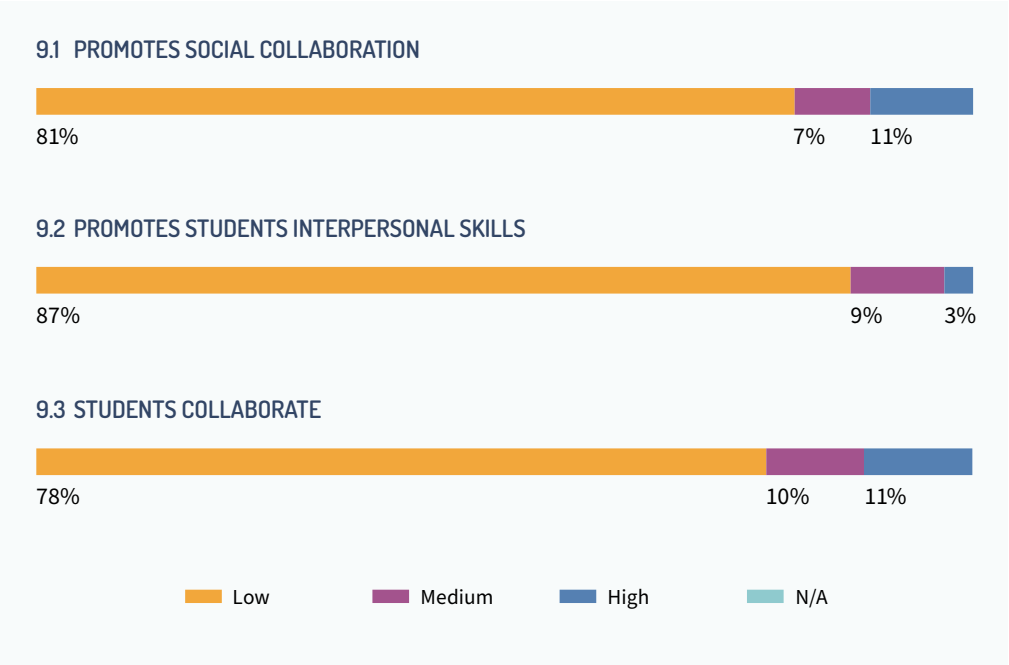
Figure 3.5.5. Distribution of Perseverance by Behaviors



On average, teachers score 2.1 points out of the 5-points possible in this element (*See Figure 3.5.1*). Figure 3.5.5. shows the distribution of teacher's scores for the perseverance element and its respective behaviors. The evaluation of the Perseverance behaviors reveals a diverse range of teacher behaviors. In the context of behavior of "Acknowledges students' efforts," a majority of teachers (87 percent) received a 'Low' rating, indicating a deficiency in cultivating students' perseverance. This shows that there is a tendency to praise natural talents rather than acknowledging hard work and effort. Shifting our focus to the behavior of a "Positive attitude towards students' challenges," it is worth noting that few (3 percent) of teachers showed a 'Low' proficiency in this area. In contrast, an overwhelming 89 percent demonstrated a 'Medium' rating, reflecting a neutral stance without actively fostering resilience. Finally, a significant 94 percent of teachers are in the 'Low' category of "Encourages goal setting,", suggesting a missed opportunity to foster perseverance through goal-oriented strategies. In contrast, a mere five percent demonstrated a 'Medium' proficiency by either discussing short- or long-term goals. In summary, the evaluation highlights the lack of teacher efforts to promote student perseverance and highlights areas for improvement.

Element 9: Social and Collaborative Skills.

Figure 3.5.6. Distribution of Social and Collaborative Skills by Behaviors



On average, their score in this element is 1.5 out of a possible 5 points, marking the lowest score among all the elements (*See Figure 3.5.1*). Figure 3.5.6 shows the distribution of teachers' scores for the social and collaborative skills element and its respective behaviors. Regarding promoting student collaboration through peer interaction, a substantial portion of teachers (81 percent) received a 'Low'' rating. This indicates a lack of emphasis on fostering collaborative efforts among students within these classrooms. In contrast, a modest seven percent demonstrated a ''Medium' proficiency, suggesting sporadic instances of superficial collaboration such as asking students to share materials to the person next to them. Similarly, a significant 87 percent of teachers scored 'low' on 'Moving to promote students' interpersonal skills', signaling a missed opportunity to develop students' interpersonal skills. These classrooms may lack strategies for nurturing skills like perspective taking, empathy, emotion regulation, and problem solving. Lastly, considering the way students collaborate through interacting with their peers, 78 percent of students were categorized as 'Low', indicating either a lack of collaboration or instances of negative behaviors during interactions. A smaller group of ten percent exhibited a 'Medium' proficiency, showcasing instances of surface-level collaboration combined with minor occurrences of negative behavior. In summary, this assessment illuminates the need to cultivate students' social and collaborative skills during class.

4 COMPARATIVE ANALYSIS OF TEACHING PRACTICES

4.1. Teaching Practices Analysis: MoECRT and MoRA[4]

Figure 4.1 displays average *Teach* scores between MoECRT and MoRA schools, highlighting category score differences from regression analysis (*See Table 4.1 in Appendix 4*).

Upon reviewing teaching practices between MoECRT and MoRA schools, MoECRT teachers averaged a score of 2.7, slightly higher than MoRA's 2.64. This 0.06-point difference indicates that MoECRT teachers scored approximately 0.03 SD higher than MoRA teachers.

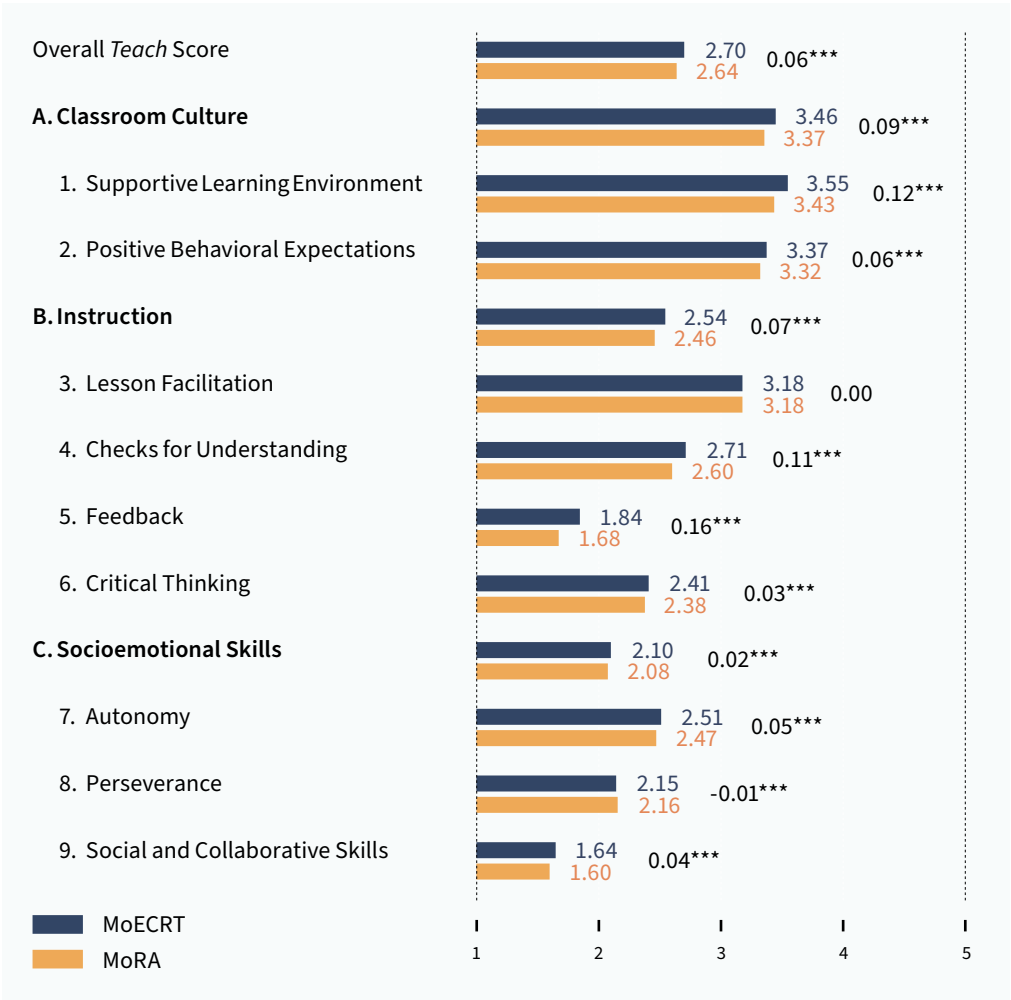
In the area of Classroom Culture, MoECRT teachers led with a mean score of 3.46 compared to MoRA's 3.37, a difference of 0.09 points. Within this area, MoECRT teachers exhibit a higher average score for fostering a supportive learning environment, with a mean of 3.55, which is 0.12 points above MoRA's average of 3.43.

Shifting focus to the Instruction area, MoECRT teachers attained an average score of 2.54, slightly higher than MoRA teachers, who averaged 2.46, marking a difference of 0.08 points. A difference is evident in the feedback element, with MoECRT teachers scoring 1.84, compared to MoRA's 1.68.

Lastly, in the Socioemotional Skills area, MoECRT scored 2.10 and MoRA, 2.08. In the social and collaborative skills component, MoECRT teachers scored 1.64 and MoRA, 1.60.

[4] For enhanced analytical precision, this section presents group differences to two decimal places.

Figure 4.1. MoECRT and MoRA Scores Across the Teach Areas



Note. The score difference between MoECRT and MoRA represents the disparity between groups as measured by a weighted regression analysis. *p<0.05, ** p<0.01, *** p<0.001.* *See Table 4.1 in Appendix 4.*

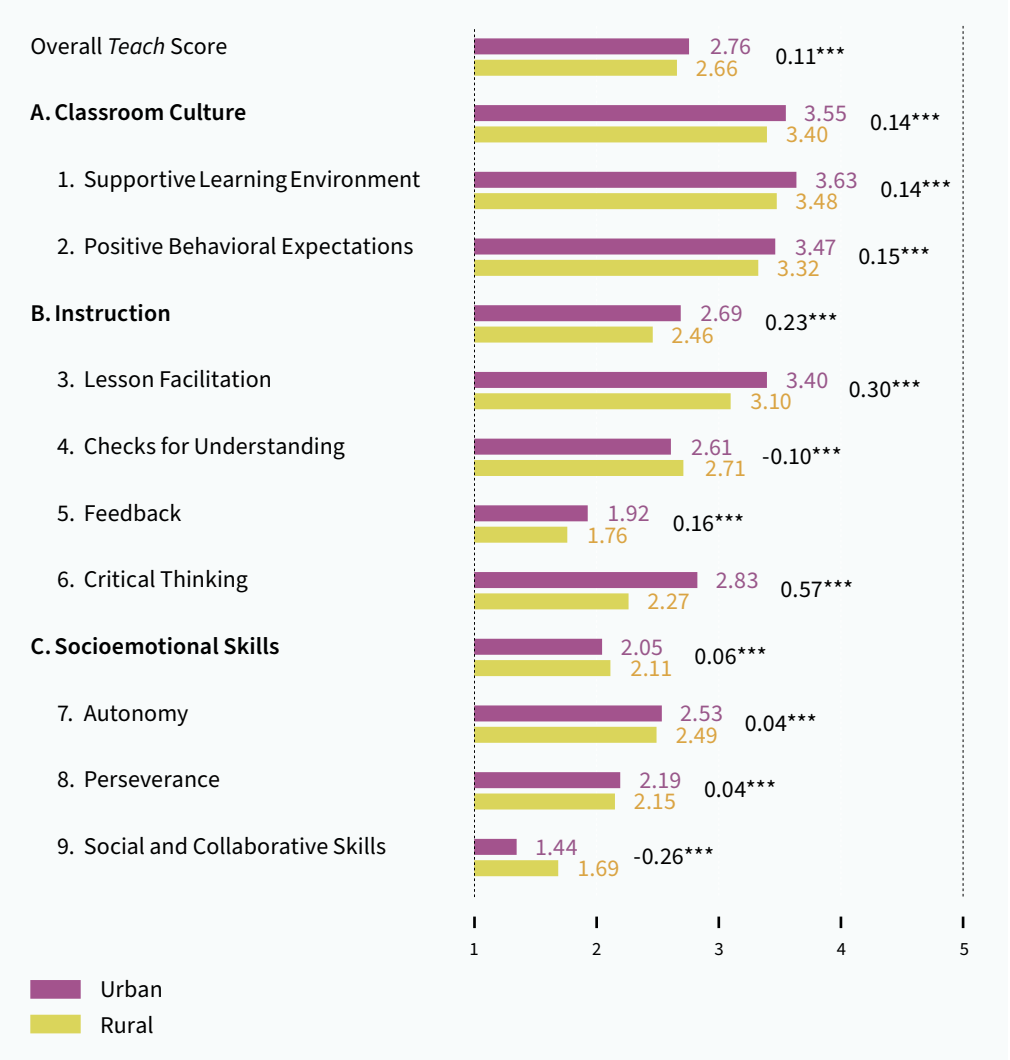
4.2. Teaching Practices Analysis: Urban and Rural

Figure 4.2 offers an analysis of average scores across Teach elements for two distinct school environments: Urban and Rural.

When observing the teaching practices between these school environments, urban teachers excelled in several elements. Overall, urban educators have an average score of 2.76, slightly surpassing their rural counterparts who recorded 2.66. This difference of 0.11 points translates to urban educators being approximately 0.06 SD more effective in this aspect.

In the area of Classroom Culture, urban educators have an edge with a score of 3.55, as opposed to rural teachers' 3.40. This difference suggests potential disparities in the classroom environment between the two settings. Urban teachers demonstrate a higher average score in fostering a supportive learning environment, with a score of 3.63 compared to rural teachers' 3.48. It implies urban teachers are treating all students with respect, and employing positive language, and addressing students' diverse needs.

Figure 4.2. Urban and Rural Scores Across the Teach Areas



Note. The score difference between MoECRT and MoRA represents the disparity between groups as measured by a weighted regression analysis. p<0.05, ** p<0.01, *** p<0.001. *See Table 4.2 in Appendix 4* for the regression results.

Turning our attention to Instruction, urban teachers, with a score of 2.69, significantly led by 0.23 points over rural teachers' 2.46. A notable disparity is observed in the critical thinking component, where urban teachers score 2.83 and rural teachers, 2.27. It suggests that urban teachers have a higher tendency to encourage open-ended questions and provide thought-provoking tasks compared to rural educators.

In the area of Socioemotional Skills, urban educators scored slightly lower, with a score of 2.05 compared to rural teachers' 2.11. Delving deeper, the autonomy element shows urban educators marginally ahead at 2.53 compared to rural teachers' 2.49. The perseverance element is closely matched between the two. However, when it comes to fostering a collaborative classroom ethos, rural educators take the lead. Their score of 1.69 in social and collaborative skills, underlines the emphasis on peer interactions and interpersonal skill cultivation, surpassing urban's 1.44.

In summary, while urban teachers generally performed better in several elements, especially in Classroom Culture and Instruction areas, the results spotlight distinct teaching practices and suggest areas of potential enhancement for both school environments.

4.3 Teaching Practices Analysis by Teacher Characteristics

This section discusses *Teach* scores in relation to teacher characteristics. With respect to the *Teach* score scores across teachers' gender, female teachers consistently edge out their male counterparts across all *Teach* elements (*See Table 4.5 in Appendix 4*). In Classroom Culture, female educators lead with an average of 3.45 compared to 3.39 by males. This suggests that they might be more effective at fostering a supportive environment and setting positive behavioral expectations. Regarding the Instruction area, scores between male and female teachers are closely matched, indicating they share similar instructional approaches.

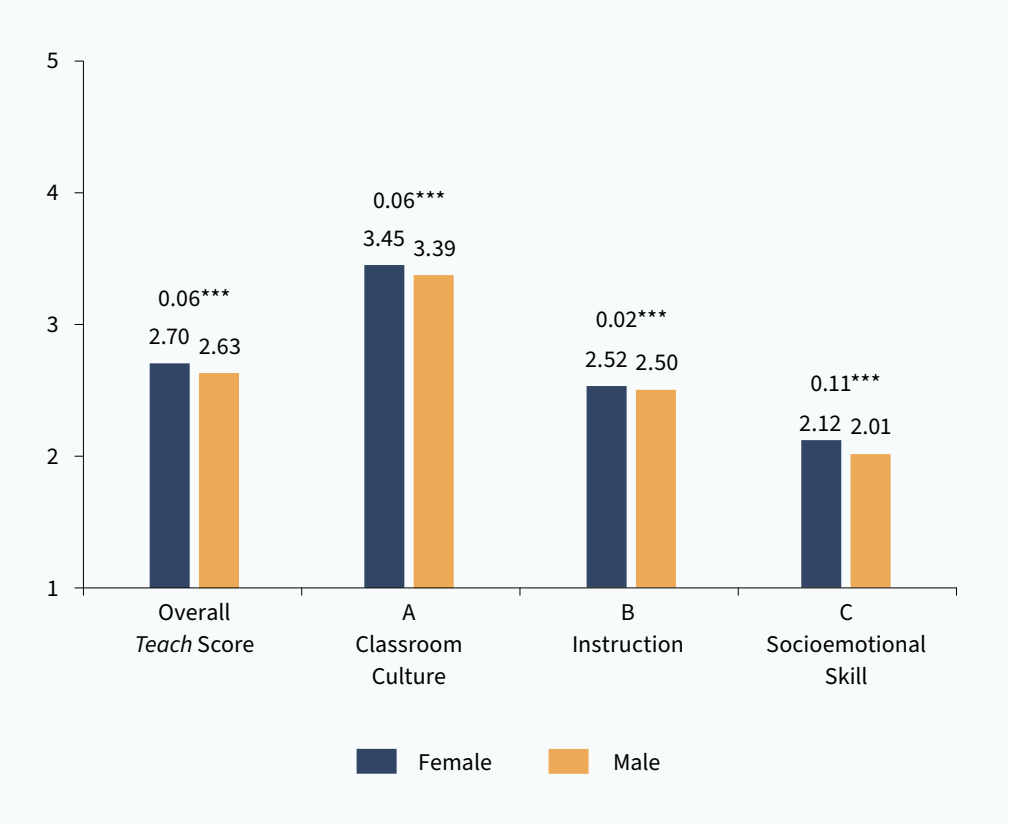
In the Socioemotional Skills area, female educators scored 2.12 compared to the male score of 2.01. This difference hints at female teachers' tendency to support student autonomy and foster social and collaborative skills. However, when it comes to instilling perseverance, the scores are closely matched.

Overall, female teachers show a slightly higher proficiency in multiple teaching domains, especially within Classroom Culture and Socioemotional Skills. However, the slight differences in scores between genders illuminate opportunities for improvement of both groups, particularly in the area of Instruction and Socioemotional Skills.

When analyzing *Teach* scores across various levels of teacher education, consistent patterns emerge. Teachers with postgraduate education tend to achieve the highest *Teach* scores, with undergraduate teachers following. Those with a diploma or equivalent education generally record lower scores. The differences in *Teach* scores are most marked within the domains of Instruction and Socioemotional Skills, with lower scores observed among teachers with less education. (*See Table 4.7 in Appendix 4*).

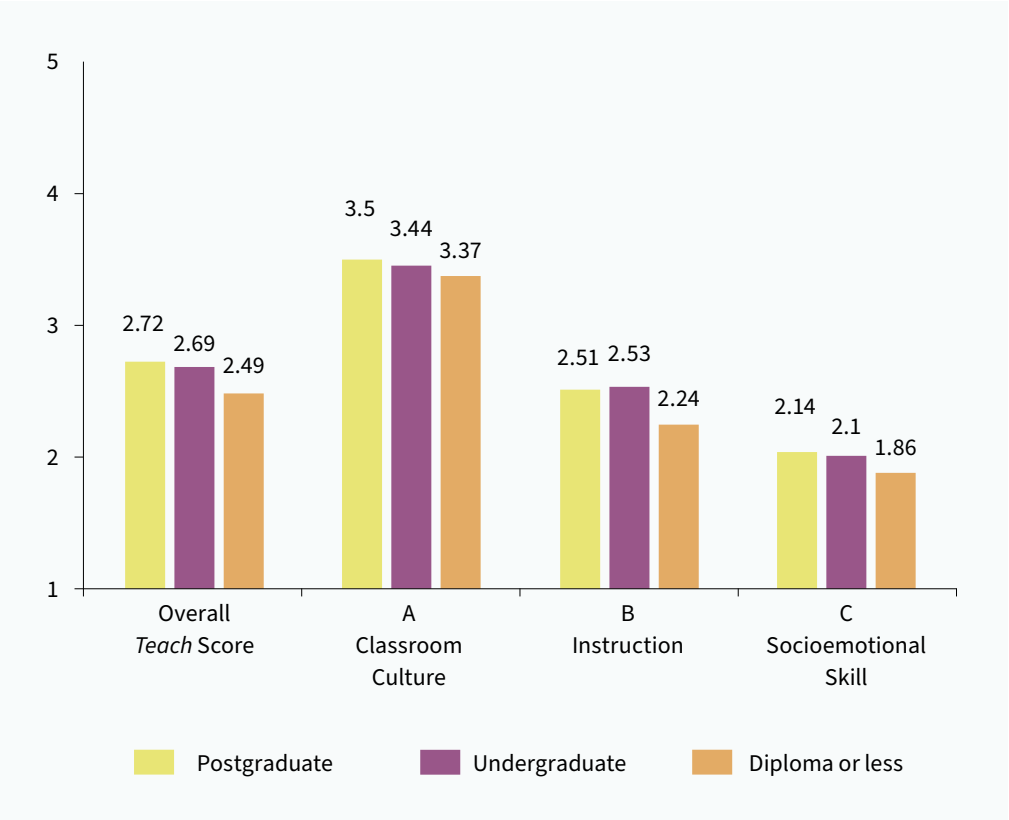
It reveals a positive relationship between higher education levels and higher *Teach* scores, implying that teachers with more advanced degrees tend to exhibit stronger teaching practices across various domains. The results shed light on the importance of considering the design and implementation of targeted teacher training programs, particularly for educators with lower levels of education.

Figure 4.3.1. Teach Area Scores by Teacher's Gender



Note. The *Teach* score difference represents the disparity between genders as measured by a weighted regression analysis. ** p<0.05, ** p<0.01, *** p<0.001.*

Figure 4.3.2. Teach Area Scores by Teacher's Education Level



Note. The figure present mean *Teach* scores across academic subjects See the details on Table 4.6 & 7 in Appendix 4.

4.4 Teaching Practices Analysis by Academic Subject and Curriculum

Figures 4.4.1 and 4.4.2 examine the *Teach* scores across academic subjects and academic curricula. First, when examining teaching practices across academic subjects, mathematics classes, with an average score of 2.72, are ahead in their general teaching practices compared to their counterparts in language (2.6) and other subjects (2.71). In the area of Classroom Culture, teachers tend to show better teaching practices when teaching math classes that treat students respectfully, use positive language and avoid bias. With respect to the Instruction area, teachers in mathematics classes tend to perform better, especially in lesson facilitation and feedback. It is pronounced in feedback practice, where they are more likely to provide specific comments that help clarify students' misunderstandings, scoring 1.98 compared to the 1.58 in language (0.4 mean difference, 0.2 SD). However, in socioemotional skills, teachers who taught other subjects seem to had a better score of 2.22. They particularly performed better in fostering student autonomy and promoting perseverance, evident from their practices of providing students with choices and acknowledging their efforts (*See Table 4.8 in Appendix 4*).

In essence, the variation in the *Teach* scores across academic subjects is especially noteworthy given that a single homeroom teacher typically covers all subjects. Such differences in scores across subjects highlight the importance of a subject-specific evaluation of teaching practices, emphasizing the need for improved teaching methods.

Figure 4.4.2 presents a comparison of *Teach* scores across different academic curriculums, shedding light on how curriculum choices are associated with teaching practices. Notably, the Merdeka Curriculum[5] outperforms the widely used curriculum, Kurikulum Tingkat Satuan Pendidikan (KTSP; translated as School-Based Curriculum) 2013[6], demonstrating an advantage in lesson facilitation (0.29 mean difference, 0.24 SD) and a substantial advantage in critical thinking (0.4 difference, 0.38 SD). These findings underscore Merdeka Curriculum's strong commitment to effective classroom guidance and the cultivation of critical thinking abilities (*See Table 4.11 and 4.12 in Appendix 4*).

These findings suggest that curriculum choices play a significant role in shaping teaching practices. To leverage these insights, educational policymakers and institutions should consider tailoring teacher training programs and support based on the specific curriculum in use, addressing areas where each curriculum may require additional focus or improvement to enhance overall teaching quality.

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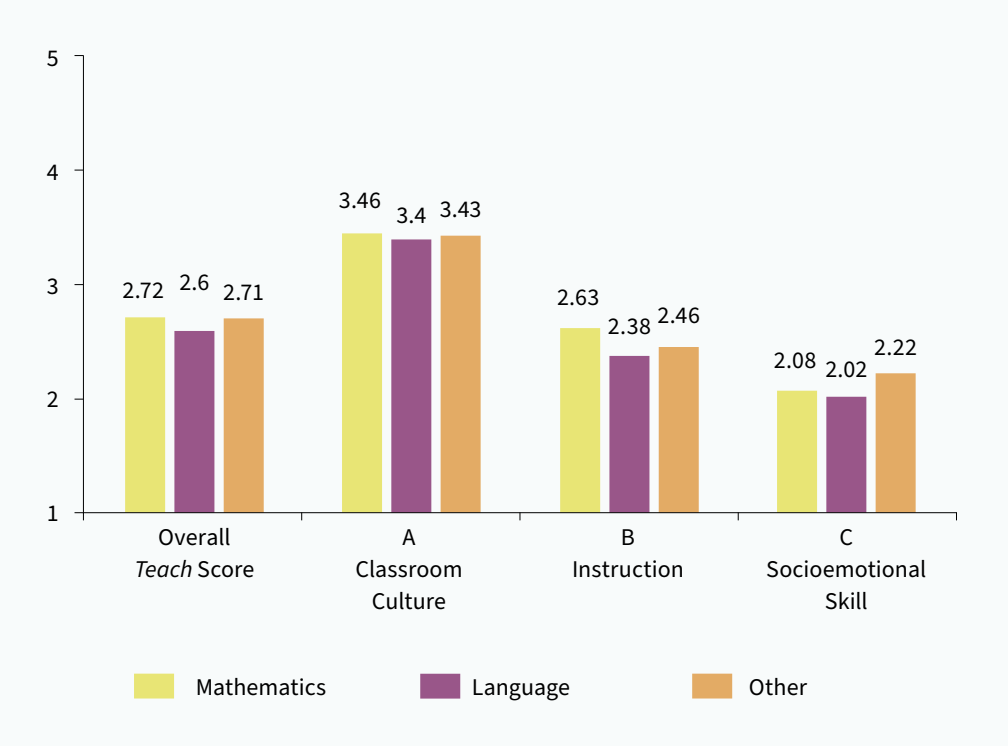
[5] Kurikulum Merdeka, translated as the emancipated curriculum, is part of Indonesia's latest educational reform introduced in 2022. This curriculum prioritizes flexibility and adaptability, steering away from standardized testing and rote memorization towards the cultivation of students' holistic competencies and character. For more information, visit https://kurikulum.kemdikbud.go.id/kurikulum-merdeka/

[6] Also known as Kurikulum 2013, it was Indonesia's education curriculum from 2013 to 2022. It introduced a competency-based approach and placed a strong emphasis on assessment. For more information, visit https://kurikulum.kemdikbud.go.id/kurikulum-2013.

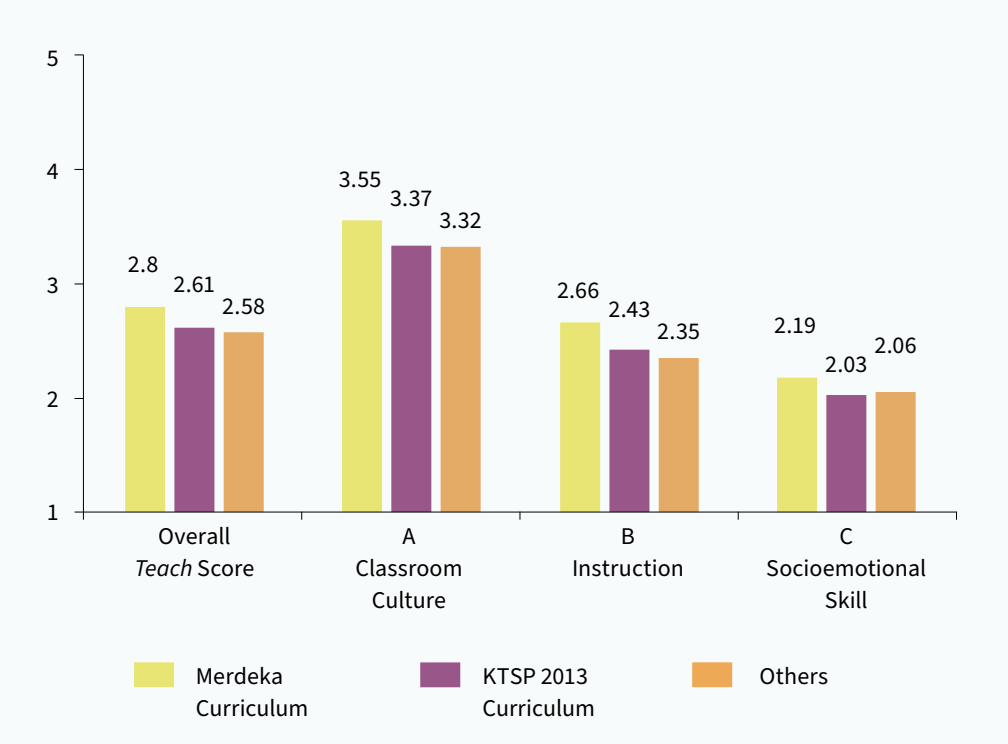
In conclusion, these findings emphasize the importance of tailoring teacher development and curriculum design to specific subject areas and curricular choices. By addressing the specific needs and strengths associated with each subject and curriculum, educational institutions can enhance overall teaching quality and contribute to better learning outcomes for students.

Figure 4.4.1. Teach Area Scores by Academic Subject



Note. The figure present mean Teach scores across academic subjects (See Table 4.8 in Appendix 4).

Figure 4.4.2. Teach Area Scores by Academic Curriculum



Note. The *Teach* score difference represents the disparity between genders as measured by a weighted regression analysis. * *p<0.05,* ** *p<0.01,* *** *p<0.001.*

5 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This report has shown that Indonesia primary school teachers demonstrate a number of pedagogical strengths and weaknesses in their classrooms. Results from Teach demonstrate that teachers have strong ability in classroom culture (88 percent score three and above), but less effective in giving instruction (26 percent score three and above) and are less skilled in socioemotional skills (only 10 precent score three and above).

Within the **Classroom Culture** area, teachers excel at creating a supportive learning environment by treating all students respectfully, using positive language, and being responsive to student needs (with an average score of 3.5 out of 5). They are also relatively effective in setting positive behavioral expectations, particularly in recognizing positive student behavior (3.4/5). Conversely, they exhibit less effectiveness in the **Instruction** area, defined by Teach as facilitating lessons (3.2/5), checking for understanding (2.7/5), providing feedback (1.8/5), and encouraging students to exercise critical thinking (2.4/5). Likewise, they demonstrate lower proficiency in **Socioemotional Skills** area, defined as instilling autonomy (2.5/5), promoting perseverance (2.2/5), and fostering social and collaborative skills (1.6/5) (*See Figure 3.2*).

The paper also reveals disparities in teaching quality among different groups. MoECRT teachers marginally outperform MoRA teachers, particularly in the area of providing clear and constructive feedback. In addition, urban teachers display better teaching practices compared to their rural counterparts, emphasizing the need for support and professional development initiatives in rural educational settings. Teacher characteristics, including gender and education level, are also related to teaching proficiency. Female teachers and teachers with higher education levels tend to have stronger teaching practices, particularly in instruction and socioemotional skills. Curriculum choices and academic subjects also play a significant role in shaping teaching practices. The Merdeka Curriculum outperforms the widely-used KTSP 2013 Curriculum indicating the importance of aligning curricula with modern teaching methodologies.

5.2 Recommendation

Based on the key findings from the research on teacher classroom observation in Indonesia, the following recommendations and suggestions are proposed for the government and relevant stakeholders to improve the quality of education:

1. Tailored teacher development is essential for Indonesia.

Indonesian teachers excel in fostering a positive classroom culture but require significant changes in improving Instruction and Socioemotional skill aspects in their teaching practice. This trend, seen in similar countries such as Vietnam, Mongolia, Philippines and China, underscores the need for targeted teacher training programs aimed at enhancing these areas, benefiting students' cognitive and socioemotional development. Below are some actionable steps to achieve this:

a. **Specialized Training Programs:** create and implement training modules specifically focused on improving instructional techniques and socioemotional skills. Partner with educational institutions/ colleges (LPTK) and NGOs to deliver these programs.

b. **Mentorship and Peer Learning:** Ensure the sustainability of mentorship programs such as the Guru Penggerak Program, where experienced teachers can guide and support less experienced peers, particularly in areas of instruction and socioemotional development. Unfortunately, the program is currently limited to teachers working under MoECRT and does not include MoRA teachers.

c. **Regular Workshops and Communities:** Organize regular workshops and community platforms to provide continuous professional development opportunities for teachers, ensuring they stay updated with the latest educational practices and methodologies.

2. Curriculum and School Differences Should Align More Closely with Modern Teaching Methods

The variation in the quality of teaching practices across different curricula, ministry oversight, and subjects indicates a need for educational policymakers to align curricula with modern teaching methodologies. In addition, teacher training programs should be tailored to specific to these needs. Here are some recommended actions:

a. **Curriculum Review and Alignment:** Conduct a comprehensive review of existing curricula (Merdeka Curriculum and KTSP 2013 Curriculum) and align them with modern teaching methodologies.

Engage educational experts to identify gaps and suggest improvements.

b. **Customized Teacher Training:** Develop training programs tailored to specific curricular requirements. Focus on areas where each curriculum may need improvement, such as lesson facilitation, critical thinking, and student engagement.

3. Educational Divides Need to be Bridged

Disparities between urban and rural teachers, especially in fostering critical thinking, highlight the need for targeted support in rural areas. Unfortunately, the current training targeted for rural area such as Guru Penggerak for special region is limited to MoECRT teachers only. Policymakers should invest in accessible training programs to equip rural teachers. In addition, encouraging teachers to pursue advanced degrees and providing opportunities for ongoing professional development are crucial to elevate teaching practices, particularly for those with lower education levels. The following steps can help bridge this divide:

a. **Targeted Rural Teacher Support:** Provide additional resources and support to rural teachers through specialized training programs aimed at enhancing critical thinking and problem-solving skills. Utilize technology to deliver remote training sessions and resources.

b. **Incentive Programs:** Currently, NGOs such as Indonesia Mengajar, which provide teaching internship opportunities in rural areas for fresh graduates, have a low conversion rate of these interns becoming actual teachers after completing the program. The government can introduce incentive programs for teachers working in rural areas to encourage retention and quality talents to become teachers. Offer scholarships and financial support for teachers pursuing advanced degrees can also support continuous learning for teachers.

c. **Collaboration with Higher Education Institutions:** Partner with universities and teacher training colleges to provide advanced degree programs and professional development courses tailored to the needs of teachers in different regions. The government can collaborate with teacher colleges or pre-service teacher training institutions to attract quality teachers to rural areas.

In conclusion, the findings from Teach in Indonesia highlight the need for targeted teacher development, curriculum alignment, and bridging educational divides to enhance teaching quality and improve the overall quality of education in Indonesia. These recommendations can guide educational policymakers and educational institutions in addressing the specific challenges and strengths associated with teaching practices in Indonesia.

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A1. *Teach* Sampling and Data Collection in Indonesia

1 *Teach* Sampling Process

This study was conducted as part of the Learning Loss Survey in 2023. It was designed as a panel survey to the the 2019 Service Delivery Indicators (SDI) survey established a nearly nationally representative benchmark of student learning outcomes in language (Bahasa Indonesia) and mathematics at the fourth-grade level, providing a pre-pandemic baseline for educational attainment. Therefore, sampling frame for this *Teach* study was built on the sampling frame of 2019 SDI, with expanded coverage to make the sample nationally representative by covering both MoECRT and MoRA schools and educational institutions. The study incorporated a carefully selected sample of 405 primary schools, representing a balance of 54 percent MoECRT schools and 46 percent MoRA schools, chosen to ensure a representative cross-section of the national school distribution.

In this study, a total of 501 teachers were observed using the *Teach* classroom observation tool at two time points—the first and last 15 minutes of their class—resulting in 1,002 observations. Of these, nine observations were excluded due to missing data, yielding a final dataset of 993 observations from 500 teachers. Observations were carried out in Grade 4 classrooms, focusing on a range of subjects including Mathematics, Language (Bahasa Indonesia), and additional areas like science and religion. To accurately reflect the national educational environment, the study also implemented school weights helped to normalize for variations in student body sizes and school characteristics across the different institutions, thereby ensuring that the findings are representative of the broader educational landscape in Indonesia. However, it should be noted that while our dataset is nearly nationally representative, it does not provide provincial or district-level representation due to the sampling design. Therefore, we have limited our work to only the national level results.

Table A1.1. Teach Sampling in Indonesia

Number of schools	**405**
% of SD (MoECRT)	54%
% of Madrasah (MoRA)	46%
% of Urban Schools	16%
% of Rural Schools	84%
Number of Teachers	**500**
% of Male Teachers	29%
% of Female Teachers	71%
# of Teach Observations	993
Medium Class Size	19
Number of Students	**9644**
% of Male Students	49%
% of Female Students	51%
Subject Distribution	
Math	46%
Language	31%
Others	23%

2 *Teach* Reliability Test

In our sample, nine observations were excluded due to missing data, resulting in an attrition rate of less than one percent. The pattern of missing data was found to be completely random, indicating that it is unlikely to skew the results, as confirmed by Little's Missing Completely At Random (MCAR) test (p-value > 0.1) (Little, 2013). In addition, to assess the reliability of the *Teach* elements alongside their related behaviors, we conducted a Cronbach's alpha test. This test measures the internal consistency of the *Teach* elements, specifically how well these elements correlate with each other. In other words, it helps us determine if the items within the *Teach* elements are consistently measuring the same underlying the construct of teaching quality. The outcome affirmed a robust internal consistency, evidenced by a Cronbach's alpha coefficient of .84 at the aggregate level (Tavakol & Dennick, 2011). Lastly, we conducted a confirmatory factor analysis (CFA) to verify the factor structure of *Teach*. The CFA determines whether these *Teach* elements are all related to and influenced by the underlying concept of *Teach*. The results show that the RMSEA suggests a reasonable fit (<0.07), both the CFI and TLI are below the commonly accepted thresholds for good or even acceptable fit (Xia, Y., & Yang, Y., 2019). Overall, both the Cronbach's alpha test and CFA results affirm the reliability of *Teach* score in Indonesia, demonstrating strong internal consistency and relationships among the elements.

3 *Teach* Training

This section further validate the use of Teach scores in the context of Indonesia. We began by translating all documents (modules, manuals, training PowerPoints, and *Teach* tools) into Bahasa Indonesia. For the practice videos, we provided Indonesian subtitles if the video is coming from other countries and produced a total of 16 videos of Indonesian classrooms, which were used to practice and examination during observer training for our enumerator of this study. Prior the training, we held discussions with teachers, researchers, and experts on the tools and how to translate the documents accurately. We also provided examples of each case based on the Indonesian local context in *Teach* manual Indonesia version. For instance, what is considered "positive learning behavior" or "positive language" in Indonesia might differ from that in Afghanistan or Tanzania, so we provided a specific sample of what is considered Low, Medium, or High for Indonesia classrooms.

We continued by showing the performance of observers after a 6-day training course. Then, we investigate *Teach* reliability in the field. A total of forty-four classroom observers participated in observer training to be raters. The observation team comprised professionals with a minimum of bachelor's degree, experienced enumerators and surveyors who have collected data related to the education field in the past. Observers participated in a six-day training that required them to practice coding using recorded videos, participate in a live field visit to MoECRT and MoRA schools in the Salatiga region, and pass the *Teach* reliability exam. The reliability exam required them to code 15-minute classroom observation segments in accordance with the Teach manual's rubric. After watching the 15-minute segment, observers were given 15 minutes to score the video. To pass the exam, they must be accurate within one of the master codes in eight of the ten scores (nine quality of teaching practices elements and the time on task element) for each segment. Observers were given two attempts to pass the exam. Of the 44 observers

that were trained and took the exam, 36 passed the exam on the first attempt. Those who did not pass (8) received a second attempt exam opportunity and 4 passed the exam. At the end a total of 40 enumerators were able to become *Teach* observers (*See Table A1.2*). Only certified observers who passed the exam then administered Teach during the data collection, with a total of 500 classes observed during the implementation.

Table A1.2. Success Rate on Teach Training

	Exam	Second Attempt	Final Result
Number of observers that took the exam	44	8	44
Number of observers that passed the exam	36	4	40
Success rate	82%	50%	91%

A2. Summary Statistics

Variable	Obs	Mean	SD	Min	Max
School location (Rural=1, Urban=2)	993	1.25	0.36	1	2
School type (MoRA=1, MoECRT=2)	993	1.74	0.50	1	2
School province	993	10.63	7.41	1	28
Teacher sex (Male=0, Female=1)	993	0.77	0.46	0	1
Teacher experience (0-5 years=1, 6-10 years=2, 10-20 years=3, Above 20 years = 4)	993	2.70	1.02	1	4
Teacher education level (High school=1, Tertiary equivalent=2, Graduate=3, Master's degree=4)	993	2.99	0.49	1	4
Overall Teach Score (1-5 scale)	993	2.68	0.42	1.42	4.08
0.1. Provide learning activity (S1) (Yes=1, No=0)	993	0.96	0.17	0	1
0.2. Students are on Task (S1) (Not on Task =1, Low=2, Medium=3, High=4)	993	3.36	0.76	1	4
0.1. Provide learning activity (S2) (Yes=1, No=0)	993	0.96	0.17	0	1
0.2. Students are on Task (S2) (Not on Task =1, Low=2, Medium=3, High=4)	993	3.30	0.77	1	4
0.1. Provide learning activity (S3) (Yes=1, No=0)	993	0.95	0.22	0	1
0.2. Students are on Task (S3) (Not on Task =1, Low=2, Medium=3, High=4)	993	3.21	0.85	1	4
Classroom Culture (1-5 scale)	993	3.44	0.57	1.5	4.5
Supportive Learning Environment (1-5 scale)	993	3.52	0.67	2	5
1.1. Respects students (1-4 scale)	993	3.82	0.47	2	4
1.2. Uses positive language (Low=2, Medium=3, High=4)	993	2.62	0.71	2	4
1.3. Responds to students' needs (N/A=1, Low=2, Medium=3, High=4)	993	1.83	1.15	1	4
1.4a. Gender bias and stereotypes (Low=2, Medium=3, High=4)	993	3.00	0.16	2	4
1.4b. Disability bias and stereotypes (Low=2, Medium=3, High=4)	993	3.00	0.00	3	3
1.4. Bias and stereotypes (Low=2, Medium=3, High=4)	993	2.99	0.15	2	4
Positive Behavioral Expectations (1-5 scale)	993	3.36	0.91	1	5
2.1. Clear behavioral expectations (Low=2, Medium=3, High=4)	993	3.59	0.70	2	4
2.2. Acknowledges positive behavior (Low=2, Medium=3, High=4)	993	2.19	0.45	2	4
2.3. Redirects misbehavior (Low=2, Medium=3, High=4)	993	3.69	0.64	2	4
Instruction (1-5 scale)	993	2.52	0.61	1	4.25
Lesson Facilitation (1-5 scale)	993	3.18	0.92	1	5
3.1. Articulates lesson objectives (Low=2, Medium=3, High=4)	993	3.34	0.60	2	4
3.2. Clear explanations (Low=2, Medium=3, High=4)	993	3.31	0.64	2	4

Variable	Obs	Mean	SD	Min	Max
3.3. Connects lesson (Low=2, Medium=3, High=4)	993	2.46	0.70	2	4
3.4. Models by enacting or thinking (Low=2, Medium=3, High=4)	993	3.12	0.86	2	4
Checks for Understanding (1-5 scale)	993	2.68	1.09	1	5
4.1. Uses questions and prompts (Low=2, Medium=3, High=4)	993	2.77	0.75	2	4
4.2. Monitors during independent/group work (N/A=1, Low=2, Medium=3, High=4)	993	2.53	1.22	1	4
4.3. Adjusts teaching (Low=2, Medium=3, High=4)	993	2.53	0.70	2	4
Feedback (1-5 scale)	993	1.80	0.94	1	5
5.1. Provides comments to clarify misunderstanding (Low=2, Medium=3, High=4)	993	2.56	0.74	2	4
5.2. Provides comments to identify successes (Low=2, Medium=3, High=4)	993	2.22	0.49	2	4
Critical Thinking (1-5 scale)	993	2.41	1.05	1	5
6.1. Asks open-ended questions (Low=2, Medium=3, High=4)	993	2.37	0.59	2	4
6.2. Provides thinking tasks (Low=2, Medium=3, High=4)	993	2.82	0.71	2	4
6.3. Students ask open-ended quest (Low=2, Medium=3, High=4)	993	2.83	0.66	2	4
Autonomy (1-5 scale)	993	2.50	1.00	1	5
7.1. Provides students with choice (Low=2, Medium=3, High=4)	993	2.26	0.54	2	4
7.2. Provides opportunities to take on roles (Low=2, Medium=3, High=4)	993	2.78	0.80	2	4
7.3. Students volunteer to participate (Low=2, Medium=3, High=4)	993	2.89	0.76	2	4
Socioemotional Skills (1-5 scale)	993	2.10	0.55	1	4
Perseverance (1-5 scale)	993	2.16	0.45	1	4
8.1. Acknowledges students' effort (Low=2, Medium=3, High=4)	993	2.20	0.39	2	4
8.2. Positive attitude toward students' challenges (Low=2, Medium=3, High=4)	993	3.05	0.33	2	4
8.3. Encourages goal setting (Low=2, Medium=3, High=4)	993	2.08	0.31	2	4
Social and Collaborative Skills (1-5 scale)	993	1.63	1.04	1	5
9.1. Promotes student collaboration (Low=2, Medium=3, High=4)	993	2.33	0.66	2	4
9.2. Promotes students' interpersonal skills (Low=2, Medium=3, High=4)	993	2.19	0.45	2	4
9.3. Students collaborate (Low=2, Medium=3, High=4)	993	2.36	0.67	2	4

Note. Scale for Teach Behaviors (1to 4): 1 Not Applicable, 2 Low, 3 Medium, 4 High. Weighted statistics, encompassing means, standard deviations, minimum, and maximum values, have been utilized to account for variations in student and school populations.

A3. Inter-item Correlations

Inter-item correlations are also computed to examine associations between the different elements of the *Teach* scale. Table A3 presents the descriptive statistics and inter-item correlations of the nine quality of teaching practices elements with means ranging from 1.63 to 3.52, and the time on task variables, with means of 3.4 and 3.3, and inter-item correlations ranging from 0 to 0.23.

Table A3. *Teach* Inter-Element Correlations

Variable	SLE	PBE	LF	CFU	F	CT	A	P	SCS
Supportive Learning Environment (SLE)	1.00								
Positive Behavioral Expectations (PBE)	0.03	1.00							
Lesson Facilitation (LF)	0.18*	0.20*	1.00						
Checks for Understanding (CFU)	0.24*	0.09*	0.05	1.00					
Feedback (F)	0.06*	0.03	0.00	0.30*	1.00				
Critical Thinking (CT)	0.17*	0.13*	0.15*	0.33*	0.10*	1.00			
Autonomy (A)	0.24*	0.14*	0.17*	0.18*	0.06	0.16*	1.00		
Perseverance (P)	0.18*	0.01	0.08*	0.16*	0.20*	0.11*	0.08*	1.00	
Social and Collaborative Skills (SCS)	0.16*	-0.02	0.02	0.17*	0.01	0.14*	0.12*	0.09*	1.00

Note. It shows pairwise correlations among the *Teach* elements, with sample weights applied to accommodate differences in student and school populations. The abbreviations are utilized to represent *Teach* elements. *$p < 0.05$.

A4. Comparative analysis of Teach Scores Across Groups

Table 4.1. Regression Analysis of *Teach* Scores: MoECRT versus MoRA

	MoECRT (1)		MoRA (2)		Diff (1-2)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Overall *Teach* Score	2.70	(0.43)	2.64	(0.43)	0.06***	(0.00)
A. Classroom Culture	3.46	(0.54)	3.37	(0.6)	0.09***	(0.00)
1. Supportive Learning Environment	3.55	(0.62)	3.43	(0.64)	0.12***	(0.00)
2. Positive Behavioral Expectations	3.37	(0.84)	3.32	(0.98)	0.06***	(0.00)
B. Instruction	2.54	(0.6)	2.46	(0.62)	0.08***	(0.00)
3. Lesson Facilitation	3.18	(0.87)	3.18	(0.93)	-0.00	(0.00)
4. Checks for Understanding	2.71	(1.06)	2.60	(1.09)	0.11***	(0.00)
5. Feedback	1.84	(0.97)	1.68	(0.97)	0.16***	(0.00)
6. Critical Thinking	2.41	(1.03)	2.38	(1.08)	0.03***	(0.00)
C. Socioemotional Skills	2.10	(0.58)	2.08	(0.57)	0.02***	(0.00)
7. Autonomy	2.51	(1.05)	2.47	(0.99)	0.05***	(0.00)
8. Perseverance	2.15	(0.51)	2.16	(0.46)	-0.01***	(0.00)
9. Social and Collaborative Skills	1.64	(1.08)	1.60	(1.05)	0.04***	(0.00)

Note. Weighted statistics account for population variations in student and school demographics across diverse educational institutions (MoRA and MoECRT). Regression analysis employs weighted methodology to address these variations, with standard errors reported in parentheses, signifying statistical significance as * p<0.05, ** p<0.01, *** p<0.001.

Table 4.2. Regression Analysis of *Teach*

	Urban (1)		Rural (2)		Diff (1-2)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Overall *Teach* Score	2.76	(0.4)	2.66	(0.44)	0.11***	(0.00)
A. Classroom Culture	3.55	(0.59)	3.4	(0.54)	0.14***	(0.00)
1. Supportive Learning Environment	3.63	(0.55)	3.48	(0.64)	0.14***	(0.00)
2. Positive Behavioral Expectations	3.47	(0.93)	3.32	(0.86)	0.15***	(0.00)
B. Instruction	2.69	(0.58)	2.46	(0.61)	0.23***	(0.00)
3. Lesson Facilitation	3.4	(0.83)	3.1	(0.89)	0.30***	(0.00)
4. Checks for Understanding	2.61	(1.06)	2.71	(1.07)	-0.10***	(0.00)
5. Feedback	1.92	(1.04)	1.76	(0.95)	0.16***	(0.00)
6. Critical Thinking	2.83	(1.08)	2.27	(1)	0.57***	(0.00)
C. Socioemotional Skills	2.05	(0.49)	2.11	(0.6)	-0.06***	(0.00)
7. Autonomy	2.53	(1.02)	2.49	(1.04)	0.04***	(0.00)
8. Perseverance	2.19	(0.57)	2.15	(0.47)	0.04***	(0.00)
9. Social and Collaborative Skills	1.44	(0.89)	1.69	(1.12)	-0.26***	(0.00)

Note. Weighted statistics account for population variations in student and school demographics across diverse educational institutions (MoRA and MoECRT). Regression analysis employs weighted methodology to address these variations, with standard errors reported in parentheses, signifying statistical significance as * p<0.05, ** p<0.01, *** p<0.001.

Table 4.3. Regression Result on *Teach* Global Score by School Characteristics

Variable	(1) Type	(2) Location	(3) Both	(4) Specified
School type	1.00		0.06***	
(MoECRT=1, MoRA=0)	0.03		(0.001)	
Urban	0.18*	0.11***	0.11***	
(Urban=1, Rural=0)		(0.001)	(0.001)	
School type and location (MoRA school in rural areas as a reference)				
MoECRT in Rural				0.08***
				(0.001)
MoRA in Urban				0.18***
				(0.002)
MoECRT in Urban				0.16***
				(0.001)
	2.58***	2.55***	2.45***	2.60***
Constant	(0.002)	(0.001)	(0.002)	(0.001)
	[2.40,2.54]	[2.36,2.61]	[2.23,2.46]	[2.64,2.87]
R^2	0.02	0.01	0.02	0.03
N	993	993	993	993

Note. Standard errors are clustered at the provincial level. 95% confidence intervals in brackets. * p<0.05, ** p<0.01, *** p<0.001. Reference groups: MoRA school observations in rural areas (N=459) In our sample, MoRA schools in rural areas have 459 observations (46%). MoECRT schools in rural regions account for 378 observations (38%). In urban areas, MoRA and MoECRT schools consist of 82 observations (8%) and 74 observations (7%) respectively.

Table 4.4. Distribution of Observations for MoRA and MoECRT Schools in Rural and Urban Areas

Authority	Location	Number of Observation	%
MoRA	Rural	459	46%
MoRA	Urban	82	8%
MoECRT	Rural	378	38%
MoECRT	Urban	74	7%

Table 4.5. Regression Analysis of *Teach* Scores: Female versus Male Teachers

	Female (1)		Male (2)		Diff (1-2)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Overall *Teach* Score	2.7	(0.43)	2.63	(0.42)	0.06***	(0.00)
A. Classroom Culture	3.45	(0.55)	3.39	(0.59)	0.06***	(0.00)
1. Supportive Learning Environment	3.53	(0.61)	3.49	(0.69)	0.04***	(0.00)
2. Positive Behavioral Expectations	3.38	(0.88)	3.3	(0.87)	0.08***	(0.00)
B. Instruction	2.52	(0.61)	2.5	(0.87)	0.02***	(0.00)
3. Lesson Facilitation	3.18	(0.88)	3.17	(0.92)	0.02***	(0.00)
4. Checks for Understanding	2.68	(1.06)	2.67	(1.07)	0.01***	(0.00)
5. Feedback	1.78	(0.99)	1.86	(0.94)	-0.08***	(0.00)
6. Critical Thinking	2.44	(1.03)	2.29	(1.08)	0.15***	(0.00)
C. Socioemotional Skills	2.12	(0.58)	2.01	(0.57)	0.11***	(0.00)
7. Autonomy	2.56	(1.03)	2.29	(1.02)	0.27***	(0.00)
8. Perseverance	2.14	(0.48)	2.21	(0.56)	-0.07***	(0.00)
9. Social and Collaborative Skills	1.66	(1.1)	1.54	(0.99)	0.11***	(0.00)

Note. Weighted statistics account for population variations in student and school demographics across diverse educational institutions (MoRA and MoECRT). Regression analysis employs weighted methodology to address these variations, with standard errors reported in parentheses, signifying statistical significance as * p<0.05, ** p<0.01, *** p<0.001.

Table 4.6. *Teach* Score by the Level of Teacher Education

	Postgraduate (1)		Undergraduate (2)		Diploma or less (3)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Overall *Teach* Score	2.72	(0.56)	2.69	(0.42)	2.49	(0.35)
A. Classroom Culture	3.5	(0.67)	3.44	(0.55)	3.37	(0.58)
1. Supportive Learning Environment	3.48	(0.64)	3.52	(0.62)	3.42	(0.66)
2. Positive Behavioral Expectations	3.52	(0.97)	3.35	(0.87)	3.32	(0.91)
B. Instruction	2.51	(0.69)	2.53	(0.6)	2.24	(0.52)
3. Lesson Facilitation	3.21	(0.97)	3.18	(0.87)	3.12	(1)
4. Checks for Understanding	2.46	(0.94)	2.72	(1.07)	2.2	(1.1)
5. Feedback	2	(1.06)	1.8	(0.98)	1.56	(0.67)
6. Critical Thinking	2.35	(1.01)	2.43	(1.05)	2.08	(0.95)
C. Socioemotional Skills	2.14	(0.61)	2.1	(0.58)	1.86	(0.43)
7. Autonomy	2.65	(1.05)	2.5	(1.03)	2.27	(0.94)
8. Perseverance	2.13	(0.37)	2.16	(0.51)	2.07	(0.32)
9. Social and Collaborative Skills	1.64	(1.02)	1.65	(1.09)	1.23	(0.69)

Note. Weighted statistics account for population variations in student and school demographics across diverse educational institutions. The sample class for teachers with a "Diploma or less" education level is 68, while there are 883 teachers with an "Undergraduate" degree and 42 teachers with a "Postgraduate" degree.

Table 4.7. Regression Result on *Teach* Global Score by Teacher's education level

	(1) Overall *Teach* Score	(2) Classroom Culture	(3) Instruction	(4) Socioemotional Skills
Undergraduate	0.20***	0.07***	0.29***	0.25***
	(0.002)	(0.003)	(0.002)	(0.002)
Postgraduate	0.23***	0.14***	0.27***	0.28***
	(0.003)	(0.004)	(0.003)	(0.003)
Constant	2.49***	3.37***	2.24***	1.86***
	(0.002)	(0.003)	(0.002)	(0.002)
R^2	0.01	0.00	0.01	0.01
N	993			

Note. Reference groups: Teachers with education below diploma (N=68). Regression analysis employs weighted methodology to account for variations in student and school populations, with standard errors reported in parentheses. * p<0.05, ** p<0.01, *** p<0.001.

Table 4.8. *Teach* Score by Academic Subject

	Mathematics (N=230) (1)		Language (N=154) (2)		Other (N=117) (3)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Overall *Teach* Score	2.72	(0.41)	2.6	(0.41)	2.71	(0.48)
A. Classroom Culture	3.46	(0.57)	3.4	(0.56)	3.43	(0.54)
1. Supportive Learning Environment	3.59	(0.58)	3.45	(0.66)	3.45	(0.65)
2. Positive Behavioral Expectations	3.33	(0.92)	3.35	(0.9)	3.41	(0.77)
B. Instruction	2.63	(0.58)	2.38	(0.62)	2.46	(0.62)
3. Lesson Facilitation	3.33	(0.82)	3.02	(0.93)	3.08	(0.91)
4. Checks for Understanding	2.84	(1.08)	2.42	(1)	2.69	(1.06)
5. Feedback	1.98	(1.05)	1.58	(0.83)	1.7	(0.91)
6. Critical Thinking	2.36	(1.04)	2.5	(1.1)	2.38	(0.97)
C. Socioemotional Skills	2.08	(0.56)	2.02	(0.49)	2.22	(0.68)
7. Autonomy	2.57	(1.04)	2.35	(0.95)	2.55	(1.09)
8. Perseverance	2.17	(0.54)	2.1	(0.42)	2.21	(0.49)
9. Social and Collaborative Skills	1.51	(0.95)	1.6	(1.04)	1.9	(1.27)

Note. Others refer to classes, including Arabic, English, Quran/ Islamic Studies, Science, etc

Table 4.9. Regression Result on *Teach* Score by Academic Subject

	(1) Overall *Teach* Score	(2) Classroom Culture	(3) Instruction	(4) Socioemotional Skills
Language	-0.13***	-0.06***	-0.25***	-0.07***
	(0.001)	(0.001)	(0.001)	(0.001)
Others	-0.02***	-0.03***	-0.17***	0.14***
	(0.001)	(0.001)	(0.001)	(0.001)
Constant	2.72***	3.46***	2.63***	2.08***
	(0.001)	(0.001)	(0.001)	(0.001)
R^2	0.02	0.00	0.03	0.02
N	993			

Note. Reference groups: Mathematic teachers (N=456). Regression analysis employs weighted methodology to account for variations in student and school populations, with standard errors reported in parentheses. * p<0.05, ** p<0.01, *** p<0.001.

Table 4.10. *Teach* Score by Academic Curriculum

	Curriculum Merdeka (N=263) (1)		Curriculum KTSP 2013 (N=700) (2)		Others (N=30) (3)	
Element	**Mean**	**(SD)**	**Mean**	**(SD)**	**Mean**	**(SD)**
Overall *Teach* Score	2.8	(0.42)	2.61	(0.42)	2.58	(0.29)
A. Classroom Culture	3.55	(0.55)	3.37	(0.55)	3.32	(0.53)
1. Supportive Learning Environment	3.64	(0.54)	3.43	(0.66)	3.58	(0.61)
2. Positive Behavioral Expectations	3.45	(0.91)	3.3	(0.85)	3.05	(0.83)
B. Instruction	2.66	(0.58)	2.43	(0.61)	2.35	(0.47)
3. Lesson Facilitation	3.35	(0.86)	3.07	(0.88)	2.82	(0.88)
4. Checks for Understanding	2.72	(0.98)	2.66	(1.12)	2.69	(0.93)
5. Feedback	1.9	(1.02)	1.73	(0.94)	1.78	(0.75)
6. Critical Thinking	2.65	(1.01)	2.25	(1.04)	2.11	(0.79)
C. Socioemotional Skills	2.19	(0.6)	2.03	(0.55)	2.06	(0.46)
7. Autonomy	2.65	(1.1)	2.4	(0.97)	2.57	(0.87)
8. Perseverance	2.22	(0.56)	2.11	(0.45)	2.13	(0.44)
9. Social and Collaborative Skills	1.71	(1.09)	1.58	(1.06)	1.48	(0.77)

Note. Weighted statistics account for population variations in student and school demographics. The sample size for Merdeka Curriculum observations is 263, while for KTSP 2013, it is 700, and for the "Other" category, it is 30. Others refer to curriculums, including national emergency, KTSP 2006, etc.

Table 4.11. Regression Result on *Teach* Score by Academic Curriculum

	(1) Overall *Teach* Score	(2) Classroom Culture	(3) Instruction	(4) Socioemotional Skills
Others	-0.03***	-0.05***	-0.08***	0.03***
	(0.003)	(0.005)	(0.004)	(0.004)
Merdeka Curriculum	0.19***	0.18***	0.23***	0.16***
	(0.001)	(0.001)	(0.001)	(0.001)
Constant	2.61***	3.37***	2.43***	2.03***
	(0.000)	(0.001)	(0.001)	(0.001)
R^2	0.05	0.03	0.04	0.02
N	993			

Note. Reference groups: Mathematic teachers (N=456). Regression analysis employs weighted methodology to account for variations in student and school populations, with standard errors reported in parentheses. * p<0.05, ** p<0.01, *** p<0.001.

Table 4.12. Regression Analysis of *Teach Scores* between Kurikulum Merdeka and Kurikulum KTSP 2013

	Curriculum Merdeka (1)		Curriculum KTSP 2013 (2)		Diff (1-2)	
Element	**Mean**	**(SD)**	**Mean**	**(SD)**	**Mean**	**(SD)**
Overall *Teach* Score	2.8	(0.42)	2.61	(0.42)	0.19***	(0.001)
A. Classroom Culture	3.55	(0.55)	3.37	(0.55)	0.18***	(0.001)
1. Supportive Learning Environment	3.64	(0.54)	3.43	(0.66)	0.22***	(0.001)
2. Positive Behavioral Expectations	3.45	(0.91)	3.3	(0.85)	0.15***	(0.002)
B. Instruction	2.66	(0.58)	2.43	(0.61)	0.23***	(0.001)
3. Lesson Facilitation	3.35	(0.86)	3.07	(0.88)	0.29***	(0.002)
4. Checks for Understanding	2.72	(0.98)	2.66	(1.12)	0.06***	(0.002)
5. Feedback	1.9	(1.02)	1.73	(0.94)	0.18***	(0.002)
6. Critical Thinking	2.65	(1.01)	2.25	(1.04)	0.40***	(0.002)
C. Socioemotional Skills	2.19	(0.6)	2.03	(0.55)	0.16***	(0.001)
7. Autonomy	2.65	(1.1)	2.4	(0.97)	0.26***	(0.002)
8. Perseverance	2.22	(0.56)	2.11	(0.45)	0.10***	(0.001)
9. Social and Collaborative Skills	1.71	(1.09)	1.58	(1.06)	0.13***	(0.002)

Note. Weighted statistics account for population variations in student and school demographics across diverse educational institutions (MoRA and MoECRT). Regression analysis employs weighted methodology to address these variations, with standard errors reported in parentheses. * p<0.05, ** p<0.01, *** p<0.001.

A5. *Teach* Score Distribution and Rubrics at A Glance

Time on Learning	**Teacher provides learning activity**	No	Yes		
		4%	96%		
	Students are on task		Low	Medium	High
			6 or more students are off task	2 to 5 students are off task	0 or 1 students are off task
			10%	39%	48%

Area	Element	Behaviors	Low Score & Description	Medium Score & Description	High Score & Description	N/A
Classroom Culture	**SUPPORTIVE LEARNING ENVIRONMENT:** The teacher creates a classroom environment where students can feel emotionally safe and supported. Moreover, all students feel welcome, as the teacher treats all students respectfully.	**1.1:** Respect	2% Does not treat all respectfully	18% Treats all somewhat respectfully	80% Treats all respectfully	0%
		1.2: Positive Language	61% Does not use positive language	26% Uses some positive language	13% Consistently uses positive language	0%
		1.3: Responds to Needs	6% Is not aware or does not respond to needs	2% Responds but does not address the problem	17% Responds & addresses the problem	75%
		1.4: Bias and Stereotypes	1% Exhibits bias or reinforces stereotypes	98% Does not exhibit bias but does not challenge stereotypes either	1% Does not exhibit bias and challenge stereotypes	0%
		1.4a: Gender Bias and Stereotypes	1% Exhibits gender bias or reinforces stereotypes	98% Does not exhibit gender bias but does not challenge stereotypes either	1% Does not exhibit gender bias and challenge stereotypes	0%
		1.4b: Disability bias and challenges stereotypes	0% Exhibits gender bias or reinforces stereotypes	100% Does not exhibit disability bias but does not challenge stereotypes either	0% Does not exhibit disability bias and challenge stereotypes	0%

Area	Element	Behaviors	Low Score & Description	Medium Score & Description	High Score & Description	N/A
Classroom Culture	**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.	**2.1:** Behavioral Expectations	12% Does not set clear expectations	18% Treats all somewhat respectfully	80% Treats all respectfully	0%
		2.2: Acknowledges Positive Behavior	90% Does not acknowledge positive behavior	7% Acknowledges some behavior	3% Acknowledges positive behavior	0%
		2.3: Redirects Misbehavior	10% Ineffectively redirects	12% Effectively redirects or somewhat effective	78% Effectively redirects or students are well-behaved	0%
Instruction	**LESSON FACILITATION:** The teacher facilitates the lesson to promote comprehension by explicitly articulating the objectives, providing clear explanations of concepts, and connecting the lesson with other content knowledge or students' experiences.	**3.1** Articulates Lesson Objectives	7% Does not state objective or cannot be inferred	53% States broad objective or can be inferred	40% States specific objective that is aligned to activities	0%
		3.2 Clear Explanations	12% Confusing or no explanation	54% Somewhat clear explanation	34% Clear and straightforward explanation	0%
		3.3 Connects Lesson	73% Does not connect	15% Superficially or unclearly connects	12% Meaningfully connects	0%
		3.4 Models by Enacting or Thinking Aloud	36% Does not model	27% Partially models	37% Completely models	0%
	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.	**4.1** Uses Questions & Prompts to Determine Understanding	43% Either does not ask or the class responds in synchrony	37% Asks effectively only of a few students	20% Asks effectively of most students	0%
		4.2 Monitors During Independent / Group Work	19% Does not monitor students	19% Monitors some students	31% Systematically monitors most students	31%
		4.3 Adjusts teaching	66% Does not adjust	22% Adjusts, but briefly and superficially	12% Substantially adjusts	0%

Area	Element	Behaviors	Low Score & Description	Medium Score & Description	High Score & Description	N/A
Instruction	**FEEDBACK:** The teacher provides specific comments or prompts to help identify misunderstandings, understand successes, and guide thought processes to promote learning.	**5.1** Provides Comments / Prompts to Clarify Misunderstandings	61% Does not provide comments about misunderstandings or comments are simple	25% Provides general or superficial comments about misunderstandings	15% Provides specific & substantive comments about misunderstandings	0%
		5.2 Provides Comments / Prompts to Identify Successes	86% Does not provide comments about successes or comments are simple	10% Provides general or superficial comments about successes	4% Provides specific and substantive comments about successes	0%
	CRITICAL THINKING: The teacher builds students' critical thinking skills by encouraging them to actively analyze content.	**6.1** Asks Open-ended Questions	78% Do not ask OR asks one open-ended question	15% Asks two or more but does not build on student responses or 1 is a follow-up to a response	7% Asks 3+ and at least 1 builds upon student responses	0%
		6.2 Provides Thinking Tasks	34% Does not provide thinking tasks	48% Provides superficial thinking tasks	18% Provides substantial thinking tasks	0%
		6.3 Students ask Open-Ended Questions and/ or Perform Thinking Tasks	32% Students neither ask nor perform	54% Students do not ask, but perform superficial thinking tasks	14% Students ask and/or perform substantial thinking tasks	0%
Socioemotional Skills	**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.	7.1 Provides Students with Choices	87% Does not explicitly provide choices	6% Explicitly provides with at least 1 superficial choice	7% Explicitly provides with at least 1 substantive choice	
		7.2 Provides Opportunities to Take on Roles	49% Does not provide opportunities	29% Provides opportunities to take on limited roles	22% Provides opportunities to take on meaningful roles	
		7.3 Students Volunteer to Participate	40% Students do not volunteer	38% Few students volunteer by expressing their ideas and taking on roles	22% Most students volunteer by expressing their ideas and taking on roles	

Area	Element	Behaviors	Low Score & Description	Medium Score & Description	High Score & Description	
Socioemotional Skills	**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.	8.1 Acknowledges Students' Efforts	87% Does not acknowledge efforts	12% Sometimes acknowledges efforts	1% Frequently acknowledges and identifies efforts	
		8.2 Positive Attitude Toward Students' Challenges	3% Has a negative attitude	89% Has a neutral attitude	8% Has a positive attitude	
		8.3 Encourages Goal setting	94% Does not encourage short or long-term goalsetting	5% Encourages short or long-term goalsetting, or discusses their importance	1% Encourages short and long-term goalsetting	
	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.	9.1 Promotes student collaboration	82% Does not promote collaboration among students	7% Promotes superficial student collaboration	11% Promotes substantial student collaboration	
		9.2 Promotes Student Interpersonal Skills	87% Does not promote interpersonal skills	10% Briefly or superficially promotes interpersonal skills	3% Promotes interpersonal skills	
		9.3 Students collaborate with one another	78% Students do not collaborate or display negative behaviors	11% Students collaborate some and rarely display negative behaviors	11% Students consistently collaborate and display no negative behavior	

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