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Impact Evaluation Report

STiR Education - Indonesia

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Abbreviations

ASER	Annual Status of Education Report
BBGP	Center for Teacher Movers and School Movers
BBPMP	Center for Education Quality Assurance
CPD	Continuous Professional Development
DC	District Champion
DEA	District Education Agency
DESSA	Devereux Student Strengths Assessment
DID	Difference-In-Difference
DL	District Leader
EL	Education Leaders
ELM	Education Leader Managers
FGD	Focus Group Discussion
FLN	Foundational Literacy and Numeracy
GDP	Gross Domestic Product
RFP	Request for Proposal
ICAN	International Common Assessment of Numeracy
IDELA	International Development and Early Learning Assessment
IDI	In-depth Interview
LAT	Learning Assessment Tool
LIC	Learning Improvement Cycle
MCQ	Multiple-choice Questionnaire
MIS	Management Information Systems
MoECRT	Ministry of Education, Culture, Research, and Technology
MOU	Memorandum of Understanding
NGO	Non-Government Organisation
OECD DAC	Organisation for Economic Cooperation and Development-Development Assistance Committee
PISA	Programme for International Student Assessment
PSU	Primary Sampling Unit
SEL	Social and Emotional Learning
SROI	Social Return on Investment
TALIS	Teaching and Learning International Survey
TDC	Teacher Development Coordinator
TNM	Teacher Network Meeting
UNICEF	United Nations International Children's Emergency Fund
UUID	Used unique identifiers
WCQ	Work Climate Questionnaire
YBPU	Yayasan Bakti Pendidikan Unggul

Executive Summary



Background of the education sector in Indonesia

School education in Indonesia has experienced significant transformations over the past few years. These reforms have been directed towards improving educational outcomes through a range of measures, including expanding access to high-quality learning materials, and improving funding to rural schools. Recognising the critical role played by teachers, the Government of Indonesia has prioritized its efforts to enhance teacher skill and capacity development (MoECRT 2023).

The revival of peer-collaboration groups such as the *Kelompok Kerja Guru* (teacher working groups) and *Kelompok Kerja Kepala Sekolah* (principal working groups) highlights the shifting focus, geared towards empowering teachers and principals by elevating their leadership skills and improving motivation levels (MoECRT 2023).

At the school level, this is formalized through the *Profil Pelajar Pancasila* (PPP), which aims to create responsible citizens by promoting holistic development and focusing on soft skills such as independent thinking, creative problem-solving, and adopting a global outlook, all while grounding students in the country's religious and moral values (MoECRT 2023).

Given this context, STiR Education's programmatic focus on enhancing intrinsic motivation across the school education hierarchy to improve academic outcomes is found to be aligned with the principles and practices of the Government of Indonesia in education.

About the Impact Evaluation Study

The primary focus of this impact evaluation study was to assess whether the STiR Education programme resulted in achieving the intended impact, i.e., an improvement in learning outcomes of children. Further, the impact evaluation study delved into understanding the level of achievement of outcomes pertaining to improvement in motivation levels, systemic and procedural transformation, and role-modelling.

Study Methodology

As a first step of evaluation, a literature review was conducted during the project initiation stage, and the findings from this review were presented in the inception report. The review covered a range of disciplines, including educational psychology, motivational theory, teacher capacity development, and school education environment. This review highlighted the methods by which causal pathways between the programme intervention and expected impact can be mapped, toolkits and assessments, usage of different research techniques, and approaches to analysis especially in the field of primary education.

Based on the findings of the review and discussions with the STiR Education M&E team, the study adopted a mixed-methods quasi-experimental research design, incorporating critical quantitative insights from various assessments and surveys, and enhancing depth and nuance through qualitative interviews. It is to be noted that baseline studies were not conducted earlier.

Quantitative data was collected from students, their parents, and teachers across the treatment schools (schools with STiR Education programme) and control schools (schools without STiR Education programme). While the students responded to a two-stage in-class assessment covering foundational literacy and numeracy, and social and emotional learning, their parents provided critical information on their household's socio-economic conditions and home learning environment. The teachers' survey

covered different aspects such as their background, the nature of work, working environment and need satisfaction, teaching behaviours, and work-task motivation.

Qualitative interviews were conducted with parents of students, teachers, school education leaders (principals), district education leaders, ministry officials, and STiR Education and Bakti Barito¹ (YBPU) programme teams. The qualitative interviews aimed to gather richer information about teaching and coaching behaviours, programme operations, systemic engagement, perspectives on programme effectiveness and stories of success or failure.

Descriptive statistics and regression analysis were used to analyse the quantitative data. The regression analysis considered the scores from the students' assessments (dependent variable) and the parents' demographic data and presence of STiR Education (independent variables). The regression models aimed to examine the extent of STiR Education's impact on student scores.

The descriptive analysis was conducted to obtain an overall comparison of key elements between the treatment and control schools.

Qualitative data was coded and analysed thematically to draw specific insights in alignment with the key evaluation questions.

Summary of Data Collected

Table 1: Summary of Data Collected

#	Type of Data	Instrument	Quantity
1.	Students' socio-economic background	Parent forms	848
2.	Learning and social-emotional assessment (LAT/SEL)	Student in-class test	930
3.	Teacher background, need satisfaction, motivation	Teacher survey	80
4.	Teacher interviews	Semi-structured questionnaire	25
5.	Education leader (school principal)	Semi-structured questionnaire	25
6.	Education leader manager interviews	Semi-structured questionnaire	11
7.	District Education Officer	Semi-structured questionnaire	2
8.	Ministry official interview	Semi-structured questionnaire	1
9.	Parents interviews	Semi-structured questionnaire	25
10.	STiR Education and YBPU programme team	Semi-structured questionnaire	4

¹ YBPU's mission is to address Indonesia's environmental and educational challenges by working collectively with partners and the community. Their key areas of focus include Education, Environment, Economy and Social.

<https://baktibarito.com/>

Key Findings

Evaluation question 1: What is the impact of STiR Education's programme on student learning outcomes- their foundations of learning, and their socio emotional learning?

Learning Assessment

The STiR programme had a positive impact on student learning outcomes. The overall effect size was 7.03%, with an effect size in standard deviation of 0.097, indicating a positive impact on student learning outcomes². Literacy performance³ showed the strongest gains with an effect size of 16.4% and an effect size in standard deviation of 0.156. The effect size in numeracy⁴ was 4.37%, with an effect size in standard deviation of 0.055. Lumajang emerged as the top-performing district in both literacy and numeracy, with strong performance in geometry, counting, and measurement.

The programme also influenced social-emotional learning outcomes, with treatment students reporting higher reliance on mothers for emotional support (47.1% vs. 34.8%) and fathers for academic support (33.5% vs. 17.2%). Peer support was also stronger in treatment districts, with 42.3% relying on friends, compared to 24.5% in control. In conflict resolution, treatment students demonstrated higher help-seeking behaviour (15.7% vs. 11.4%) and lower conflict escalation (5.3% vs. 6.5%).

However, numeracy improvements were not statistically significant, and 5.2% of treatment students reported having no emotional support, compared to 0.5% in control. Similarly, 13.2% of treatment students lacked academic support, compared to 4.9% in control. Empathy and emotional recognition were weaker in the treatment group, with more students misinterpreting situations as intentional (26% vs. 24.1%) and higher non-empathetic responses (6.4% vs. 3.5%).

Despite these challenges, the programme had a positive impact on literacy, peer relationships, and help-seeking behaviour. The high effect size in literacy (16.4%) highlights significant improvements in reading and comprehension, while stronger peer and family support networks suggest greater social-emotional engagement among treatment students.

Evaluation question 2: To what extent are education officials, teachers, and students intrinsically motivated as a result of engagement with the STiR Education programme?

The findings indicate strong functional autonomy among school supervisors and district champions, particularly in training, curriculum implementation, and day-to-day operations. Respondents reported having the flexibility to design training sessions, propose topics, and tailor materials to school-specific needs. School education leaders in the treatment group also exhibited independent decision-making in fostering collaborative processes and introducing innovative teaching practices. Additionally, a sense of purpose was evident across both groups, with supervisors, coordinators, and teachers expressing strong professional relationships, frequent collaboration, and alignment with broader educational goals. Teachers in the treatment group reported greater support from leadership and stronger peer relationships, indicating a positive work environment that fosters professional growth.

² Regression results indicated that being part of the programme leads to a 0.771-point increase in total LAT scores.

³ Regression results indicated that being part of the programme leads to a 0.383-point increase in literacy scores.

⁴ Regression results indicated that being part of the programme leads to a 0.389-point increase in numeracy scores (Not statistically significant).

Supervisors and coordinators faced systemic challenges, particularly in policy decision-making, as final authority rested with higher leadership. The inconsistencies in communication—especially in consultation with supervisors and external partners—also weakened the sense of agency.

Teachers in the treatment group struggled with execution, particularly in teaching effectiveness and classroom management. While they embraced interactive methods, they lacked confidence and consistency in applying them effectively as reported during the study. The control group outperformed the treatment group in key teaching behaviours, demonstrating greater adaptability, stronger discipline, and more structured engagement with students. Control teachers also displayed better mastery, as they were less likely to blame students and more likely to use diverse assessment strategies.

Despite these challenges, the treatment group still demonstrated a stronger drive for continuous learning and improvement. Many actively sought training opportunities, valued feedback loops, and viewed teaching as a lifelong learning process. Similarly, school education leaders reported a deep sense of purpose, linking their work to societal transformation and the success of their students. While the control group maintained a more structured and disciplined environment, the treatment group cultivated an openness to change.

Evaluation question 3: What is the impact of STiR Education’s programme on the education ecosystem? What processes, structures or routines have been established/changed in the government education system as a result of the STiR Education programme? Are there any other benefits to government initiatives/priorities?

STiR Education aligned closely with Indonesia’s teacher development initiatives, integrating into existing government structures through collaborations with the BBGP (Center for Teacher Movers and School Movers), the BBPMP (Center for Education Quality Assurance), and the District Education Authority (DEA). While government-led Teacher Mover programmes covered approximately 10% of personnel per district, respondents noted that STiR Education reached a significantly larger share, covering 60-70% of teachers with structured training spanning six months to three years. The evaluation also found that STiR Education leveraged existing government facilitators and champions to strengthen teacher network meetings, helping to sustain programme interventions. In Lumajang, respondents credited STiR Education with contributing to improvements in key education indicators, where previously weak performance areas in the national Education Report had shifted from amber to green⁵.

Despite these positive aspects, respondents also highlighted challenges in scaling and institutional integration. In Kota Kediri, 35% of senior teachers struggled with adapting to new technology, making it difficult for them to fully engage with the Merdeka curriculum, which emphasized character over academic performance. Additionally, in Lumajang, limited support from the Education Agency was reported as a barrier to fully realizing the programme’s impact. Some respondents also expressed concerns that facilitators needed additional guidance from STiR Education in independently developing training content and selecting topics. While STiR gradually transferred responsibility for its interventions, discussions also indicated that continued assistance was still required to build local capacity. Furthermore, funding constraints were identified as a key challenge.

⁵ Green- Ready, Amber- Needs Improvement, Red- Not Ready

Despite these issues, STiR Education gained strong government endorsement, leading to expansion into three additional districts and the signing of MoUs in East Nusa Tenggara. In Kota Kediri, a Focus Group Discussion (FGD) confirmed that the DEA had begun funding most teacher network meetings (TNMs), suggesting progress toward long-term sustainability. Similarly, in Lumajang, the DEA had incorporated TNM expenses into its upcoming budget and had fully funded school principal network meetings, reflecting a commitment to sustaining STiR's interventions. Respondents also shared that Lumajang had been recognized at the East Java level for improving key quality indicators, further motivating the district to continue implementing these interventions. As a result, two additional districts had expressed interest in collaborating with STiR Education in the future.

Evaluation question 4: To what extent does the STiR programme develop officials' and teachers' capacities to be effective learners and role-models?

Among the 20 school principals interviewed, 45% (9 principals) found Learning Improvement Cycles (LICs, refer Figure 6) valuable for their professional growth, citing innovative methodologies, collaboration, and mentorship as key benefits. Four principals reported actively implementing effective questioning techniques and coaching strategies to enhance teacher performance and student engagement. Two principals highlighted differentiated learning as a major takeaway, allowing them to tailor teaching to diverse student needs. Three principals credited LICs with improving teacher collaboration through structured discussions.

However, some principals questioned the added value of LICs, especially those with already skilled teams. One principal noted that their role in LICs was mainly logistical, limiting deeper engagement with the programme's content.

Among teachers, 75% (15 respondents) reported that LICs enhanced their professional development, particularly in differentiated learning, growth mindset strategies, and active learning methods. Teachers noted that LICs encouraged student collaboration and creative teaching techniques, such as educational songs and visual teaching aids. However, 25% (5 respondents) expressed concerns regarding the clarity and practical application of the programme content.

Teachers in treatment districts showed a higher preference for collaborative training methods compared to control teachers. 50% of treatment teachers preferred peer collaboration (vs. 20% in control), while 38.3% favoured peer feedback (vs. 20% in control). Treatment teachers were also more likely to engage with external training providers (35% vs. 20%) and attend seminars (46.7% vs. 26.7%). Notably, 16.7% of treatment teachers preferred learning through observation, whereas no control teachers opted for this approach, suggesting a stronger emphasis on collaborative and observational learning in treatment schools.

Both groups showed a strong preference for virtual training, with 56.7% of treatment teachers and 73.3% of control teachers opting for this mode. The high engagement with virtual training suggests that schools in Indonesia benefit from a strong digital learning infrastructure, enabling greater accessibility to professional development opportunities. Control teachers favoured virtual training over in-person training, further reinforcing its convenience and flexibility.

Overall, treatment teachers demonstrated greater engagement with diverse teaching and training methods, indicating a broader openness to multiple learning channels both within and outside the school ecosystem.

Evaluation question 5: What is the impact of STiR Education’s programme on gender and equity?

A significant difference in gender-based performance was observed when comparing the treatment and control districts- female students from the treatment group emerged as the strongest performers overall. They were the top performers in numeracy and literacy, outperforming both the control district and male students from the treatment districts. This highlights the success of the STiR program, which has effectively supported and empowered female students to excel thereby ensuring equality.

However, the programme’s design and strategy do not explicitly incorporate gender equality as a core objective, and no formal gender analysis was conducted prior to implementation. Key gender gaps remain in programme monitoring, with no gender-disaggregated data captured to track progress. Furthermore, while some LIC content includes gender considerations, there is no structured co-design process ensuring women’s participation. As a result, STiR Education’s contribution to gender equality was assessed at GEN 1⁶, indicating limited but present gender-responsive elements.

Despite this, STiR’s commitment to refining its approach presents an opportunity to embed stronger gender-sensitive practices, particularly in content development, monitoring, and addressing the specific challenges faced by female students and educators.

Evaluation question 6: What is the Social Return on Investment (SRoI) associated with investing in STiR Education’s programmes?

Social Return on Investment for STiR was conducted based on impact generated across students, taking into account their performance in LAT scores, and teachers, leveraging their self-reported motivation levels under the 5 areas in the Work Task Motivation (WTM) scale. The framework for conducting the SRoI for STiR was developed referring to Social Value International and UNDP’s guides to conducting SRoI. Primary data collected from both stakeholders was leveraged to ensure reliability of estimated Net Present Value of impact.

The Social Return on Investment (SROI), calculated as the total Net Present Value of impact divided by the cost of inputs, was found to be £6.88 for every pound invested in the programme.

The financial proxy for students was based on a cost-savings approach, reflecting savings at the parent level. The proxy for teachers was determined using the time value approach, considering the hourly rate of teachers. The government-published report card, Neraca Pendidikan Daerah (NPD), was utilized to obtain data on the number of teachers, students, elementary schools, etc., with the financial proxy values also derived from the NPD.

⁶ Gender Equality Scale:

- 0- No Contribution
- 1- Limited Contribution
- 2- Significant Contribution
- 3- Primary Objective

Section 1:

About STiR Education



1.1. Background and Context

Access to quality education is considered as a fundamental human right, and the lack of school education inhibits critical developmental, cognitive capabilities, and decision-making skills; restricts social mobility and employment opportunities; and has a wide-reaching disempowering effect on one’s own independence of thought and freedom of actions. However, 244 million children around the world are out of school (UNICEF 2022), and even when children attend school, they learn very little (Roser, 2022).

Recentring the focus on quality of education entails systemic changes, resulting in the creation of learning environments and conditions that are accessible, inclusive, and engaging. This requires collaboration between teachers and educators, education leadership and administration, government officials, and enablers.

STiR Education’s vision emphasizes intrinsic motivation as a crucial element in fostering lifelong learning among children. The organisation aims to strengthen education systems by enabling and catalysing partnerships with governments to drive and deliver interventions that facilitate incremental improvements. STiR Education’s core objective is to eventually usher in system-wide transformations in how education is delivered and how children learn.

Figure 1: Strategic Opportunities for STiR Education

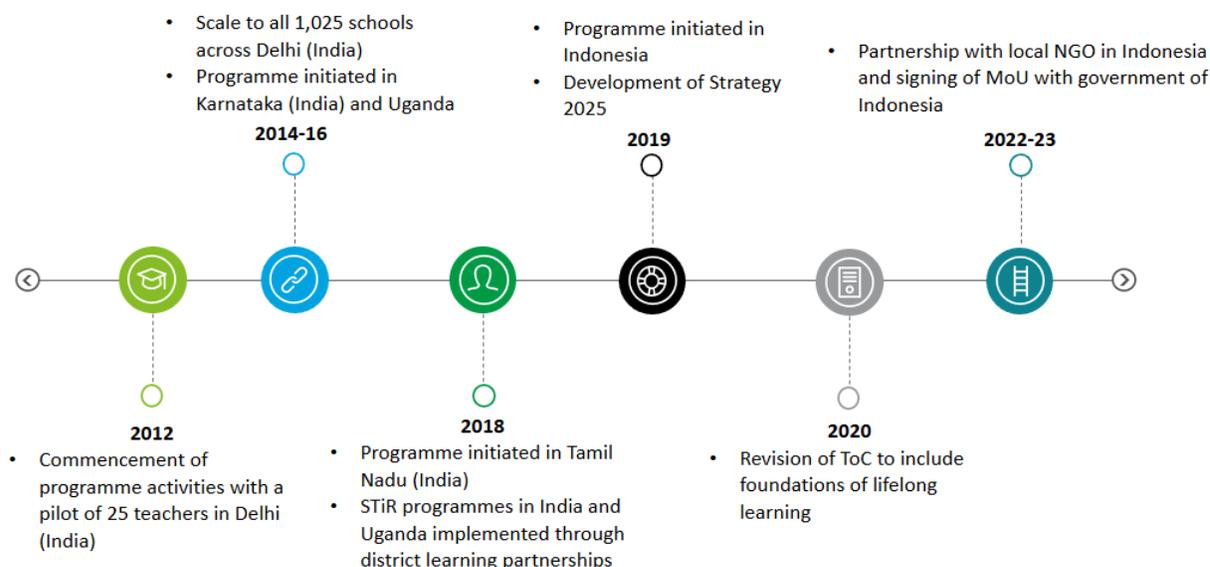


STiR Education implements its programme offerings through:

1. **The teacher networks:** To develop teachers’ levels of intrinsic motivation and support their continuous improvement
2. **Training and mentoring programme:** To support district officials in prioritising teacher motivation through operationalising teacher networks and ensure collaboration and exchange of information and feedback between officials and teachers

3. **A support model for national or state governments:** To help them align and optimise the intrinsic motivation approach within their priorities and systems.

Figure 2: Key Milestones for STiR Education⁷



1.2. Programme Design

STiR Education’s Theory of Change articulates its vision of a world where children not only love learning but are also equipped to thrive in an ever-evolving landscape. Central to this vision is the cultivation of intrinsic motivation among teachers, a journey guided by meticulously designed professional development initiatives. STiR Education has two core objectives: nurturing a love for learning in children and preparing them for sustained success beyond the school years.

For Teachers

STiR Education aims to empower teachers through the cultivation of intrinsic motivation. This involves providing a professional space for reflection, fostering a sense of professional pride, and encouraging thoughtful decision-making. STiR advocates for high-quality professional development, which entails regular peer network meetings, peer observation and feedback, and reflective practices. The organisation collaboratively co-creates content with partner governments, ensuring alignment with government priorities, and tailoring it to each geography's unique needs.

For Governments

Recognizing that teachers do not operate in isolation, STiR Education extends its focus to the professional conditions shaped by school leaders and officials. These influencers play a pivotal role in leading and delivering programmes for teachers. Effective role-modelling of intrinsic motivation becomes paramount,

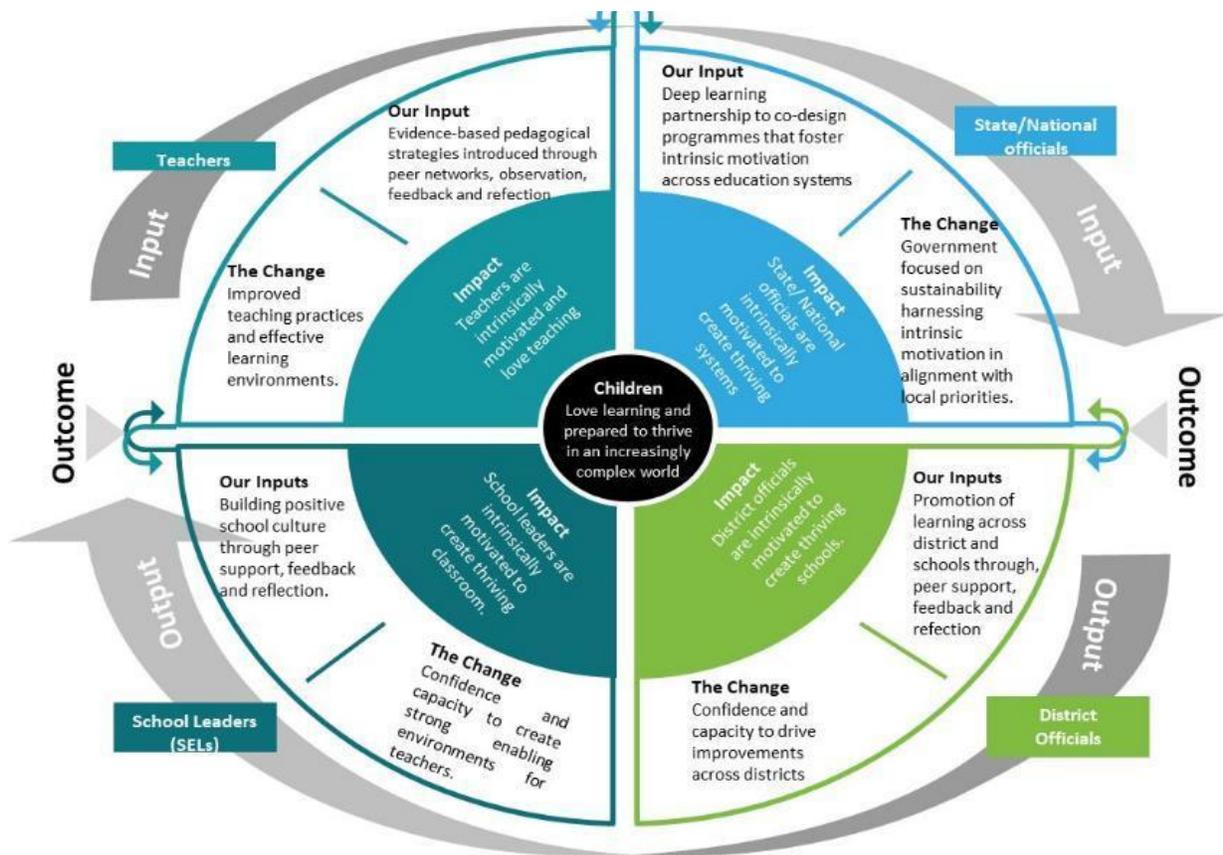
⁷ Note: “Initiated” here refers to the date of MoU signing.

necessitating a commitment to improvement cultures, an openness to mistakes, and a profound sense of professional pride.

In parallel with teachers, school leaders and officials also require autonomy, mastery, and purpose. STiR Education has introduced mechanisms such as quarterly training institutes, observation and feedback sessions, and reflective practices tailored to the distinct needs of these leaders.

STiR Education’s dual role at this level involves co-creating training content with partner governments and working directly with district and senior officials, providing coaching and strategic support. The ultimate aim is to ensure a culture of intrinsic motivation permeates the entire educational system.

Figure 3: STiR Education's Theory of Change

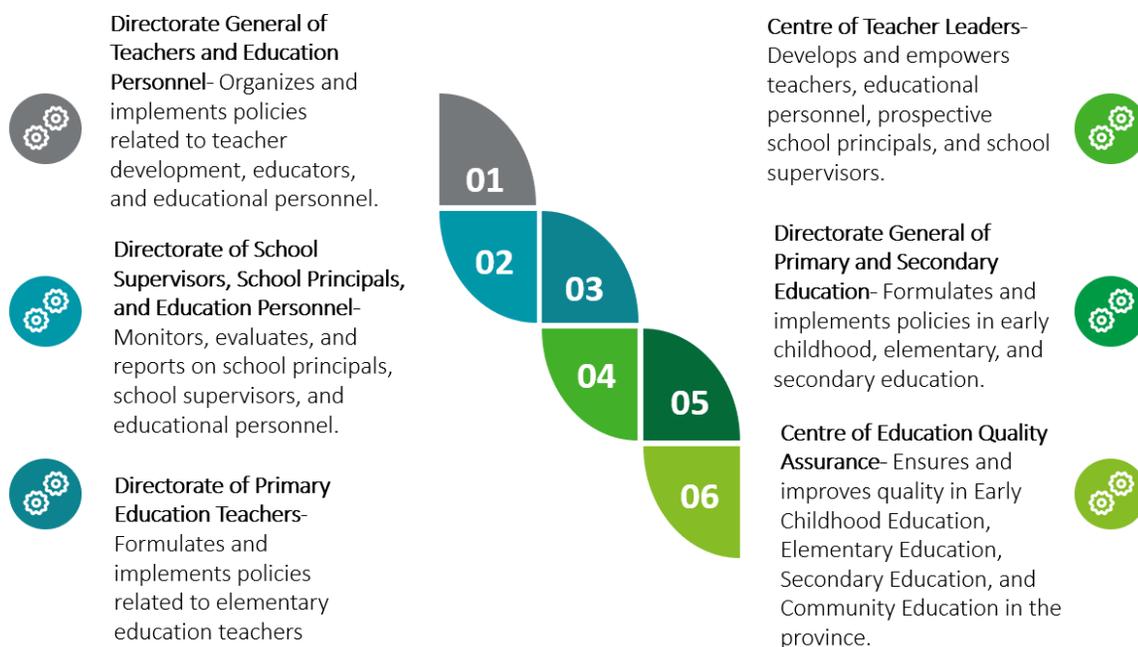


1.3. STiR Education in Indonesia

STiR Education’s programme in Indonesia started its presence in 2019, but activities only began in May 2022 after establishing a partnership with the local NGO Yayasan Bakti Pendidikan Unggul (YBPU) in January 2022. YBPU signed MOUs with the Government enabling STiR to launch its programmes in Lumajang and Kota Kediri districts of East Java. While the MoUs with the Government of Indonesia are tripartite in nature (i.e. Between STiR, YBPU and Government), they are signed by YBPU and the Government. YBPU not only maintains the relationship with the government, but also implements the programme in Indonesia. The initiative focuses on peer networks, action, feedback, and reflection, engaging primary teachers and officials in regular meetings and training. In July 2023, STiR signed a three-year MOU with the Ministry of Education, Culture, Research and Technology (MoECRT), enhancing its national profile and scaling efforts.

STiR Education’s operations are linked with several departments under the MOECRT, which governs early childhood, elementary, secondary, and community education, as well as cultural management, to aid the President in managing the state government. The departments involved are illustrated in the figure below, alongside their respective roles. Additionally, STiR collaborates with the Secretariat General of Teachers and Education Personnel, the Secretariat General of Primary and Secondary Education, and the Directorate of Primary Education. *(Source: Documents shared by STiR)*

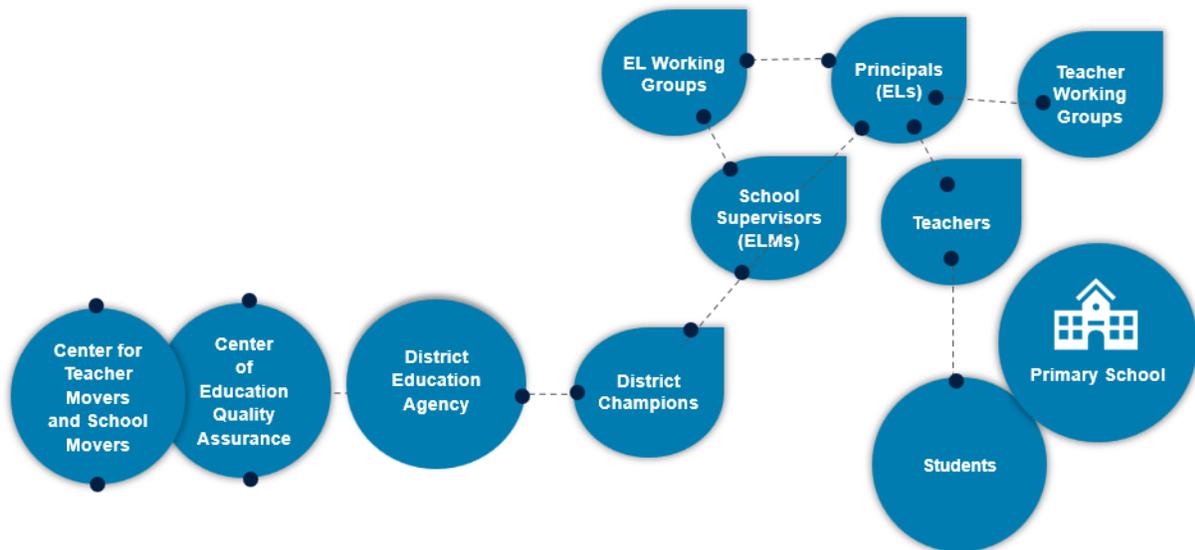
Figure 4: Relevant departments under MoECRT for STiR



1.4. Stakeholders

The STiR Education programme relies on a diverse network of stakeholders, each with distinct roles and responsibilities crucial to the execution of the programme, with the overall objective of enhancing student learning outcomes.

Figure 5: Stakeholders involved in implementing STiR Education programmes

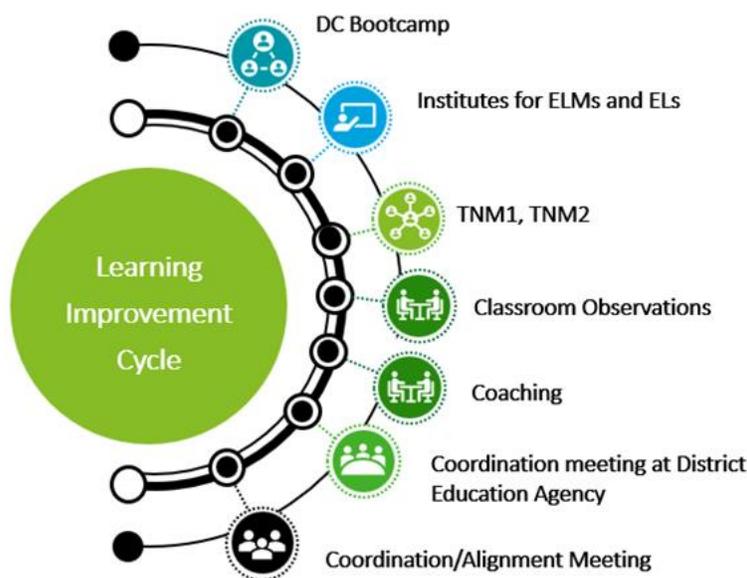


- **District Education Agency (DEA):** The DEA is responsible for formulating and implementing educational policies at the city or district level. It manages public education services, provides technical guidance, and executes additional tasks as directed by the mayor or regent. The DEA is led by the Head of the Education Agency along with Section head of Centre of Teacher Movers and Section head of Primary Education.
- **Section Head of Centre of Teacher Movers and School Movers:** Formulates technical policies for teachers and educational staff across Early Childhood Education, Elementary, and Junior High Schools. Key responsibilities include setting qualification standards, managing teacher transfers and retirements, and planning to meet staffing needs.
- **Coordinator of School Supervisors (District Champions):** Oversees School Supervisors, coordinates their activities, and manages school supervision reporting. Responsibilities include recommending credit points for School Supervisors and delivering annual supervision reports.
- **School Supervisors (Education Leader Managers, ELM):** School Supervisors enhance school learning quality through planning, mentoring, and performance reporting. Each sub-district typically has 1-4 Supervisors.
- **School Principals (Education Leaders, EL):** School Principals serve as instructional leaders, overseeing curriculum development, student affairs, and community relations. Typically, responsible for one school, they may manage up to 2-4 schools depending on circumstances.
- **Teachers:** Teachers handle curriculum and syllabus assessment, evaluate annual and semester programmes, and develop learning plans that meet process standards and lesson plans.

Primary level teachers participate in monthly network meetings to adopt new practices, while school leaders and district officials attend termly training sessions to enhance their skills. *(Source: Documents shared by STiR)*

1.4.1 Learning Improvement Cycle (LIC):

Figure 6: Components of LIC



The Learning Improvement Cycle (LIC) begins with a Bootcamp for the District Leaders, then progresses through Institutes for Education Leader Managers (ELMs) and Education Leaders (ELs). It includes Teacher Network Meetings 1 (TNM 1) and 2 (TNM 2), with Classroom Observations. Coaching is provided throughout, spanning the Bootcamp, Institutes, and TNMs. The cycle concludes with Coordination Meetings involving both the District Education Agency and National bodies, after which the next LIC begins. Each LIC focuses on a different theme. Details of each programme activity carried out are listed below:

Table 2: Programme Activities in LIC

Programme Activities	Description
DC Bootcamp (District Champion)	Facilitated by District Leaders (DL), these sessions enhance the ability to deliver high-quality training and support for the ELM Institute.
ELM Institute (Education Leader Manager)	These sessions build ELMs' capacity to deliver high-quality training and support to ELs managing networks.
EL Institute (Education Leader)	Co-facilitated by ELMs and DLs, these sessions enhance ability of ELs to lead effective teacher

Programme Activities	Description
	network meetings and provide constructive feedback to teachers
TNM (Teacher Network Meeting)	Facilitated by school principals or TNM coordinators, these sessions introduce teachers to key classroom practices and the supporting evidence
Classroom Observation	Provides teachers with targeted feedback from school principals or supervisors to help improve classroom practices
Coaching	Involves monthly developmental meetings for feedback exchange and reflection among DLs, District Champions (DC) ELMs, and ELs.
Coordination/Alignment Meeting	Co-chaired by the DC and DL, and attended by District Education officials, these termly meetings allow district stakeholders to analyse data, share insights, and develop plans to enhance programme delivery.

(Source: Documents shared by STiR)

Section 2:

Outline of the Impact Evaluation



2.1. Context of the Study

STiR Education commissioned the study to evaluate its efforts in transforming the education ecosystem through the implementation of various programmes that enhance intrinsic motivation for key actors. The study adopted a systematic approach and methodology to assess the relevance, coherence, effectiveness, efficiency, impact, and sustainability of STiR Education programmes

This impact evaluation study aimed to provide insights into the primary education context in Indonesia, determine the alignment of STiR Education’s interventions with Government efforts, analyse the level of impact on educational outcomes of students, assess the motivational drivers and barriers in key actors, and understand the nature of support provided by STiR Education to primary education stakeholders in the country. In addition to assessing programmatic impact, the study also enabled the creation of robust evidence for STiR Education’s Theory of Change (ToC).

The primary focus of the study was developing this evidence base is to understand the impact of the programme at the student level and the institution/stakeholder level. To achieve this, the impact evaluation employed a combination of qualitative and quantitative evaluation approaches.

This study attempted to answer the following questions:

Table 3: Key Evaluation Questions

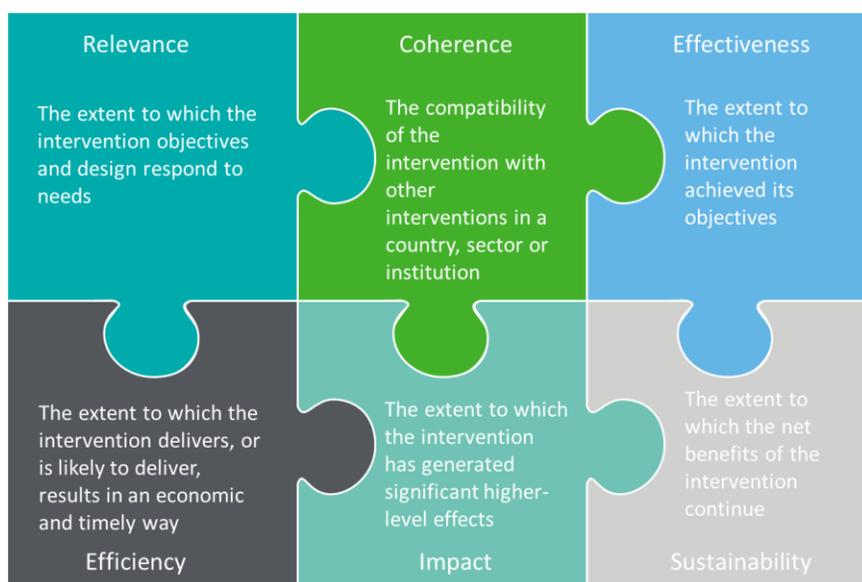
#	Key Evaluation Question
1	What is the impact of STiR Education’s programme on student learning outcomes, their foundations of learning, and their socio-emotional learning?
2	To what extent are education officials, teachers, and students intrinsically motivated as a result of engagement with the STiR programme?
3	What is the impact of STiR Education’s programme on the education ecosystem? What processes, structures or routines have been established/changed in the government education system as a result of the STiR programme? Are there any spillover benefits to government initiatives/priorities?
4	To what extent does the STiR programme develop officials’ and teachers’ capacities to be effective learners and role-models?
5	What is the impact of STiR Education’s programme on gender and equity
6	What is the Social Return on Investment (SROI) associated with investing in STiR Education’s programmes?

2.2. Approach and Methodology

OECD DAC Framework

This study adopted the principles of OECD-DAC framework to evaluate the impact of STiR Education's programme on all programme beneficiaries and the education ecosystem. This framework recommends the use of six criteria to evaluate interventions.

Figure 7: OECD-DAC criteria (Source: OECD)



The evaluation framework was tailored to assess STiR Education's interventions and provide a structured method for analysing the effectiveness and impact of the organisation's initiatives. This framework served as a strategic guide for collecting, analysing, and interpreting data to ascertain the extent to which STiR Education's programme achieved their intended goals and objectives. It delineates the critical components of

interventions of STiR Education, including input resources, programme activities, delivered outputs, realized outcomes, and broader societal impacts.

Beyond evaluation, these criteria can also be extended to various processes such as defining frameworks and indicators for monitoring, managing results, funding approval, strategic planning, and intervention design, all aimed at enhancing future interventions. Ultimately, the criteria provide a consistent language, enabling standardization across interventions.

While the evaluation questions were adopted from the RFP for Evaluation developed by STiR Education, the OECD-DAC framework was used to further refine these questions. This serves the dual purpose of providing clarity for each of the evaluation questions, and closing any potential gaps in the evaluation.

Table 4: Evaluation Questions

No.	Evaluation Question	OECD-DAC criteria Mapping	Sub-Evaluation Areas / Leading Questions	Data Source and Type of Information
1	What is the impact of STiR Education's programme on student learning outcomes, their foundational learning, and their socio-emotional learning?	Impact, Effectiveness	- How does STiR programme impact learning behaviours of students? - In what ways does STiR programme influence relationships (student-student, student-teacher)? - What is the extent of STiR Education's influence on student foundational learning (literacy and numeracy)?	- Assessments: Student LAT and SEL scores (Treatment vs Control) - Self-reported teaching strategies by teachers

No.	Evaluation Question	OECD-DAC criteria Mapping	Sub-Evaluation Areas / Leading Questions	Data Source and Type of Information
			- How much of the learning improvement can be attributed to STiR Education's programmes?	
2	To what extent are education officials, teachers, and students intrinsically motivated as a result of engagement with the STiR programme?	Relevance, Impact	<ul style="list-style-type: none"> - How do STiR Education programmes address the specific needs of the education officials, teachers, and students? - What is STiR Education's contributions towards enabling autonomy, mastery, and purpose for officials, teachers, and students? - How does STiR Education support safety, self-esteem, and engagement of students? - To what extent do stakeholders demonstrate autonomy, mastery, purpose, and self-esteem? 	<ul style="list-style-type: none"> - Teacher survey tool - Qualitative interviews with teachers, officials, parents, and education officers - SEL and LAT scores (Treatment vs Control)
3	What is the impact of STiR Education's programme on the education ecosystem? What processes, structures, or routines have been established/changed in the government education system as a result of the STiR programme?	Coherence, Sustainability, Efficiency	<ul style="list-style-type: none"> - In what ways is the STiR programme aligned with government education interventions at central, state, and district levels? - How has STiR Education improved or streamlined government processes? - What partnerships has STiR formed to ensure sustainability of outcomes? - What support and resources are required to sustain outcomes of the STiR programme? - Does the government find value in or take ownership of processes introduced by STiR? 	<ul style="list-style-type: none"> - Qualitative interviews with teachers, education leaders, and officials - Interviews with stakeholders to assess integration of STiR processes within government priorities
4	To what extent does the STiR programme develop capacities of officials and teachers to be effective learners and role models?	Effectiveness, Sustainability	<ul style="list-style-type: none"> - What skills, capacity, and knowledge have STiR Education's programmes imparted to officials and teachers? - What changes in knowledge, skills, and behaviours result from STiR Education's programmes? - Do stakeholders find LICs valuable for professional development? 	<ul style="list-style-type: none"> - Teacher surveys - Qualitative interviews with teachers and officials
5	What is the impact of STiR Education's programme on gender and equity?	Relevance, Impact	<ul style="list-style-type: none"> - How has STiR identified and integrated specific requirements to foster gender and inclusion? - What are the variations in performance (gender-wise) in LAT and SEL scores (Treatment vs Control)? - How much of gender equity in participation and retention can be attributed to STiR interventions? 	<ul style="list-style-type: none"> - Sex-disaggregated LAT and SEL scores - Qualitative interview with stakeholders
6	What is the Social Return on Investment (SRoI) associated with investing in STiR Education's programmes?	Efficiency	<ul style="list-style-type: none"> - What is the monetary value of the outcomes realised by STiR Education's programmes, and how does this compare to input costs? - How do STiR Education's programmes contribute to improvements in income? 	<ul style="list-style-type: none"> - Budget and cost documents of STiR Education - Secondary review to assign financial values to outcomes

2.3. Data and Identification Strategy:

Data

The primary data source for evaluating STiR Education programme included the quantitative and qualitative data collected directly from the schools covering both treatment and control districts. The quantitative data helped in evaluating the key outcomes of the programme i.e., student learning, including their foundational learning and social-emotional learning. This quantitative data was also complemented by qualitative evidence obtained from teachers and education officials of the Government. Qualitative data helped in evaluating the other outcomes of the programme including intrinsic motivation and the capacity of teachers and officials to be effective learners and role models.

The study also analysed gender and equity dimensions for the aforementioned outcomes. For gender dimension, the study assessed the difference in outcomes between male and female programme beneficiaries (boys and girls). The study also assessed the distribution of the outcomes to trace improvement/worsening. Additionally, the study sought to understand the impact of STiR Education's programme on the respective education ecosystems through qualitative evidence.

Data collection tools were developed, drawing upon existing literature and past credible studies, and then customized to fit the specific contexts of the geographies in which STiR Education operates. These tools were piloted, refined, and administered for data collection.

While the study also intended to utilise secondary data from government sources to enrich the analysis, such data was not made available during the time of study.

Figure 8: Students completing the assessment at the Bawang School (Kota Kediri). Picture taken during the field visit to Indonesia in August 2024



Identification Strategy

The core of identification strategy hinged on the quasi-experimental method, with adaptations to suit the unique contexts of programme geographies. The overarching approach was designed to isolate the impact of STiR Education programmes by comparing differences between treated and control groups, in the programme geographies vs. non-programme geographies, while controlling for potential confounders.

The treatment groups are defined as the schools whose teachers participated in the network meetings facilitated by STiR Education programme, and the control group as comprising schools in the neighbouring regions whose teachers never participated in STiR Education’s programme. For the evaluation, schools were randomly selected for data collection within the treatment and control groups.

Recognizing the inherent challenges of selection bias and confounding variables, the methodology incorporated statistical controls to ensure comparability between the treatment and control groups.

The estimation equation for the evaluation is provided below:

Equation 1

$$Y_{ig} = \alpha + \beta_1 * Prog_g + \beta_2 * X_{igs} + \varepsilon$$

Here Y_{ig} is the main outcome variable (student learning/social-emotional learning scores) for student i and geography g , where g can take the value of either 1 if it is a programme geography and 0 otherwise. α is the intercept term which captures the average baseline level of the outcome among the control group students in the control geographies without any other covariates being factored in. $Prog_g$ is a dummy variable that takes the value of 1 for programme geographies (Lumajang and Kota Kediri), and 0 for the non-programme geographies. β are the respective coefficients, wherein β_1 is the main coefficient

of interest that provides an estimate of the impact of STiR Education's programme. ε is the error term that captures the unexplained/unobserved factors that affect the outcome. \mathbf{X}_{igs} is the vector of observable covariates specific to student i , geography g , and school s .

\mathbf{X}_{igs} is the vector of observable covariates specific to student i , grade d , geography g , and school s . This vector will include –

- a) Ability of the student – Students' academic score in the previous year. *[Not collected: Schools did not have a digitised and readily available database.]*
- b) Gender of the student - This is to control for any differential effects on learning outcomes between girls and boys.
- c) Access to private tuition
- d) Number of siblings - More siblings might mean less individual attention from parents, affecting study time or resources available.
- e) Access to learning materials - Availability of textbooks, internet, and other educational resources may affect learning outcomes differentially.
- f) General Health - General health conditions or chronic illnesses can affect attendance and concentration through indicative questions such as, "How many times did you get sick in the last 3 months?". *[Not collected due to sensitivities associated with this]*

In addition to the above, data pertaining to socioeconomic background of the parents of the students and their households was collected. These are:

- a) Highest education level attained by parents – Parental education may indirectly affect student learning outcomes, as more educated parents may be able to support their children better in their studies.
- b) Highest education level attained by siblings
- c) Household Expenditure data – this better reflects actual living standards and consumption patterns
- d) Land ownership
- e) Asset ownership
- f) Employment status
- g) Primary occupation - At a household level, it was not possible to isolate and identify the primary occupation as family members were engaged in multiple income-generating activities. Instead, we utilised data on number of employed persons within each family]
- h) Housing status (owned/rented)

This information was collected through take-home surveys filled in by the parents of students who appeared for the in-class assessment.

Additionally, the following variables were not included in the regression analysis:

- a) Students' academic score in the previous year - No data could be collected because the schools did not have a database
- b) Attendance of students- No data could be collected because the schools did not have a database. Discussions with local STiR teams also confirmed that obtaining datasets for these two indicators is a challenge.

- c) Primary occupation- No structured data could be collected. We have overall HH member wise employment data (Y/N).
- d) Health insurance household members- No structured was collected given the nature of cultural/contextual sensitivity.
- e) Household Income –Household expenditure data was collected as it better reflects actual living standards and consumption patterns. Also, from our past experience and research studies, we understand income data can sometimes be unreliable due to underreporting and its inability to capture household needs and consumption.

Classification of Regression Variables

Regression analyses were conducted to explore the relationship between academic performance (Numeracy, Literacy, and Total Scores) and a range of potential predictors. Separate models were developed for each outcome variable to provide a nuanced understanding of the factors influencing student performance. The predictors were selected based on their relevance to the dependent variables, in consultation with STiR Education team.

Table 5: Variable Classification

Dependent Variable	Independent Variable
1. Numeracy Score	1. Treatment Status: Binary (Treatment = 1, Control = 0)
2. Literacy Score	2. Gender: Female (1), Others (0)
3. Total Score	3. Coaching Classes: Whether the student attends coaching classes (Yes = 1, No = 0)
	4. Number of Siblings
	5. Learning Resources Available: Sum of resources such as Computer, Mobile, Library (Yes = 1, No = 0)
	6. Siblings' Educational Attainment: Coded from Not Literate (0) to Postgraduate and Above (7)
	7. Parents' Educational Attainment: Coded from Not Literate (0) to Postgraduate and Above (7)
	8. Land Ownership: Binary (Yes = 1, No = 0)
	9. Assets Owned: Sum of assets, including electricity, indoor toilet, television, mobile, fridge, bike/2-wheeler, computer, and gas stove (Yes = 1, No = 0)
	10. Percentage Dependents: Calculated as $1 - \left(\frac{\text{Number Employed}}{\text{Number in Household}} \right) - \left\{ \left(\frac{\text{Number Employed}}{\text{Number in Household}} \right) \right\} - \left(\frac{\text{Number Employed}}{\text{Number in Household}} \right)$
	11. Housing Situation: Binary (Own House = 1, No = 0)
	12. Monthly Expenditure
	13. Distance to the City Centre

Control Variables List: Treatment vs Control, Gender, Coaching Classes, Number of Siblings, Highest Degree Parents, Highest Degree Siblings, Access to Learning Materials, Own land, Sum of Assets Owned, Percentage of dependents, Own house, Monthly Expenditure, Distance to city centre.

Regression Models

A total of five models were run starting with just 'being in STiR programme / treatment' as the only predictor, and adding several related variables in the consecutive models. The models and predictors included in each of them are shown below:

Model 1: Treatment (in STiR Programme)

Model 2a: Treatment, Gender, Coaching Class, Number of Siblings, Parents highest degree, Siblings highest degree, Own Land, % of Dependents in the household, Own House

Model 2b: Treatment, Gender, Coaching Class, Number of Siblings, Parents highest degree, Siblings highest degree, Own Land, % of Dependents in the household, Own House, Monthly household Expenditure

Model 3: Treatment, Gender, Coaching Class, Number of Siblings, Parents highest degree, Siblings highest degree, Own Land, % of Dependents in the household, Own House, Monthly household Expenditure, Sum of Assets Owned, Sum of Access to Learning Materials

Model 4: Treatment, Gender, Coaching Class, Number of Siblings, Parents highest degree, Siblings highest degree, Own Land, % of Dependents in the household, Own House, Monthly household Expenditure, Sum of Assets Owned, Sum of Access to Learning Materials, Distance from City Centre

The final model (Model 4) highlights key predictors and their influence on student outcomes, offering insights into how these factors interact to shape academic performance.

Robustness Check for Unobserved/Missing Characteristics: Bound Analysis

Although Equation 1 accounted for observable factors that may influence the outcomes of interest, there was still unobserved or missing observable factors that could affect these outcomes and potentially confound our results. To measure the extent of this bias in our results, a bound analysis as developed by Altonji et al. (2005) and Oster (2017) was conducted. Our implementation of this method mirrored the approach taken by Jain, Mukhopadhyay, Prakash, and Rakesh (2021) in their study. The bound analysis, as they described, is as follows.

Consider a generic estimating equation:

Equation 2

$$Y = \beta X + \gamma Z + W$$

Here X is the variable of interest, Z is observed, and W contains all the unobserved factors that affect the outcome of interest (Y).

To estimate the bias in the main coefficient (β), Altonji et al. (2005) it was assumed that the relationship between the main independent variable of interest (X) and the unobservable factors (W) is proportional to the relationship of the independent variable (X) with the observables (Z), where the degree of proportionality is denoted by δ . This relationship is characterized by the following equation:

Equation 3

$$\frac{Cov(X, W)}{Var(W)} = \delta * \frac{Cov(X, \gamma Z)}{Var(\gamma Z)}$$

This approach was extended by Oster (2017), who proposed considering the movement of the coefficient corresponding to the main independent variable of interest upon the addition of covariates and deducing a similar bias.

2.4. Sampling Strategy

2.4.1 Coverage of Impact study:

The study covered three districts in East Java Province, Indonesia- Lumajang, Kota Kediri and Kabupaten Kediri- detailing both quantitative and qualitative interactions.

Figure 9: Study area in Indonesia



The study employed a **stratified random sampling strategy** for data collection. This method involved dividing the population of interest — comprising students, teachers, education leaders, and other relevant stakeholders — into distinct subgroups or strata. These strata were formed based on shared characteristics or criteria pertinent to the study's objectives.

By considering the variability within different strata, stratified random sampling aims to yield a more precise estimation of population parameters.

This sampling approach was specifically chosen to ensure a more comprehensive representation of the diverse groups participating in the programme.

Criteria for selection of Treatment and control cohorts:

The treatment group consisted of schools which are part of STiR Education programme, and the control group comprising schools in the neighbouring regions whose teachers have not participated in STiR's programme. Further, the control cohort was selected from the neighbouring region where STiR Education aims to initiate operations.

- a. Both the treatment districts of Lumajang and Kota Kediri were considered for the study
- b. Under control sample, 1 district was selected (Kabupaten Kediri) neighbouring Kota Kediri and 5 schools were covered from the district
- c. Primary sampling unit (PSU) is the school (Treatment and Control)

Study schools were selected randomly from each of the selected districts across the programme using RANDARRAY () function in excel. As randomization reduced selection bias and improved the generalizability of the findings. This technique helped that every school within the selected district had an equal chance of being selected. Further, school with at least 20 students in grade 6 were considered for the study (both Treatment and Control).

The total samples are calculated using the following formula:

Figure 10: Sample Calculation

$$\text{Sample size} = \frac{\frac{z^2 * p (1-p)}{\epsilon^2}}{1 + \frac{z^2 * p (1-p)}{\epsilon^2 N}}$$

Where:
 z is the z score, ϵ is the margin of error
 N is the Targeted group (Total no. of students (600,000) approximately)
 p is the population proportion
 Z= Z value (2.58 for Confidence level 99%)
 p = percentage of picking a choice (50%), expressed as decimal point 0.5
 ϵ : margin of error of 5%

$$\text{Sample Size for each programme} = \frac{\frac{(2.58)^2 * (0.5) * (1-0.5)}{(0.05)^2}}{1 + \left(\frac{(2.58)^2 * (0.5) * (1-0.5)}{(0.05)^2 * 600,000} \right)} = 666$$

A total sample size of 726 students were covered under the treatment group and 204 samples were assessed from the control schools (totalling 930 across both treatment and control). The coverage is detailed out in the table below.

The sample size is detailed out in the table below. This sample size selected was statistically significant to represent the population.

Table 6: Actual Coverage

Programme	Treatment			Control		
	No. of Districts	Selection of districts	Selected districts	No. of Districts	Selection of districts	Selected districts
Indonesia	2	Both the implementation districts selected	<ul style="list-style-type: none"> Lumajang Kota Kediri 	1	Neighbouring district (where STiR Education aims to initiate operations)	<ul style="list-style-type: none"> Kabupaten Kediri

Location	Treatment					Control						
	District	Schools per district		Total Schools	Total student covered	Total Teachers covered	District	Schools per district		Total Schools	Total student sample	Total Teachers sample
Indonesia	2	Kota Kediri	14	24	726	65	1	Kabupaten Kediri	5	5	204	15
		Lumajang	10									

Selection of Grade:

The study was conducted with students studying in the Grade 6 of government primary schools.

STiR Education operates across diverse geographies. Grade 6 emerges as the most representative level for cross-location comparisons, as it is included in all programme geographies. This grade also marks a critical educational transition, moving students from primary to upper primary or secondary learning, introducing complex academic concepts, and often requiring standardized tests, as in Indonesia.

Additionally, Grade 6 represents a shift from "learning to read" to "reading to learn," a stage where academic demands rise due to abstract and conceptual vocabulary. This transition often exacerbates the "Grade 4 slump," a phenomenon where academic performance initially drops but stabilizes in subsequent years.

2.5. Data Collection

Table 7: Sample Groups

No.	Stakeholder Group	Data Collection Tools
•	Students	- LAT (Learning Assessment Tool) - SEL (Social Emotional Learning) Assessment Tool
•	Parents	- Parent In-Depth Interview (IDI) Tool - Take-home Parent Survey (Pre-Assessment Form)
•	Teachers	- Teacher Survey Questionnaire - Teacher IDI Tool
•	School Education Leaders (School principal)	- Education Leader IDI Tool
•	Education Leader Managers	- Education Leader Manager IDI Tool
•	District Education Leaders (District Education Officers)	- District Coordinator IDI Tool (adapted per department)
•	STiR Programme Team	- Programme Team IDI Tool (adapted per role)

Data Sources:

- Student Learning Assessment Tests: Administered at schools using tools designed in collaboration with STiR Education.
- Parent Surveys: Completed at home via physical forms sent with students.
- School Information Sheets: Data collected from school principals.

While Student Learning Assessment Tests were administered to all students, the Parent Surveys were not mandatory. The forms were sent through the students and parents were requested to fill the same and send it back. As expected, not all the parents had filled the form. There were also Parent Surveys that did not have the correct identifiers and some had missing values for critical questions. Such forms were deemed unusable. After cleaning the dataset (removing incomplete records, duplicates, and improperly identified entries), a total of **630 records** were included in the analysis.

2.5.1 Development of Data Collection Tools

Learning Assessment Tool

The development of the Learning Assessment Tool followed a structured process, guided by a review of literature, selection of appropriate methodologies, and careful design to ensure validity and reliability.

Literature Review and Methodology Identification

The initial phase involved an in-depth review of existing literature to identify the most relevant methodologies for assessing student competencies. Two primary approaches were considered: Grade competency and Foundational Literacy and Numeracy (FLN) competency.

- a. **Grade Competency Approach:** This method focuses on assessing whether students can meet the specific academic standards outlined for their grade level. It evaluates subject-specific knowledge aligned with curriculum expectations. This is described in the Global Proficiency Framework (GPF), which outlines the minimum proficiency levels expected of students in grades one to nine in reading and mathematics.
- b. **FLN Competency Approach:** This method adopts a “floor test” approach, aiming to assess whether students possess essential foundational skills in literacy and numeracy. The focus is on determining whether students have mastered the minimum skills required to engage effectively in learning.

The FLN competency approach was chosen for its inclusivity and foundational nature. This decision was based on the need to establish a baseline of fundamental skills, ensuring that even basic literacy and numeracy capabilities are captured. For Grade 6 students, the FLN competency assessment aimed to verify their ability to easily manage these foundational skills, providing a clear picture of basic learning levels.

Tool Review and Methodology Selection

The tool design phase involved a review of existing assessment frameworks to align with curriculum and practical response methods such as multiple-choice questions, written answers, and calculations. Two prominent tools were identified and adapted:

- a. **ASER Tool (Annual Status of Education Report):** Widely recognized for its simplicity and focus on assessing basic reading and arithmetic abilities, ASER employs a community-based approach to measure foundational skills.⁸
- b. **ICAN (International Common Assessment of Numeracy) by PAL Network:** ICAN offers a global framework for assessing foundational numeracy, emphasizing cross-country comparability and relevance to diverse contexts.⁹

Both tools provided valuable insights into designing an effective assessment for foundational skills. ASER’s straightforward approach and ICAN’s methodological rigor were combined to create a robust evaluation framework for the study.

Development and Fraud Prevention Measures

The assessment tool was designed with a mix of components derived from the ASER and ICAN methodologies, tailored to the specific needs of the target population. To maintain test integrity and

⁸ <https://asercentre.org/asere-tools/>

⁹ <https://palnetwork.org/ican/>

minimize fraudulent practices, two sets of tools were developed. These tools were designed to assess the same competencies using varied question formats and sequences, ensuring reliability, and discouraging any attempts at pre-emptive answer sharing.

Social and Emotional Learning Tool

The social and emotional learning tool aimed to understand how children navigate challenges that require the use of social and emotional skills. This tool intended to determine whether children have developed appropriate behaviours to different situations.

Literature Review and Parameter Identification

The initial phase focused on understanding the core components of social-emotional learning through a detailed review of established tools and surveys:

- a. Devereux Student Strengths Assessment (DESSA): This tool assesses social-emotional competencies by evaluating various strengths in children, such as self-regulation, relationship skills, and empathy.
- b. PANORAMA Social-Emotional Learning Survey: Widely used in educational contexts, this survey measures students' competencies in areas such as conflict resolution, emotional regulation, and interpersonal skills.
- c. The IDELA (International Development and Early Learning Assessment) tool by Save the Children was identified as a suitable framework to adapt for the SEL tool. This is a globally recognized tool used for measuring developmental and early learning outcomes in children aged 3.5 to 6 years.
- d. IDELA's original structure consists of four components: Motor development, Emergent literacy, Emergent numeracy, and Social-emotional development.

From these frameworks, three critical parameters were identified as essential for the SEL tool: conflict resolution, relationships, and empathy. These parameters were chosen for their universal relevance and ability to provide actionable insights into students' social-emotional well-being.

Simplification and Focus

To ensure accessibility and ease of administration, it was decided to focus on key critical elements from both DESSA and Panorama tools instead of attempting to cover the entire spectrum of social-emotional competencies. This approach allowed for a targeted and meaningful assessment while minimizing respondent burden.

The SEL tool adapted the social-emotional development component of the IDELA, as this tool's emphasis on measuring interpersonal skills and emotional awareness provided a robust foundation for assessing conflict resolution, relationships, and empathy.

Tool Design and Administration

The SEL tool was designed as a multiple-choice questionnaire (MCQ) to facilitate straightforward responses from students. To ensure accurate comprehension and responses:

- a. Each question was developed align with the identified parameters.
- b. Questions were explained to students during administration, allowing them to understand the context before providing their answers.

This approach ensured that the tool captured nuanced aspects of social-emotional development without overwhelming or confusing respondents.

Teacher Survey Questionnaire

The Teacher Survey Tool was designed to provide a comprehensive assessment of teacher motivation, work environment, and teaching behaviours, with a specific focus on linking these aspects to intrinsic motivation and capacity-building initiatives. This tool aimed to gather actionable insights while maintaining a strong theoretical foundation.

Literature Review and Conceptual Framework

The development process began with an extensive review of existing tools and frameworks to ensure robustness and relevance. Key references included:

- a. TALIS (Teaching and Learning International Survey) by OECD: This large-scale international survey evaluates teachers' working conditions and the learning environments they create. TALIS provided insights into measuring professional autonomy, collaborative practices, and factors influencing teacher satisfaction.
- b. OXFAM NOVIB Tools: These frameworks offered perspectives on equity, inclusivity, and teacher engagement in resource-constrained environments, emphasizing the socio-emotional aspects of teaching.
- c. Department of Education (United Kingdom) Surveys: These provided region-specific methodologies for assessing teacher workload, professional development opportunities, and classroom practices, which were contextualized for this tool.

The review emphasized critical components such as working hours, subjects taught, intrinsic and extrinsic motivation, teacher behaviours and capacity-building efforts.

Focus on Intrinsic Motivation

Intrinsic motivation, a core element of the tool, was measured using components adapted from the Work Climate Questionnaire (WCQ). The WCQ is renowned for evaluating workplace environments and their role in fostering intrinsic motivation. Key dimensions include assessing whether teachers feel supported in their roles and have the freedom to make independent decisions about the methods they use, and whether teachers are provided with opportunities to develop skills and achieve career growth.

Teaching Behaviours

The teaching behaviour component was informed by STiR Education's monitoring framework—safety, curiosity, intentional teaching, engagement, and self-esteem.

The tool was structured to integrate findings from the literature review while being adaptable to diverse teaching contexts.

Incorporation of the Teacher Work Task Motivation Scale

To further enhance the tool's comprehensiveness, the Teacher Work Task Motivation Scale was included. This scale evaluated intrinsic and extrinsic drivers influencing teacher performance and task engagement, providing quantitative measures to complement qualitative insights.

In depth interviews with stakeholders

Figure 11: IDI with parents at the Ditotruran School in Kabupaten Lumajang. Taken during the field visit to Indonesia in August 2024



In-depth interviews, each lasting 30-40 minutes, were conducted with a diverse range of stakeholders to gain a deeper understanding of the programme and its impact. These stakeholders included Education Leaders (EL), Education Leadership Managers (ELM), district agencies, Ministry representatives, parents, and the STiR programme team. These consultations provided valuable insights about the nuances of the programme and its effectiveness.

Selection and Training of Enumerators

An intensive robust capacity-building and training programme was conducted with the enumerators for the quantitative surveys. The enumerators also underwent ethical training prior to the data collection phase. These enumerators were carefully selected from our associated local survey partner, based on their knowledge of the education sector, minimum educational qualification (graduate), familiarity with the specific geography, prior experience interviewing similar respondents, and fluency in the respective local languages. Additionally, preference was given to enumerators with prior experience working with children. The trainings were conducted in both English and the local languages specific to the programme geography.

During this training workshop, a detailed orientation on the STiR Education programme and objectives, the purpose of the impact evaluation, the different tools and questionnaires, and the overall data collection process to be adopted was provided. This was followed by several rounds of mock testing, using both hard copies and the Kobo tools.

The training workshop also included a discussion of the experiences and insights gained from the pilot, along with potential field challenges such as the unavailability of teachers, classroom management, and alternative methods for explaining questions in the LAT-SEL survey and teacher survey.

2.5.2 Quality Assurance

Each stage of data collection involved specific quality checks:

1. **Preparatory Phase**
 - a. **Enumerator Training:**
 - i. Conducted workshops covering evaluation objectives, tools, and processes.
 - ii. Included mock tests, pilot insights, and challenges like unavailability of teachers or classroom management.
 - b. **Tool Refinement:** Incorporated feedback from pilot testing to improve clarity and usability of tools.
2. **Field-Level Data Collection**
 - a. **On-Site Supervision:** Data collection was monitored across all stakeholder groups (students, teachers, parents, etc.). Real-time feedback was provided to enumerators.
 - b. **Data Corroboration:** Paper responses were cross-checked against digital entries (e.g., Kobo forms).
 - c. **Spot Checks:** Random checks ensured adherence to protocols, particularly for teacher surveys using Likert-scale questions.
 - d. **Consent for Photos:** For ethical considerations, consent for taking photographs of students and teachers was obtained from the School Principal. Further, the team ensured that the photos of the children do not show their faces, to ensure privacy and confidentiality.
3. **Post-Data Collection**
 - a. **Backend Checks:** Data submissions were validated for accuracy, consistency, and completeness (e.g., matching school names, resolving missing entries).
 - b. **Consolidation:** Duplicate entries were removed, and data from multiple sources (e.g., paper and digital) were harmonized.

2.5.3 Tool-Specific Quality Measures

Each tool underwent customized quality reviews to maintain data integrity:

Table 8: Tool Quality Measures

Tool	Field Execution	Recording Method	Quality Checks
Student Assessment Forms	Facilitated by enumerators and teachers	Paper forms, digitized via Kobo app	On-site supervision, data corroboration
Teacher Surveys	Conducted by enumerators	Direct entry into Kobo app	Spot checks, backend checks, consistency check
Parent Pre-Assessment Forms	Distributed to parents for completion	Paper forms, digitized via Kobo app	Backend checks, consistency checks

Tool	Field Execution	Recording Method	Quality Checks
Interviews (teachers, leaders, ministries)	Conducted internally	Handwritten notes consolidated on templates	On-site supervision

2.5.4 Challenges and Mitigation

Key issues encountered during data collection and corresponding solutions included:

Table 9: Challenges and Mitigation

Issue	Mitigation Strategy
Respondents needing repeated clarifications	Simplified questions; added follow-ups for in-depth interviews.
Missing or incomplete responses	Added an explicit "no response" option in Kobo forms.
Spelling/grammatical errors in student forms	Instructed enumerators to retain errors for authenticity.
Duplicate entries	Used unique identifiers (UUID) to identify and remove duplicates.
Extended survey durations	Addressed internet connectivity delays; no further action required.

2.6. Data Analysis

To determine correctness of the responses, the answer key from the ASER tool was referred to while keeping the scoring principle the same. Primarily, it looked at what was comprehended by the survey respondent beyond the spelling errors, decimal based answers in division questions etc.

Based on these steps, scores obtained by the students were determined. The SEL tool involved more subjective responses meaning there is no correct answer. The primary focus was to map each question to the area being assessed—such as safety, empathy, support, and emotion recognition—and to identify patterns of support-seeking behaviours among students, particularly regarding who they turn to for support within their family and friends. Additionally, pre-assessment data was used to contextualize the student LAT-SEL assessment and validate the student responses.

Teacher survey tool revealed preferences and underlying work task motivation factors. Analysis on the teacher survey enabled us to understand the operators behind a teachers work and variables impacting such operators.

2.7. Assumptions of the Study

This evaluation study was guided by a set of assumptions to ensure clarity in interpretation and contextualization of the findings. These assumptions pertain to the study design, data collection, analysis, external factors, and overall research environment.

1. Assumptions Related to Study Design

Intrinsic Motivation Framework: It was assumed that intrinsic motivation is a combination of autonomy, mastery, and purpose, aligning with factors identified in the literature review (autonomy, competence, and involvement). This framework was elaborated in the Inception Report submitted in January 2024.

Control District Selection: The selection of the control district was based on discussions with the STiR programme team, prioritizing similarity with treatment districts and geographical proximity.

School Sampling: Schools were selected through digital randomization. Any shared characteristics or attributes among schools that could influence study outcomes are considered coincidental.

Programme Implementation Consistency: The STiR Education programme is assumed to have been implemented consistently across all treatment schools as per its design.

Homogeneity of Control and Treatment Districts: It is assumed that the control and treatment districts share similar socio-economic, cultural, and educational characteristics, aside from the intervention.

2. Assumptions Related to Data Collection and Respondent Behaviour

Respondent Accuracy: All respondents—students, teachers, school leadership, school supervisors, officials, STiR programme team members, and parents—were assumed to have answered the questions to the best of their abilities, without withholding or misrepresenting key information.

Clarity of Questions: All questions were explained to respondents in sufficient detail to avoid misinterpretation. It is assumed that respondents understood the questions as intended.

Enumerators' Neutrality: Enumerators conducting surveys or interviews have maintained neutrality, avoiding any influence on respondents' answers.

Student Integrity: While best attempts were made to encourage accurate responses, it is acknowledged that some students may have provided incorrect or misleading information, particularly in the Social and Emotional Learning (SEL) component.

Teacher Surveys: Teacher surveys were conducted individually, and confidentiality was maintained. However, it is assumed that respondent integrity was maintained and are not influenced by social or professional concerns.

3. Assumptions Related to Data Analysis

Secondary Data: An analysis of secondary data was initially planned but was excluded due to the unavailability of key metrics, such as student grade-level academic performance, student attendance rates, and teacher attendance/attrition rates. It is assumed that this exclusion does not significantly alter the findings, as both treatment and control schools are similarly affected by external factors.

Impact Metrics: The impact of STiR Education is quantified using two metrics: the duration of the programme in the district and the proximity of schools to the city centre. This assumption is based on qualitative discussions indicating that STiR team monitoring visits primarily target schools closer to urban centres.

Identification of Independent Variables: The independent variables for the student Learning Assessment Tools (LATs) were identified through internal discussions and consultations with the STiR team. It is

assumed that these variables comprehensively capture factors influencing student outcomes, although there could be additional unrecognized variables.

Sufficiency of Sample Size: Despite a conservative estimate for the sample size, some data were excluded due to quality issues or low response rates (e.g., from parents). It is assumed that the remaining data are sufficient for reliable statistical analysis.

Statistical Assumptions: The regression models used for analysis are assumed to satisfy requirements such as linearity, homoscedasticity, and independence, ensuring reliable results.

Data Analysis Tables: Please note that response percentages may not sum to 100% in certain cases due to non-responses or multi-choice responses.

4. Assumptions About Measurement Tools

Research Tool Validation: The research tools used were validated through pilot testing and extensive consultation with STiR Education team members, incorporating inputs from the literature review.

5. Assumptions About External Influences

Other Educational Initiatives: It is assumed that any other educational or developmental programmes in the study districts, whether implemented by the government or other organisations, have influenced treatment and control schools equally.

Uniform External Factors: Broader policy, economic, and social factors are assumed to have affected treatment and control schools in similar ways, ensuring that external influences do not disproportionately skew the results.

6. Assumptions About Ethical Considerations

Informed Consent: All respondents provided informed consent and were aware of the purpose and scope of the evaluation.

Confidentiality and Anonymity: Respondents were assured of confidentiality and anonymity, minimizing the likelihood of socially desirable responses.

2.8. Limitations of the study

While this evaluation provides detailed insights into the impact of STiR Education's interventions in Indonesia, certain limitations must be acknowledged to contextualise the findings. These limitations stem from constraints in the design and methodology of the evaluation, including the sampling framework, availability of data, quality of data, and other external factors. These limitations may have influenced the scope, accuracy, and generalizability of the results. Recognizing these limitations not only ensures transparency but also provides a foundation for future evaluations to address these gaps and build upon this study's contributions. These limitations are as follows:

1. Study Design Constraints

- i. Given the complexity of the programme's results chain and the potential for interference from external factors, it was challenging to establish a direct causal relationship between programme activities and outcomes.

- ii. The selection of the control district was conducted in consultation with the STiR Indonesia local teams. While efforts were made to identify a district with similar attributes to the treatment districts, Indonesia's unique geography and terrain posed significant logistical challenges, potentially impacting the comparability of results.

2. Sampling and Data Quality Issues

- i. Despite using a conservative sample size estimate, a portion of the data was excluded due to quality issues.
- ii. A low response rate from parents on the assessment forms further reduced the amount of usable data, limiting the robustness of the regression analysis.
- iii. The sampling framework was designed to ensure uniformity across STiR Education regions; however, this approach may have constrained the ability to capture unique contextual differences in certain regions.

3. Data Collection and Measurement Limitations

- i. The literacy component of the student assessment tool was adapted to accommodate a large sample size, prioritizing comprehension and writing aspects over the recommended one-on-one evaluation of reading speed, diction, and comprehension. This adjustment was necessitated by time and resource constraints but limited the depth of the literacy assessment.
- ii. Despite measures to prevent fraudulent practices and encourage truthful responses, some students may have provided inaccurate or misleading information.
- iii. Teacher surveys were conducted individually, and while confidentiality was assured, it is possible that respondents refrained from sharing certain responses due to social or professional concerns.
- iv. Respondents' answers may have been unintentionally biased, influenced by personal beliefs or external factors.
- v. While a gender lens was applied in the study, local cultural norms likely influenced the behaviour of both respondents and enumerators, potentially affecting the validity of some observations and data points.

4. Analytical and Resource Constraints

- i. The study intended to incorporate secondary data analysis as part of the evaluation. However, critical data such as student grade-level academic performance, attendance rates, and teacher attrition rates were unavailable. Furthermore, programme teams did not share secondary data collected through their internal monitoring frameworks, limiting the comprehensiveness of the evaluation.
- ii. Although efforts were made to account for factors that influence learning outcomes, it is possible that some variables were not included within the scope of the study.

5. Tool Design and Validation

- i. The research tools were validated through pilot testing and extensive consultation with the STiR Education team, incorporating insights from the literature review. However, certain limitations in the tools' design may have impacted their ability to fully capture the complexities of the study context.

6. Contextual and External Influences

- i. Local cultural norms, particularly regarding gender dynamics, heavily influenced the behaviour of respondents and enumerators. This cultural overlay may have affected the authenticity of some responses.
- ii. Indonesia's challenging geography and terrain presented logistical difficulties, potentially affecting the comparability between control and treatment districts.

Section 3:

Detailed Findings



3.1. Impact of STiR Programme on Student Learning Outcomes

Evaluation Question

What is the impact of STiR Education's programme on student learning outcomes, their foundations of learning, and their socio emotional learning?

Summary

The STiR programme had a positive impact on student learning outcomes. The overall effect size was 7.03%, with an effect size in standard deviation of 0.097, indicating a positive impact on student learning outcomes¹⁰. Literacy performance¹¹ showed the strongest gains with an effect size of 16.4% and an effect size in standard deviation of 0.156. The effect size in numeracy¹² was 4.37%, with an effect size in standard deviation of 0.055. Lumajang emerged as the top-performing district in both literacy and numeracy, with strong performance in geometry, counting, and measurement.

The programme also influenced social-emotional learning outcomes to some extent, with treatment students reporting higher reliance on mothers for emotional support (47.1% vs. 34.8%) and fathers for academic support (33.5% vs. 17.2%). Peer support was also stronger in treatment districts, with 42.3% relying on friends, compared to 24.5% in control. In conflict resolution, treatment students demonstrated higher help-seeking behaviour (15.7% vs. 11.4%) and lower conflict escalation (5.3% vs. 6.5%).

However, numeracy improvements were not statistically significant, and 5.2% of treatment students reported having no emotional support, compared to 0.5% in control. Similarly, 13.2% of treatment students lacked academic support, compared to 4.9% in control. Empathy and emotional recognition were weaker in the treatment group, with more students misinterpreting situations as intentional (26% vs. 24.1%) and higher non-empathetic responses (6.4% vs. 3.5%).

Despite these challenges, the programme had a clear positive impact on literacy, peer relationships, and help-seeking behaviour. The high effect size in literacy (16.4%) highlights significant improvements in reading and comprehension, while stronger peer and family support networks suggest greater social-emotional engagement among treatment students.

3.1.1 Impact on Student Learning Outcomes

Overall Performance in LAT

Results indicate that being part of the STiR programme resulted in a positive impact on student learning outcomes. Statistically significant scores were obtained for the total score, along with a modest effect size of 7.03% points and an effect size in standard deviation of 0.097. These results indicate that the programme interventions improved student performance in numeracy and literacy.

Numeracy Performance

¹⁰ Regression results indicated that being part of the programme leads to a 0.771-point increase in total LAT scores.

¹¹ Regression results indicated that being part of the programme leads to a 0.383-point increase in literacy scores.

¹² Regression results indicated that being part of the programme leads to a 0.389-point increase in numeracy scores (Not statistically significant).

An effect size of 4.4% is observed in numeracy performance, with an effect size in standard deviation of 0.055. Overall, this indicates a positive impact on numeracy scores.

Literacy Performance

An effect size of 16.45% is observed in literacy performance, highest among the three models (i.e. Total, numeracy and literacy score). Additionally, regression results showed an effect size in standard deviation of 0.156. These results indicate a positive impact on literacy performance.

District Wise Performance

In terms of overall student performance, across districts in LAT assessments, Lumajang was the top performing district, followed by Kota Kediri and Kabupaten Kediri. Additionally, for both numeracy and literacy tests, Lumajang emerged as the top performer.

Treatment districts demonstrated stronger performance across all sub-section tests, with Lumajang emerging as the top performer in all except subtraction. Here, Kota Kediri scored 4% points higher. Geometry, counting, and measurement were found to be the strongest concepts among students. Additionally, division was the weakest area for students across the three districts, with 36% as the highest percentage for correct response, recorded in Lumajang.

Table 10: LAT Performance- Treatment vs Control

	Treatment total	Control total
Combined (Numeracy + Literacy)	73.4%	67.8%
Numeracy	74.8%	70.5%
Literacy	67.6%	56.7%

3.1.2 Impact on Social-Emotional Learning

Relationship ¹³	Treatment	Control
Mother	47.1%	34.8%

¹³ Students were able to select multiple options.

Relationship ¹³	Treatment	Control
Father	21.1%	7.4%
Grandmother	6.9%	3.9%
Grandfather	2.2%	1.0%
Aunt or Uncle	1.5%	0.5%
Brother	7.4%	2.5%
Sister	15.3%	8.3%
Friends	42.3%	24.5%
Teacher	2.1%	1.5%
Classmate	1.4%	2.9%
Nobody	5.2%	0.5%
Blanks	14.6%	22.1%

Emotional Support

Results indicate the presence of a stronger support system for students in the treatment districts, both within their family and among friends. Majority of students seek emotional support from their immediate family members, especially mothers. Here, treatment districts showed a higher reliance on mothers for emotional support (47.1%) as compared to the control district (34.8%).

Strong sibling relationships are observed in treatment districts, with 7.4% of students approaching their brother and 15.3% approaching their sisters for emotional support. In control districts, the dependence on siblings was much lower (Sisters: 8.3%, Brothers: 2.5%).

Additionally, treatment districts also reported stronger peer relationships with 42.3% of students likely to approach their friends (vs 24.5% control).

The treatment students were more likely to approach teachers for emotional support. However, the difference between treatment and control districts was marginal (0.6% points). Notably, a greater number of treatment students (5.2%) reported having nobody to talk to for emotional support as compared to control students (0.5%).

Relationship ¹⁴	Treatment	Control
Mother	65.3%	47.1%
Father	33.5%	17.2%
Grandmother	4.3%	0.5%
Grandfather	1.9%	0.5%
Aunt or Uncle	2.9%	1.0%
Brother	10.1%	4.9%
Sister	16.5%	12.3%
Friends	13.4%	2.9%
Teacher	9.6%	7.8%
Classmate	2.6%	0.5%
Nobody	13.2%	4.9%
Blanks	7.9%	11.8%

Academic Support

While students from both treatment and control districts were most likely to approach their mothers for academic support, the dependence is significantly higher in the treatment district (65.3% vs 47.1% control)

The dependence on teachers in the treatment district is comparatively higher (9.6% vs 7.8% control), indicating a stronger support system within the school.

Notably, a greater number of students across both treatment and control groups reported having no one to turn to for academic support compared to emotional support. Additionally, the lack of any

form of support is higher in the treatment district, with 13.2% of students reporting that they would approach nobody for academic help.

Empathy and Emotional Recognition

¹⁴ Students were able to select multiple options.

Table 13 highlights key differences in situational perception and empathetic reasoning between treatment and control groups. Results show that in the control district, 92.5% of students expressed appropriate responses, compared to only 85.9% in the treatment district. This indicates a need for interventions to improve student empathy and social and emotional recognition abilities.

In the treatment district, those who engaged in inappropriate behaviour were the most likely to be uncertain of the situation (9.7%), while in control districts they did so only if they believed the situation was accidental (1.4%). Additionally, all the students in control districts who believed the accident to be self-caused expressed an appropriate response to the situation.

Interestingly, a greater number of students in control districts reported the situation to be accidental, while a greater number of students in the treatment districts reported it to be intentional, indicating that students in the treatment districts had less favourable attitudes and perceptions of events. This can be further evidenced by the higher percentage of students in treatment schools reporting non-empathetic responses (6.4%), as compared with students from control schools (3.5%).

It was observed that while the students from schools that underwent the STiR programme demonstrated greater emotional recognition, students experienced challenges in demonstrating consistent empathy. Additional interventions might be needed to improve perspective-taking and reasoning in ambiguous social situations.

Table 13: Empathetic Reasoning and Situational Perception - Treatment vs Control					
Empathetic Reasoning					
Treatment (n = 716)					
Situational Perception	Appropriate response (n = 615)	Inappropriate response (n = 12)	Non-empathetic (n = 46)	Uncertain (n = 43)	Grand Total (n = 716)
Accidental (n = 477)	88.1%	0.6%	4.8%	6.5%	66.6%
Intentional (n = 186)	83.9%	2.7%	9.7%	3.8%	26.0%
Self-caused (n = 22)	81.8%	4.5%	4.5%	9.1%	3.1%
Uncertain (n = 31)	67.7%	9.7%	12.9%	9.7%	4.3%
Grand Total	85.9%	1.7%	6.4%	6.0%	100.0%
Control (n = 199)					
Situational Perception	Appropriate response (n = 184)	Inappropriate response (n = 2)	Non-empathetic (n = 7)	Uncertain (n = 6)	Grand Total (n = 199)
Accidental (n = 139)	92.8%	1.4%	4.3%	1.4%	69.9%
Intentional (n = 48)	91.7%	0.0%	2.1%	6.3%	24.1%
Self-caused (n = 6)	100.0%	0.0%	0.0%	0.0%	3.0%
Uncertain (n = 6)	83.3%	0.0%	0.0%	16.7%	3.0%
Grand Total	92.5%	1.0%	3.5%	3.0%	100.0%

Conflict Resolution

Conflict resolution skills were assessed through two scenarios- Scenario 1 presented a minor conflict, whereas Scenario 2 involved an escalated conflict. The data presented in Table 14 highlights notable differences in how treatment and control students approach conflict resolution. For the minor conflict scenario, no significant difference was observed between the resolution responses of students in

treatment schools (89.8%) and students from control schools (89.6%). However, in the escalated conflict scenario a significant difference was observed with students from control districts being more likely to engage in resolution behaviours (79.1% vs 74.6% treatment).

The treatment group of students demonstrated higher rates of help-seeking behaviour (15.7% vs 11.4% control) and lower escalation behaviour (5.3% vs 6.5% control).

The overall difference in conflict handling abilities between the treatment and control groups is not very prominent. This may suggest a greater need to focus on and develop students' conflict-handling skills through the programme.

Table 14: Conflict Management - Scenario comparison - Treatment and Control								
Scenario 1								
Scenario 2		Conflict Resolution (n = 640)	Help-seeking (n = 55)	Conflict Avoidance (n = 8)	Conflict Escalation (n = 7)	Uncertain (n = 3)	Total (n = 713)	
	Treatment (n = 713)							
	Conflict Resolution (n = 532)	93.0%	5.8%	0.8%	0.2%	0.2%	74.6%	
	Help-Seeking (n = 112)	92.9%	3.6%	0.9%	1.8%	0.9%	15.7%	
	Conflict Avoidance (n = 19)	73.7%	26.3%	0.0%	0.0%	0.0%	2.7%	
	Conflict Escalation (n = 38)	44.7%	36.8%	7.9%	7.9%	2.6%	5.3%	
	Uncertain (n = 12)	83.3%	8.3%	0.0%	8.3%	0.0%	1.7%	
	Total	89.8%	7.7%	1.1%	1.0%	0.4%	100.0%	
		Conflict Resolution (n = 180)	Help-seeking (n = 17)	Conflict Avoidance (n = 1)	Conflict Escalation (n = 2)	Uncertain (n = 2)	Total (n = 201)	
	Control (n = 201)							
	Conflict Resolution (n = 159)	90.6%	8.2%	0.0%	0.6%	0.6%	79.1%	
	Help-Seeking (n = 23)	87.0%	8.7%	4.3%	0.0%	0.0%	11.4%	
	Conflict Avoidance (n = 3)	66.7%	33.3%	0.0%	0.0%	0.0%	1.5%	
	Conflict Escalation (n = 13)	92.3%	0.0%	0.0%	7.7%	0.0%	6.5%	
Uncertain (n = 3)	66.7%	33.3%	0.0%	0.0%	0.0%	1.5%		
Total	89.6%	8.5%	0.5%	1.0%	0.5%	100.0%		

3.2. Levels of Intrinsic Motivation across Stakeholders

Evaluation Question

To what extent are education officials, teachers, and students intrinsically motivated as a result of engagement with the STiR programme?

Summary

The findings indicate strong functional autonomy among school supervisors and district champions, particularly in training, curriculum implementation, and day-to-day operations. Respondents reported having the flexibility to design training sessions, propose topics, and tailor materials to school-specific needs. School education leaders in the treatment group also exhibited independent decision-making in fostering collaborative processes and introducing innovative teaching practices. Additionally, a sense of purpose was evident across both groups, with supervisors, coordinators, and teachers expressing strong professional relationships, frequent collaboration, and alignment with broader educational goals. Teachers in the treatment group reported greater support from leadership and stronger peer relationships, indicating a positive work environment that fosters professional growth.

Supervisors and coordinators faced systemic challenges, particularly in policy decision-making, as final authority rested with higher leadership. The inconsistencies in communication—especially in consultation with supervisors and external partners—also weakened the sense of agency.

Teachers in the treatment group struggled with execution, particularly in teaching effectiveness and classroom management. While they embraced interactive methods, they lacked confidence and consistency in applying them effectively. The control group outperformed the treatment group in key teaching behaviours, demonstrating greater adaptability, stronger discipline, and more structured engagement with students. Control teachers also displayed better mastery, as they were less likely to blame students and more likely to use diverse assessment strategies.

Despite these challenges, the treatment group still demonstrated a stronger drive for continuous learning and improvement. Many actively sought training opportunities, valued feedback loops, and viewed teaching as a lifelong learning process. Similarly, school education leaders reported a deep sense of purpose, linking their work to societal transformation and the success of their students. While the control group maintained a more structured and disciplined environment, the treatment group cultivated an openness to change.

3.2.1 Officials

Autonomy

Across the responses from various school supervisors and district champions across Lumajang and Kota Kediri, a recurring theme of **functional autonomy**¹⁵ emerged. This was evident from the pattern of

¹⁵ In this context, “functional autonomy” refers to the practical, day-to-day freedom and authority that District Education Officers (DEOs) have to make decisions and take actions within their roles. This does not include policy, pedagogical, or strategic autonomy.

decision-making, with most individuals having control and autonomy within specific contexts, particularly related to training, curriculum implementation, and day-to-day operations

1. Daily Operations and Guidance:

Respondents described having autonomy in their day-to-day operations, particularly when engaging with schools on competency improvement efforts. The respondents reported having the freedom to design and implement training sessions, decide on coaching methods, and tailor these activities to the specific needs of teachers and school heads. However, their ability to intervene directly in school matters was limited. For instance, one school supervisor noted that they could not take direct action when schools engaged in prohibited activities, such as selling worksheets, and must defer to the school principal to address the issue.

Supervisors also shared that their role was more centred on relaying decisions from higher authorities, but they did have the ability to propose training topics and supervise teacher performance.

2. Autonomy in Curriculum and Training Development:

Several respondents reported having some autonomy in tailoring curriculum and training topics to meet the specific needs of schools. They prioritized schools based on the challenges they faced, adjusting training content accordingly. The school supervisors developed materials based on principal requests and align curriculum content with Ministry of Education guidelines.

3. Systemic Challenge – Limitations in Policy Decision-Making:

A clear limitation in autonomy was observed in policy decision-making, as most respondents acknowledge that the key decisions were made by the Education Agency or senior leadership. A number of school supervisors explicitly stated that they did not have the authority to make decisions regarding policies or regulations; instead, they delivered decisions made by the agency to school principals.

The District Champions (DCs) in both Lumajang and Kediri articulated a slightly higher degree of autonomy compared to school supervisors. The DC of Kediri mentioned being involved in designing fund allocation plans and customizing training content based on research, suggesting more significant control over specific operational areas. However, even in this role, the final authority still was with the leadership, reflecting a constrained autonomy at higher administrative levels. For instance, the DC in Kediri emphasised that certain suggestions, such as ‘not dismissing a principal close to retirement’, could be overruled by higher authorities.

Purpose

Across the responses from educational supervisors and coordinators in Lumajang and Kota Kediri, the theme of relatedness—the sense of connection, communication, and collaboration, was prominently expressed. This relatedness fostered a sense of purpose, where individuals felt their contributions were meaningful and aligned with broader educational goals.

Most respondents described frequent interactions with colleagues, the Education Agency, and other stakeholders, which reinforced their sense of being part of a larger educational system. Supervisors

emphasized the importance of **open communication channels, regular meetings, and consultations** with the Education Agency.

Another supervisor highlighted how the Education Agency consistently engaged school supervisors in discussions, particularly in the **implementation of the LICs** and socialization of mid-semester report card materials. This ongoing dialogue and inclusion in decision-making processes helped supervisors feel valued and relevant, enhancing their relatedness within the educational framework.

However, supervisors also stressed the **importance and need for consultations before** implementing programmes with external partners like STiR. They observed that such decisions were informed through monthly working group forums. Although this demonstrates a structured communication process, there is little involvement or engagement with the key stakeholders prior to making these decisions.

A few respondents reported that while the Education Agency occasionally consulted some supervisors on training preparation, this communication was not always evenly distributed, leaving some supervisors out of the loop. This inconsistency in communication hinders a full sense of relatedness, as it creates gaps in information.

Mastery

A core theme within mastery is the pursuit of continuous learning and improvement, which was demonstrated by eight respondents. They actively pursued ways to improve both their personal competence and their ability to support others in their educational careers.

One respondent discussed how they applied **differentiation and growth mindset principles** in their supervisory role, emphasizing the value of learning and applying new methodologies to improve the school environment. Another respondent noted that they found satisfaction in being **asked challenging questions**, as it motivated them to deepen their understanding and improve their knowledge.

Nine respondents discussed the **role of feedback and reflection** in their work, indicating that feedback loops were critical, and that growth requires regular evaluation and adjustment. This was primarily reflected in the respondents' approach towards providing feedback and enabling a culture of reflection.

Seven respondents expressed their desire to continue serving as role models and leaders in their educational environments. They emphasized not only their own growth but also their responsibility in helping others achieve mastery.

Eight respondents expressed a desire for further training and professional development, demonstrating that they view mastery as a continuous, lifelong process.

One respondent stated their aspiration to attend additional training sessions, even expressing interest in studying abroad to further enhance their supervisory skills. Another respondent, despite having already progressed significantly in their career, emphasized that they still had "room for growth" and regularly sought ways to expand their knowledge, particularly in teaching theory and practice.

3.2.2 School Principal

Autonomy

It was noted that autonomy among principals in the treatment schools manifests in several ways, primarily through independent decision-making, fostering collaborative processes, and empowering teachers to take control of their classroom practices.

Respondents reported taking the initiative on innovative programmes and activities that directly impact the learning environment. These included scheduling weekly teacher meetings or setting up extracurricular activities. These decisions reflected their ability to act independently, ensuring that both teachers and students remain engaged and motivated.

A few respondents described their involvement in making significant curriculum adjustments to align the school’s educational focus with broader goals, like introducing environmental themes or innovative teaching methods that are tailored to the specific context of their schools.

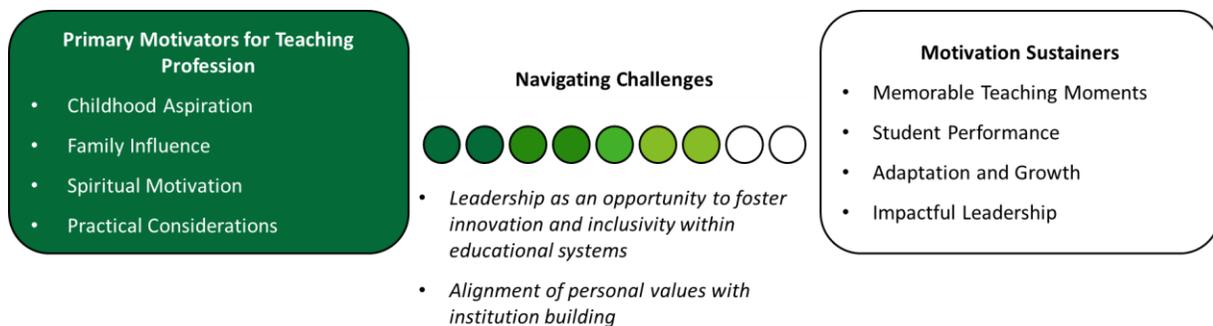
The respondents also highlighted that they were often subjected to external constraints, such as government regulations or budgetary limitations. These restrictions prevented them from fully implementing desired changes, such as improving infrastructure or expanding programmes that require additional funding.

Purpose

School principals highlighted that teaching and school leadership transcend the boundaries of their profession and had instead become a vocation that satisfies their intrinsic need to contribute to societal transformation. Some respondents expressed this by aligning their sense of purpose with their spiritual or moral values. This perspective allowed them to endure challenges such as limited resources or demanding environments, as their work fulfils a deeper need to connect with their community and uphold values of care, inclusivity, and equity.

A recurring theme among participants was the deep sense of fulfilment derived from the success of their students. These moments often acted as personal milestones, reinforcing the teachers’ commitment to their profession.

Figure 12: Motivating Factors

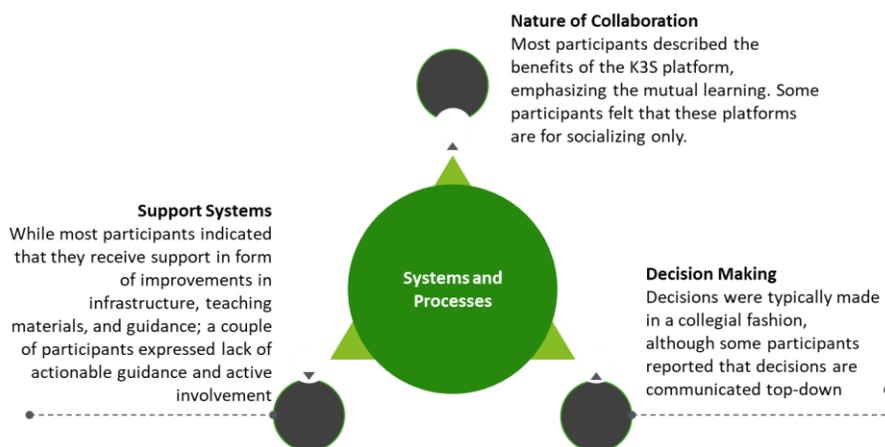


Collaboration between principals, supervisors, and educational agencies was a key avenue through which educators connect to their sense of purpose. Platforms like the Principal Working Group (K3S) enabled discussions that were intended to foster collective decision-making. This ability to engage in meaningful

consultation resonates with the intrinsic motivation pillar of purpose. However, the data suggests a mixed reality: while some participants saw these forums as opportunities for meaningful engagement, others perceived them as tokenistic or overly top-down.

The availability and quality of support systems significantly influence how principals perceive their roles and connect with their purpose. Supervisors and education offices were often viewed as critical enablers, providing resources, guidance, and training.

Figure 13: Systems and Processes



Mastery

Mastery refers to the ongoing pursuit of improvement, skill-building, and growth. Among the school principal respondents, this drive was evident in their focus on professional development, use of feedback, and efforts to inspire learning in their environments.

3.2.3 Teachers

Autonomy

Teachers in the treatment group reported a significantly higher sense of control over their workload compared to the control group.

While 66.7% of control group teachers strongly disagreed with having sufficient control, this number was significantly lower in the treatment group at 28.3%, suggesting a moderate improvement. Similarly, school leadership's provision of choices on how teachers work was perceived more positively in the treatment group, with 80% agreeing or strongly agreeing, compared to only 66.7% in the control group.

However, when asked if they would work differently if allowed, 60% of control group teachers strongly disagreed or disagreed, compared to the lower 36.7% in the treatment group, indicating that treatment group teachers still desired more flexibility in their roles.

While teachers in the treatment group reported slightly more varied teaching methods (91.7% agreed or strongly agreed), the control group had a stronger overall endorsement (93.3%), indicating greater confidence in using different approaches. Additionally, 100% of control group teachers felt they could

adjust the difficulty level of teaching, compared to 90% in the treatment group, suggesting that control group teachers felt more capable of adapting their lessons.

When it came to classroom discipline, control teachers raised their voices less often, with responses more evenly distributed across the scale, whereas treatment teachers were slightly more likely to raise their voices (46.7%), indicating potential struggles with classroom management. Encouraging students to ask questions was also more common in the control group, where 93.3% agreed or strongly agreed, compared to the treatment group's 85%, suggesting that control teachers fostered a more interactive learning environment.

Mastery

Teachers in the treatment group felt more supported by school leadership.

90% of treatment teachers agreed or strongly agreed that leadership conveyed confidence in their abilities, marginally higher compared to 86.6% in the control group.

Trust in leadership was also higher in the treatment group, with 88.4% reporting agreement, while the control group was slightly lower at 80%. Additionally, a greater proportion of treatment group teachers (80%) reported a strong sense of accomplishment, compared to only 73.3% in the control group.

However, teachers in the treatment group still found it challenging to incorporate feedback into their work, though to a lesser degree than the control group. 43.3% of treatment teachers strongly disagreed that incorporating feedback was difficult, compared to 73.3% in the control group, suggesting a positive effect of the intervention on adaptability to feedback.

The control group showed stronger performance in mastery-related teaching behaviours. Only 13.4% of control teachers agreed or strongly agreed with using standard teaching methods, compared to 15% in the treatment group, suggesting that control teachers were slightly less rigid in their instructional approaches.

Control teachers were also less likely to blame students for their faults or struggles, with none agreeing with this approach, compared to 5% of treatment teachers.

Additionally, more control teachers (80%) rejected the use of written tests as the only form of assessment, compared to 73.3% in the treatment group, reinforcing a more diverse assessment strategy in the control setting. Control teachers also placed less emphasis on lecturing as the best method of instruction, with only 20% agreeing, compared to 15% in the treatment group, reinforcing their preference for student-centred approaches.

Purpose

The treatment group demonstrated a stronger sense of purpose, particularly in their ability to voice concerns and build professional relationships. 88.3% of treatment teachers felt comfortable voicing their concerns, compared to 80% in the control group, indicating slightly greater psychological safety in the treatment setting. Additionally, treatment teachers reported better professional relationships with peers, with 93.4% agreeing or strongly agreeing, compared to 86.7% in the control group.

However, when asked if they would change career paths if given a choice, 81.6% of treatment teachers disagreed, compared to a higher 86.6% in the control group, suggesting that while the treatment may

have improved work satisfaction, career dissatisfaction remained high in both groups. Teachers in the control group appeared to promote a stronger sense of student accountability and engagement. 33.4% of control teachers strongly agreed that students should solve their own issues, compared to 18.3% in the treatment group, indicating that control teachers encouraged greater student independence.

Additionally, control teachers were more likely to encourage students to voice concerns (66.6%), compared to 85% in the treatment group, reinforcing a stronger culture of student participation. When it came to disciplinary strategies, 33.4% of control teachers agreed or strongly agreed with occasional scolding for discipline, compared to the same 33.4% in the treatment group, showing no major differences in behaviour management approaches.

Figure 14: Challenges and Reflections in Treatment Districts

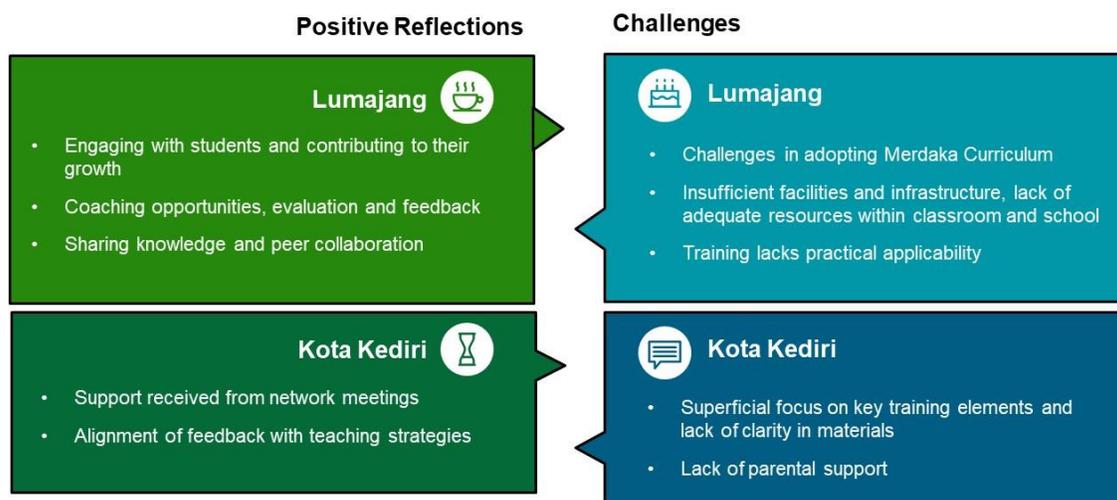


Table 15: Teacher Need Satisfaction- Treatment vs Control

Teacher Need Satisfaction*	Category	Treatment					Control				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
No sufficient control over workload	Autonomy	28.3%	38.3%	11.7%	11.7%	6.7%	66.7%	26.7%	0.0%	6.7%	0.0%
School leadership provides choices on how they work	Autonomy	6.7%	5.0%	6.7%	43.3%	36.7%	0.0%	13.3%	6.7%	60.0%	20.0%
Work differently, if allowed	Autonomy	36.7%	23.3%	18.3%	10.0%	6.7%	66.7%	13.3%	6.7%	6.7%	0.0%
Not enough time for personal life due to work	Autonomy	35.0%	43.3%	13.3%	1.7%	1.7%	40.0%	33.3%	13.3%	6.7%	0.0%
School leadership conveys confidence in teacher's abilities	Mastery	0.0%	1.7%	6.7%	40.0%	50.0%	0.0%	0.0%	13.3%	33.3%	53.3%
Trust in the school leadership	Mastery	0.0%	1.7%	10.0%	41.7%	46.7%	6.7%	0.0%	6.7%	20.0%	60.0%
Sense of accomplishment from working	Mastery	1.7%	0.0%	13.3%	53.3%	26.7%	13.3%	6.7%	0.0%	33.3%	40.0%
Difficult to incorporate feedback in work	Mastery	43.3%	30.0%	18.3%	5.0%	0.0%	73.3%	13.3%	6.7%	0.0%	6.7%
Able to voice concerns	Purpose	0.0%	0.0%	8.3%	40.0%	48.3%	0.0%	0.0%	20.0%	46.7%	33.3%

Teacher Need Satisfaction*	Category	Treatment					Control				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positive professional relationship with peers	Purpose	1.7%	0.0%	1.7%	36.7%	56.7%	6.7%	0.0%	0.0%	26.7%	60.0%
If given a choice, would change career path	Purpose	53.3%	28.3%	10.0%	0.0%	5.0%	73.3%	13.3%	0.0%	0.0%	6.7%

*Note: Respondents were asked to rank each statement from 5 (Strongly Agree) to 1 (Strongly Disagree)

Table 16: Teacher Behaviour- Treatment vs Control

Teacher Behaviour*	Category	Treatment					Control				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Different methods in classroom	Autonomy	0.0%	1.7%	1.7%	30.0%	61.7%	0.0%	0.0%	6.7%	33.3%	60.0%
Raise my voice in class	Autonomy	16.7%	13.3%	21.7%	30.0%	16.7%	20.0%	20.0%	20.0%	20.0%	20.0%
Adjust difficulty level of teaching	Autonomy	0.0%	0.0%	6.7%	50.0%	40.0%	0.0%	0.0%	0.0%	60.0%	40.0%
Encourage students to ask questions	Autonomy	1.7%	0.0%	1.7%	38.3%	55.0%	0.0%	0.0%	6.7%	60.0%	33.3%
Standard teaching methods for all	Mastery	23.3%	33.3%	23.3%	11.7%	3.3%	46.7%	33.3%	6.7%	6.7%	6.7%
Blame students for their faults	Mastery	35.0%	40.0%	15.0%	3.3%	1.7%	26.7%	66.7%	6.7%	0.0%	0.0%
Lecturing is the best method of presentation	Mastery	26.7%	26.7%	26.7%	15.0%	1.7%	46.7%	13.3%	20.0%	13.3%	6.7%
Use of written test only	Mastery	25.0%	48.3%	18.3%	3.3%	0.0%	66.7%	13.3%	13.3%	6.7%	0.0%
Blame students for not understanding	Mastery	43.3%	30.0%	11.7%	5.0%	0.0%	40.0%	53.3%	6.7%	0.0%	0.0%
student should solve their own issue	Purpose	21.7%	35.0%	20.0%	10.0%	8.3%	13.3%	33.3%	13.3%	33.3%	6.7%
Encourage students to voice concerns	Purpose	1.7%	1.7%	8.3%	46.7%	38.3%	0.0%	26.7%	6.7%	33.3%	33.3%
Occasional scolding for discipline	Purpose	6.7%	15.0%	38.3%	26.7%	6.7%	13.3%	20.0%	60.0%	6.7%	0.00%

*Note: Respondents were asked to rank each statement from 5 (Strongly Agree) to 1 (Strongly Disagree)

The key takeaway from the comparison is that while the treatment group expressed openness to adaptive and interactive teaching methods, their implementation was less effective compared to the control group.

Teachers in the treatment group were less reliant on rigid teaching methods like lecturing and written tests, and they encouraged more interactive student engagement. However, despite their inclination towards alternative methods, their classroom management and student engagement were weaker. In contrast, control group teachers not only valued adaptability but also demonstrated stronger execution of effective teaching behaviours. Additionally, they encouraged student participation while balancing it with greater student independence, fostering a more structured and well-managed learning environment.

However, a key limitation in this analysis is the small sample size across both groups. An increase in sample size could have different results.

3.3. Systemic Impact: STiR Programme and the Education Ecosystem

Evaluation Question

What is the impact of STiR Education’s programme on the education ecosystem? What processes, structures or routines have been established/changed in the government education system as a result of the STiR programme? Are there any spillover benefits to government initiatives/priorities?

Summary

STiR Education aligned closely with Indonesia’s teacher development initiatives, integrating into existing government structures through collaborations with the BBGP (Center for Teacher Movers and School Movers), the BBPMP (Center for Education Quality Assurance), and the District Education Authority (DEA). While government-led Teacher Mover programmes covered approximately 10% of personnel per district, respondents noted that STiR Education reached a significantly larger share, covering 60-70% of teachers with structured training spanning six months to three years. The evaluation also found that STiR Education leveraged existing government facilitators and champions to strengthen teacher network meetings, helping to sustain programme interventions. In Lumajang, respondents credited STiR Education with contributing to improvements in key education indicators, where previously weak performance areas in the national Education Report had shifted from amber to green.

Despite these positive aspects, respondents also highlighted challenges in scaling and institutional integration. In Kota Kediri, 30-40% of senior teachers struggled with adapting to new technology, making it difficult for them to fully engage with the Merdeka curriculum, which emphasized character over academic performance. Additionally, in Lumajang, limited support from the Education Agency was reported as a barrier to fully realizing the programme’s impact. Some respondents also expressed concerns that facilitators needed additional guidance from STiR Education in independently developing training content and selecting topics. While STiR gradually transferred responsibility for its interventions, interviews also indicated that continued assistance was still required to build local capacity. Furthermore, funding constraints were identified as a key challenge.

Despite these issues, STiR Education gained strong government endorsement, leading to expansion into three additional districts and the signing of MoUs in East Nusa Tenggara. In Kota Kediri, a Focus Group Discussion (FGD) confirmed that the DEA had begun funding most teacher network meetings (TNMs), suggesting progress toward long-term sustainability. Similarly, in Lumajang, the DEA had incorporated TNM expenses into its upcoming budget and had fully funded school principal network meetings, reflecting a commitment to sustaining STiR’s interventions. Respondents also shared that Lumajang had been recognized at the East Java level for improving key quality indicators, further motivating the district to continue implementing these interventions. As a result, two additional districts had expressed interest in collaborating with STiR Education in the future.

Alignment with Government Initiatives

Respondents across the government and the programme team noted that STiR Education programmes aligned closely with the teacher development initiatives of the Indonesian government.

The government runs its own programmes through the Center for Teacher Movers and School Movers, funded by the Ministry of Education, focusing on identifying and training principals and teachers. By involving key government stakeholders such as the BBPMP (Center for Quality Assurance) and working within the District Education Authority (DEA), STiR integrates its programme into the government's existing structure.

However, interviews highlighted that the government's Teacher Mover programmes cover approximately 10% of personnel in each district. In contrast, STiR Education covers a much larger audience, reaching 60-70% of teachers within a district, and offers long-term training over 6 months to 3 years.

STiR Education collaborated closely with the Teacher Movers programme, introduced by the Government of Indonesia in 2021, by leveraging their champions and facilitators in teacher network meetings. The programme team highlighted that this collaboration ensured that many of these teachers, who would potentially move into leadership positions, could help in sustaining and scaling the interventions. While the Teacher Movers programme emphasizes preparing teachers for supervisory or principal roles, STiR focused on enhancing the instructional leadership skills of a broader base of educators.

A key issue that STiR Education addresses is the gap in support for teachers who are not part of the Teacher Mover Programmes. While these teachers have access to platforms like PMM (Platform Merdeka Mengajar), they often lack adequate field support and coaching. STiR Education's role in integrating school principals and supervisors helped bridge this gap by ensuring that feedback and content delivery are aligned across all levels. This ensured that principals, supervisors, and teachers were on the same page, fostering a more cohesive learning environment and peer learning communities.

With significant funding directed toward programmes like Teacher Movers and other government-led initiatives, STiR Education's evidence-based practices and long-term partnerships make it well-positioned to support and enhance the government's education reforms.

Meeting Government Priorities

Kota Kediri

In Kota Kediri, the District Champion reported that the facilitator system introduced by STiR is promising, however, continued assistance from STiR is needed, particularly to guide facilitators on content development and selection of training topics. Eventually, the DC expects that facilitators are able to conduct independent surveys to determine the necessary training topics.

A significant challenge in Kota Kediri is that many senior teachers nearing retirement struggle with new technology, with around 30-40% still facing difficulties with gadgets. Fully adapting to the Merdeka curriculum, which emphasizes character over academic performance, will take time. To address this, guidance is being provided to senior teachers, encouraging them to avoid expecting instant changes in attitude or performance.

Lumajang District

According to multiple respondents, including the District Champion, Lumajang had initially received a poor national report (Education Report), with several indicators marked as amber. However, some of these indicators have now improved to green, and this positive change is attributed to the efforts made by STiR. Small changes at the field level have made a significant impact, fostering intrinsically motivated officials.

This is particularly evident in literacy, improved academic achievements and classroom management. However, the District Champion believes that the full impact has not yet been realised due to limited support from the Education Agency.

Transferring Ownership of STiR Education Interventions

Interviews indicated that there is a gradual transfer of ownership of the STiR Education programmes.

The programme team members highlighted that STiR is responsible for delivering the content of the first two Learning Improvement Cycle (LIC) bootcamps. These bootcamps were co-designed with inputs from the programme team, teachers, supervisors, and district officials, ensuring alignment with local needs. STiR coordinates with all stakeholders, ensuring proper scheduling, budgeting, and logistical planning.

As the programme progressed, STiR began transferring responsibility to government officials by actively engaging the officials and evaluating their level of confidence in independently executing different elements of the programme. STiR continued to support them in other areas where they need further assistance. This process enabled a smooth transition of ownership.

The co-design teams, which included teachers, school principals, school supervisors, and STiR district leads, played a crucial role in this process by addressing challenges and refining the implementation of LICs based on reflective discussions.

An important example of this transition is in the development of materials for school supervisors and principals. Initially, there can be resistance, as some question how teachers can design materials for supervisors. However, STiR team facilitated collaborative debrief sessions where these teacher-designed materials are shared with supervisors and principals for their input. This inclusive process built acceptance and strengthened ownership among government officials.

Over time, district champions and government officers are supposed take full responsibility for the LIC process, including designing, delivering, and evaluating the programme, with STiR serving as a support system. This structured transfer of ownership ensures that the government is actively involved and eventually fully responsible for the programme's sustainability.

Sustainability and Outlook

The STiR programme team observed that the District Education Authority (DEA) had several options for improving teacher competency, such as conducting training internally or partnering with the Center for Teacher Movers, with the funding earmarked from the district's own budget. The team noted that although the DEA has the flexibility to engage with other implementation agencies, the BBMP East Java (Center for Quality Assurance) advocated for STiR, despite budget limitations.

As a result, the programme has now expanded to three additional districts, with Memorandums of Understanding (MoUs) signed in East Nusa Tenggara. Securing buy-in from stakeholders, particularly at the DEA level, remains critical since the programme operates on a limited budget. The programme's mandate of voluntary participation has been communicated to the DEA, and the organisation has responded by incorporating the programme's needs into its budgeting process.

In Kota Kediri, a Focus Group Discussion (FGD) was held to evaluate whether STiR should maintain a long-term presence or begin transitioning out to expand into other districts. The FGD revealed that Kota Kediri is well-prepared for STiR Education's transition, as the DEA now funds most TNMs.

In Lumajang, the DEA's response has been even stronger, with TNM expenses included in the upcoming year's budget. Lumajang also provides full funding for school principal network meetings, while schools apply for TNM funding through school supervisors. Lumajang was also recognized at the East Java level for improving key quality indicators, which has motivated the district to continue implementing these interventions.

As a result of STiR Education's success in Lumajang and Kota Kediri, two other districts have expressed interest in collaborating with STiR in the future.

3.4. Effective Learning and Role Modelling: Impact of STiR Programme

Evaluation Question

To what extent does the STiR programme develop officials' and teachers' capacities to be effective learners and role-models?

Summary

Among the 20 school principals interviewed, 45% (9 principals) found Learning Improvement Cycles (LICs) valuable for their professional growth, citing innovative methodologies, collaboration, and mentorship as key benefits. Four principals reported actively implementing effective questioning techniques and coaching strategies to enhance teacher performance and student engagement. Two principals highlighted differentiated learning as a major takeaway, allowing them to tailor teaching to diverse student needs. Three principals credited LICs with improving teacher collaboration through structured discussions.

However, some principals questioned the added value of LICs, especially those with already skilled teams. One principal noted that their role in LICs was mainly logistical, limiting deeper engagement with the programme's content.

Among teachers, 75% (15 respondents) reported that LICs enhanced their professional development, particularly in differentiated learning, growth mindset strategies, and active learning methods. Teachers noted that LICs encouraged student collaboration and creative teaching techniques, such as educational songs and visual teaching aids. However, 25% (5 respondents) expressed concerns regarding the clarity and practical application of the programme content.

Teachers in treatment districts showed a higher preference for collaborative training methods compared to control teachers. 50% of treatment teachers preferred peer collaboration (vs. 20% in control), while 38.3% favoured peer feedback (vs. 20% in control). Treatment teachers were also more likely to engage with external training providers (35% vs. 20%) and attend seminars (46.7% vs. 26.7%). Notably, 16.7% of treatment teachers preferred learning through observation, whereas no control teachers opted for this approach, suggesting a stronger emphasis on collaborative and observational learning in treatment schools.

Both groups showed a strong preference for virtual training, with 56.7% of treatment teachers and 73.3% of control teachers opting for this mode. The high engagement with virtual training suggests that schools in Indonesia benefit from a strong digital learning infrastructure, enabling greater accessibility to professional development opportunities. Control teachers favoured virtual training over in-person training, further reinforcing its convenience and flexibility.

Overall, treatment teachers demonstrated greater engagement with diverse teaching and training methods, indicating a broader openness to multiple learning channels both within and outside the school ecosystem.

3.4.1 School Principals

Out of the 20 school principals interviewed, 4 mentioned that learning effective questioning techniques and coaching strategies were being actively implemented to improve teacher performance and classroom engagement. Additionally, 2 school principals highlighted differentiated learning as a key takeaway, enabling them to tailor teaching strategies for diverse student needs. A further 3 principal respondents emphasized LICs' role in improving teacher collaboration through structured discussions.

45% of the school principals (9 individuals) expressed that the LICs were valuable for their professional growth. By introducing innovative methodologies, promotion of collaborative practices, and mentorship; the LICs supported the principals in encouraging teachers to reflect on their teaching methods.

Some respondents felt their already-skilled teams limited the additional value LICs could bring. Another respondent noted that their role in LICs was primarily logistical, which restricted deeper engagement with the programme's content.

3.4.2 Teachers

Teachers emphasized the introduction of innovative teaching techniques, such as differentiated learning, growth mindset strategies, and backward flow methods. LICs often focused on fostering active learning environments, encouraging student collaboration, and creating ice-breaking activities to engage students.

The LICs also provided insights into improving literacy and fostering a student-centred learning approach, such as creating engaging educational songs and visual teaching aids.

Figure 15: Response of Teachers to the Teaching Interventions

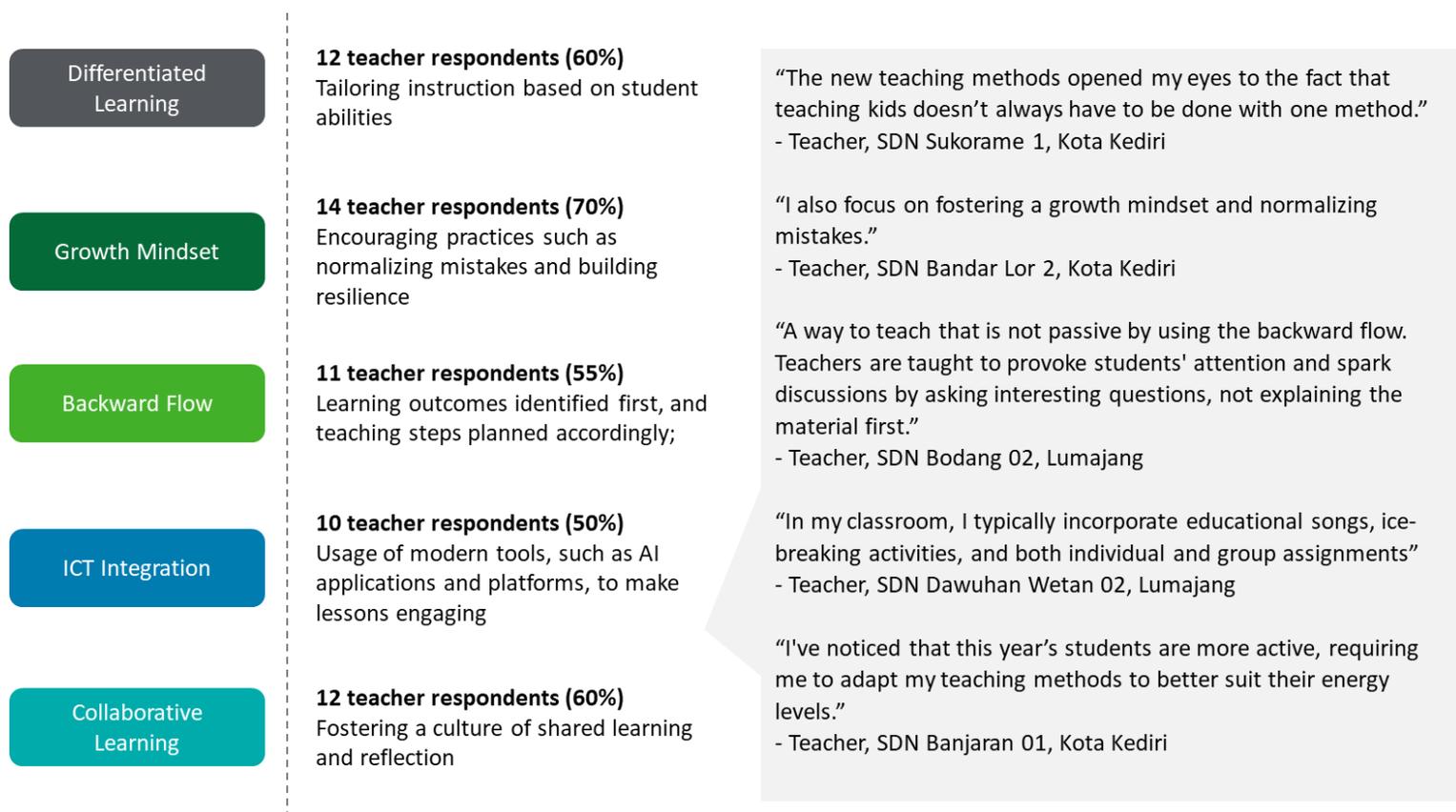


Figure 16: Teachers from Kaliuling School in Kabupaten Lumajang completing the assessment.



A majority, 75% (15 teacher respondents), felt that LICs added value to their professional development. However, 25% (5 teacher respondents) raised concerns about the clarity and application of the programme. The positive perceptions were centred on skill development (equipping teachers with tools), collaborative learning, and practical applications. Some teachers felt that the LIC content had limited

applicability and insufficient training support. Teacher respondents shared examples of how they applied their experiences from the LICs in the classroom.

Preferred Training Methods

Teachers from treatment districts showed a high preference for collaborative training methods such as peer collaboration (50%), feedback from peers (38.3%) and coaching (33.3%). Control teachers, however, did not show much preference for these methods- only 20% showed preference for peer collaboration and feedback from peers. While treatment teachers were more likely to engage with feedback driven approaches, both district types showed a lower preference towards feedback from students.

While 16.7% of treatment teachers showed preference towards observational learning, there were no control teachers who opted for this approach. This highlights the minimal emphasis placed on collaboration and observation as essential learning methods in control schools.

Teachers from treatment districts were more likely to opt for external trainings (35% vs 20% control) and seminars (46.7% and 26.7% control).

It is important to note that strong preference was given to virtual training by both districts, wherein 56.7% of treatment teachers and 73.3% of control teachers opted for this approach. The popularity of virtual training could indicate the presence of a good digital learning and technology infrastructure in Indonesian schools. The presence of strong technological infrastructure can expand growth opportunities for both teachers and students by providing access to various channels of learning and development, while also fostering additional collaboration opportunities.

Notably, control teachers prefer virtual training to in-person type trainings, further emphasizing the robust infrastructure and its many benefits, including convenience and enhanced collaboration opportunities.

Overall, treatment districts show a greater engagement with a variety of teachings methods. This could indicate that the teachers here are more open to learning from several channels, both within and outside the school ecosystem.

Table 17: Training Delivery Approach- Treatment vs Control

Training Delivery Approach*	Treatment	Control
In-person lecture type training	55.0%	33.3%
Feedback from peers	38.3%	20.0%
Training designed and delivered by external providers	35.0%	20.0%
Learning through observation	16.7%	0.0%
Coaching	33.3%	33.3%
Feedback from students	30.0%	13.3%
Attending conferences / seminars	46.7%	26.7%
Virtual training	56.7%	73.3%
Self-learning	48.3%	26.7%
Peer collaboration	50.0%	20.0%

**Please note that multiple selections allowed for this question*

Green indicates methods embedded in STiR Education's programmes

3.5. Impact of the STiR Programme on Gender and Equity

Evaluation Question

What is the impact of STiR Education's programme on gender and equity?

Summary

A significant difference in gender-based performance was observed when comparing the treatment and control districts- female students from the treatment group emerged as the strongest performers overall. They were the top performers in numeracy and literacy, outperforming both the control district and male students from the treatment districts. This highlights the success of the STiR programme, which has effectively supported and empowered female students to excel thereby ensuring equality.

However, the programme's design and strategy do not explicitly incorporate gender equality as a core objective, and no formal gender analysis was conducted prior to implementation. Key gender gaps remain in programme monitoring, with no gender-disaggregated data captured to track progress. Furthermore, while some LIC content includes gender considerations, there is no structured co-design process ensuring women's participation. As a result, STiR Education's contribution to gender equality was assessed at GEN 1, indicating limited but present gender-responsive elements.

Despite this, STiR's commitment to refining its approach presents an opportunity to embed stronger gender-sensitive practices, particularly in content development, monitoring, and addressing the specific challenges faced by female students and educators.

3.5.1 Performance on Learning Assessment Test

To understand whether STiR Education has had any impact on gender, as a first step, the study aimed to identify the level of difference in performance between male and female students across the treatment and control sample schools.

Across all three districts, it was observed that female students outperformed male students in both numeracy and literacy. Additionally, the female students of the treatment districts outperformed all other students (male students of treatment districts, male and female students of control districts) in numeracy and literacy.

However, it is important to note that this is not an anomaly; in the PISA 2022, girls outperformed boys in mathematics and reading.¹⁶

Additionally, male students of the treatment districts outperformed the male students of the control district in both literacy and numeracy. The gap between treatment and control is very evident, with treatment students across both genders scoring significantly higher. This indicates that the STiR programme has positively impacted student learning outcomes.

¹⁶<https://gpseducation.oecd.org/CountryProfile?primaryCountry=IDN&treshold=5&topic=PI#:~:text=Girls%20outperformed%20boys%20in%20m,thematics,23%20score%20points%20in%20Indonesia.>

Notably, the greatest performance gap is observed in the literacy test for both males and females. In the treatment group, boys scored 10.5% points higher, and females scored 10.2% points higher than their counterparts.

Kota Kediri is the only district wherein males outperform females in the subsection test- male students score 1% point higher in geometry and 3.6% points higher in counting.

Division is the weakest area across all three districts, with male students from the control district showing the weakest performance (27.4%).

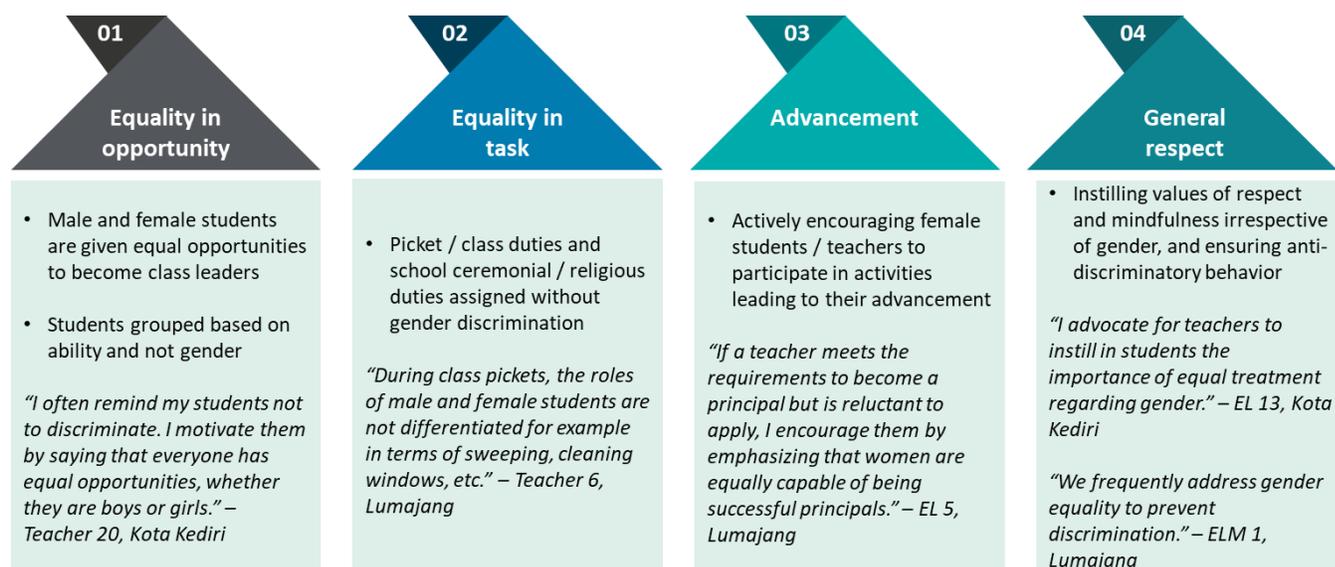
Table 18: Gender-wise LAT Performance- Treatment vs Control

	Male	Female
Treatment		
Combined (Numeracy + Literacy)	71.6%	75.2%
Numeracy	73.2%	76.7%
Literacy	65.2%	69.5%
Control		
Combined (Numeracy + Literacy)	65.2%	70.9%
Numeracy	67.8%	73.9%
Literacy	54.7%	59.3%

3.5.2 Addressing Gender Issues

A number of teachers and school leaders alluded towards ensuring gender equality in their classrooms and schools. These efforts were not coordinated nor guided by STiR Education’s materials or principles, hence most teachers, ELs and ELMs only discussed gender equality in terms of ensuring respect towards each other.

Figure 17: Addressing challenges with gender in Education



3.5.3 Assessing STiR Education's Contribution towards Gender Equality

The UNDP's Gender Marker is a vital accountability tool that tracks financial investments in gender-responsive initiatives, to assess whether projects integrate gender considerations.

Table 19: UNDP Gender Equality Marker

Code	Description of Code
GEN 3	<ul style="list-style-type: none"> The achievement of gender equality and/or the empowerment of women are an explicit objective of the output and the main reason that this output was planned.
GEN 2	<ul style="list-style-type: none"> Gender equality is not the main objective of the expected output, but the output promotes gender equality in a significant and consistent way. Requires evidence that a gender analysis has been done, that there will be change related to gender equality/women's empowerment and there are indicators to measure/track this change.
GEN 1	<ul style="list-style-type: none"> Output at the project level contributes in a limited way to gender equality, but not significantly. Gender equality is not consistently mainstreamed and has not been critical in the project design Some aspect(s) of the output at the project level (i.e. one or more of its activities) are expected to promote gender equality but not in a consistent way
GEN 0	<ul style="list-style-type: none"> Outputs at the project level are not contributing to gender equality.

To determine STiR Education's contribution towards advancing gender equality and empowerment of women, a mapping exercise was undertaken.

No.	Area	Description	Evaluation Finding
1	Theory of Change and Strategy	<p>Does the Theory of Change state gender equality or empowerment of women as an explicit objective?</p> <p>Does the programme strategy explicitly highlight gender equality goals?</p>	<p>No. It was found that the Theory of Change and the accompanying strategy narrative does not mention gender equality and empowerment of women.</p> <p>Gender does not feature as a key project impact, outcome, or output.</p>
2	Gender Analysis	Was a gender analysis study undertaken to (i) understand the nature of challenges faced by girls and women in the education system, and (ii) identify methods to address these issues?	No. To the understanding of the evaluators, a gender analysis study was not undertaken prior to the programme implementation in Indonesia.
3	Co-Design Process	Does the Co-Design Process specifically emphasise on the mandatory participation of women?	No. It was observed that the Co-Design Committee does have women participants, however, this was not a result of STiR Education's processes. Instead, the Committee is focused on engaging personnel of certain experience.
4	Content	Does the content used for the LICs address gender inequality issues amongst stakeholders at all levels?	Yes. Although the Evaluation Team has not reviewed the LIC content for the purpose of this Evaluation, discussions

No.	Area	Description	Evaluation Finding
			with the STiR Education team highlighted that certain aspects of gender equality are incorporated in the content.
5	Implementation	Does the programme implementation address the specific challenges faced by women and girls?	Partially. As depicted in Figure 11, the programme implementation does address challenges faced by women.
6	Monitoring Framework	Does the Monitoring Framework capture gender-disaggregated data across all indicators?	No. The Internal Monitoring Framework does not capture data in a gender-disaggregated manner.

3.6. Social Return on Investment (SRoI) of STiR Education Programme

Evaluation Question
What is the Social Return on Investment (SRoI) associated with investing in STiR Education’s programmes?

The objective of estimating SRoI was to estimate the financial value of the impact STiR aimed to create, delivering improvement in student learning outcomes through fostering intrinsic motivation in teachers. The SRoI framework was developed in alignment with the methodology and frameworks presented by Social Value International¹⁷ and United Nations Development Programme¹⁸. With these two as a reference point, SRoI was contextualized to the programme’s theory of change, stakeholders involved, inputs, outputs, and outcome. STiR Education’s audited balance sheets for FY 23-24 were considered to determine the input cost, against which financial value of impact was determined. The formula for SRoI was as follows:

Equation 4: SRoI Calculation

$$\begin{array}{l}
 \text{Social Return on Investment (SRoI)} \\
 \hline
 \text{Net Present Value of Impact (Financial)} \\
 \hline
 \text{Value of Inputs (Financial)} \\
 \\
 \text{Net Present Value of Impact} \\
 \hline
 (\text{Impact} - \text{Deadweight} - \text{Attribution (+/-) Displacement}) * \text{Financial Proxy per Unit} \\
 \\
 \text{Value of Inputs} \\
 \hline
 \text{Cost of implementing program}
 \end{array}$$

For STiR education, net present value of impact was estimated basis impact at student level, LAT assessment, and teacher level- self-reported score on work task motivation scale.

Net Present Value of Impact:

- Value of impact at student level: The impact considered in this analysis was the increase in Student Learning Outcomes (SLO) attributable to STiR across treatment schools. The financial proxy was based on a cost-savings approach, specifically at the parent level. The financial proxy relied on a set of assumptions, which were as follows:
 - In the absence of the publicly funded education system, parents would have borne the cost of educating their children.
 - The government of Indonesia spent IDR 19,108,981 per child¹⁹, which was the average cost incurred by the government in Kota Kediri and Lumajang.

¹⁷ socialvalueint.org/guide-to-sroi

¹⁸ https://www.undp.org/sites/g/files/zskgke326/files/migration/eurasia/Appendix-SROI-methodology_ENG.pdf

¹⁹ <https://npd.kemdikbud.go.id/>

- If the government had not provided free education, parents would have needed to bear the same cost per child.
- Therefore, the amount invested by the government per child was considered the cost saved by parents in educating their child.
- Finally, with an investment of IDR 19,108,981, the government achieved 100% SLO, providing an indicative value for each percentage point of SLO.

The Neraca Pendidikan Daerah (NPD), education report card, published by the Indonesian government was the base for identification of financial proxies. The total number of elementary schools in Lumajang and Kota Kediri, as reported in the Neraca Pendidikan Daerah (NPD), was 759, with an average of 29 students per grade. The total number of grade 6 students was 22,011, resulting in a total government investment of IDR 420,607,774,084 for grade 6. Through regression analysis, the marginal effect (7.027%) was calculated as the percentage contribution to student scores by STiR, accounting for deadweight and attribution.

The net present value of the impact delivered by STiR (calculated by multiplying the total amount invested by the government for grade 6 students by the marginal effect value and the number of grade 6 students) was IDR 29,556,108,285, which equates to £1,476,032 (based on an exchange rate of 1 IDR = 0.00004994 as of 31st March 2024).

2. Value of impact at teacher level: The impact at the teacher level was measured by the difference between treatment and control groups across the self-reported Intrinsic Motivation (IM) score on the Work Task Motivation (WTM) scale. The financial proxy used was based on the time value approach for teachers. The assumptions underlying the financial proxy are as follows:
 - Time invested by teachers in the LIC was considered value-adding, supported by qualitative interactions
 - Time spent on LIC training and activities contributed to the intrinsic motivation of teachers
 - The attribution percentage was determined based on teachers' revealed preferences regarding factors impacting their motivation
 - The total attributable financial impact value was calculated as: $IM \text{ delta} * \text{total hours spent in LIC} * \text{hourly rate of a teacher} * \text{attribution \%}$
 - The hourly rate for teachers was estimated based on the professional fees for teachers in the Neraca Pendidikan Daerah (NPD)
 - The total number of elementary school teachers was 5,169, with an average per teacher rate (across Lumajang and Kota Kediri) of IDR 10,730,919
 - The total number of working days is 179²⁰, with 8 hours per day, resulting in an hourly rate of IDR 7,493
 - The total number of value-adding LIC hours is estimated to be 490 hours, with an average of 7 LICs across both districts, each lasting 10 days at 8 hours per day. Within these 7

²⁰ <https://liburnasionalkalender.com/school-holiday-east-java/2024-2025>

hours, the time is considered value-adding within the school, while 1 hour per LIC day is allocated to negative displacement, accounting for out-of-school engagement

A weighted scoring approach was used to determine the motivation and amotivation scores across the five Work Task Motivation (WTM) areas. These scores were then consolidated into total motivation and amotivation scores for both treatment and control groups. The difference between the treatment and control groups represents the impact created by STiR on the intrinsic motivation of teachers, with the treatment group showing a 0.14% higher score.

To determine attribution, teachers' preferences regarding factors impacting motivation were considered, and the attribution percentage was estimated based on the scores given for STiR-influenced factors. Out of 11 factors, STiR influences 5, with the weighted score for these factors indicating a 35% attribution.

The total number of elementary school teachers is 5,169, according to NPD data. The difference in Work Task Motivation (WTM) between the treatment and control groups is 0.14%. The total number of LIC hours contributing to the intrinsic motivation of teachers is 490 hours, accounting for 70 hours of negative displacement, with an attribution percentage of 35%. The net present value of impact was calculated as IDR 9,348,216 or £ 467 (1 IDR = 0.00004994 as of 31st March 2024) at the teacher level.

3. Total Net Present Value of impact:

Net Present value of impact for teachers and students was calculated as £ 1,476,498.

Value of Inputs:

Value of inputs, cost of delivering the programme, was determined from the audited balance sheets of STiR Education for the FY 2023-24, amounting to £ 214,641.

Social Return on Investment Determination:

SRoI was determined by dividing the total financial value of impact delivered by STiR's input cost, leading to a return of £ 6.88 per pound invested by STiR.

It is important to note that this SRoI is calculated by considering student and teacher levels basis data availability.

3.7. Summary of Findings

STiR Education emphasizes intrinsic motivation as a crucial element in fostering lifelong learning among children. The organisation aims to strengthen education systems through partnerships with governments to drive and deliver interventions in the school education ecosystem. In Indonesia, STiR Education began programme activities in May 2022, after establishing a partnership with the local NGO Yayasan Bakti Pendidikan Unggul (YBPU) in January 2022. The programme's operations are strategically linked with multiple departments under the Ministry of Education, Culture, Research, and Technology (MOECRT), which governs early childhood, elementary, secondary, and community education, as well as cultural management.

The evaluation of STiR Education's programme in Indonesia delved into determining the impact on student learning outcomes as well as understanding the level of achievement of intermediate outcomes such as intrinsic motivation levels across stakeholders, adoption of alternate models of learning and development, and integration of processes within systems to facilitate leadership development. The evaluation was conducted across the treatment districts of Lumajang and Kota Kediri, and a control district of Kabupaten Kediri. This provided a comprehensive picture of the programme's strengths, challenges, and opportunities for growth.

Most importantly, students in the STiR Education programme demonstrated statistically significant improvements in learning outcomes, scoring an average of 0.74 points higher than students in the control group. This indicates a measurable positive impact of the programme on academic performance. Furthermore, female students outperformed male students in all three districts, reflecting global trends in education outcomes.

In terms of social-emotional learning, similar behavioural patterns were observed across districts, but the treatment districts showed relatively stronger peer relationships and higher social engagement. Kabupaten Kediri lagged behind in fostering these aspects. This suggests that the programme's emphasis on social-emotional competencies has successfully enhanced the quality of student interactions and support systems in treatment schools.

However, the evaluation highlighted that when self-reported scores for "receiving" a working environment that encourages autonomy, mastery, and purpose were compared with scores for "providing" a similar learning environment, it was found that teachers struggle to translate their own experiences into the classroom. The gap between these scores was higher in the treatment districts, suggesting that while teachers value and appreciate educational interventions such as STiR Education's programmes, they are unable to effectively integrate these into their teaching methods or classroom management practices.

In Lumajang, teachers consistently reported a lower rate of enabling autonomy, mastery, and purpose within their classrooms (as compared to the other two districts), and preferred traditional teaching methods such as written tests, occasional scolding, and having a standardised teaching style.

The study also found that the programme has supported to a limited extent in fostering leadership and improving work environments for educators. Teachers in Kota Kediri reported higher satisfaction with leadership and peer support compared to Lumajang, where responses indicated mild dissatisfaction or a tendency toward neutrality.

District officials and school principals expressed qualified satisfaction with their working environments and opportunities for personal growth and career progression. These stakeholders expressed that a hierarchical approach to policymaking, exclusion from consultations on STiR programme delivery, and critical resource and infrastructure constraints led to a misallocation of efforts.

Discussions with officials and STiR Education team also highlighted that STiR Education's programmes aligned closely with Indonesia's teacher development initiatives. The interventions allowed for expansion of training programmes much beyond the government's own programmes by covering 60-70% of teachers per district. However, stakeholders also reported concerns about limited applicability and insufficient training support, underscoring the need for ongoing collaboration and capacity building.

The evaluation revealed the persistence of gendered perceptions in the Indonesian education system. Women leaders and programme implementers faced challenges due to societal biases, which not only reinforce a preference for male teachers but also created barriers for women in leadership roles.

STiR Education has also gradually begun transferring ownership to government stakeholders to ensure sustainability. In districts such as Lumajang and Kota Kediri, government stakeholders have begun incorporating programme components into their budgets, ensuring continued support for teacher network meetings and school principal collaborations.

However, further efforts are needed to address programmatic inefficiencies, training relevance, and inclusivity. Strengthening the alignment between professional experiences and classroom practices, addressing gender biases, and improving the applicability of training methods will be crucial to maximising the programme's long-term impact

Annexure I- Detailed Findings



Introduction

The detailed insights, findings, and data for the evaluation questions are presented in this Annexure. There are no further significant findings or insights for EQ 3 and EQ 6 apart from the findings covered in the Key Findings Section 3.3 and 3.6 respectively of this report.

Evaluation Question 1:

What is the impact of STiR Education’s programme on student learning outcomes, their foundations of learning, and their socio emotional learning?

Analysis of Regression Results

- 1. Model A (Total Score):** This model considers the total score in the Learning Assessment Test, i.e., both the literacy and numeracy components.

Table 20: Total Score (Dependent Variable)

Variable	Coefficients	Standard Error	t Stat	P-value
(Intercept)***	7.7580	0.5748	13.4980	< 2e-16
Treatment*	0.7712	0.3214	2.3990	0.0167
Gender**	0.5739	0.1809	3.1720	0.0016
Coaching	-0.1479	0.2274	-0.6510	0.5155
Siblings	0.1137	0.1822	0.6240	0.5328
Highest degree of parents*	0.1329	0.0590	2.2520	0.0247
Highest degree of siblings	0.0161	0.0622	0.2590	0.7958
Land	0.1497	0.1947	0.7690	0.4425
Dependents	-0.0948	0.2733	-0.3470	0.7288
House [^]	0.4345	0.2626	1.6550	0.0985
Expenditure [^]	0.0000	0.0000	1.9340	0.0536
Assets Owned	0.0481	0.0805	0.5970	0.5504
Learning Materials	0.1637	0.1842	0.8890	0.3744
Distance**	0.0180	0.0064	2.8250	0.0049

Significant codes: '****' 0.001 '***' 0.01 '**' 0.05 '^' 0.1

Table 21: Total Score (Summary Output)

	Model 1	Model 2a	Model 2b	Model 3	Model 4
(Intercept)	10.015*** (0.28)	8.48*** (0.465)	8.443*** (0.464)	8.165*** (0.56)	7.758*** (0.575)
Treatment	1.058*** (0.297)	0.891** (0.293)	0.813** (0.295)	0.721* (0.323)	0.771* (0.321)
Gender		0.595** (0.182)	0.594** (0.181)	0.585** (0.182)	0.574** (0.181)
Coaching		-0.159 (0.229)	-0.152 (0.229)	-0.151 (0.229)	-0.148 (0.227)

	Model 1	Model 2a	Model 2b	Model 3	Model 4
Siblings		0.143 (0.183)	0.127 (0.183)	0.137 (0.183)	0.114 (0.182)
Highest degree of parents		0.16** (0.056)	0.128* (0.058)	0.113^ (0.059)	0.133* (0.059)
Highest degree of siblings		0.026 (0.062)	0.019 (0.062)	0.014 (0.063)	0.016 (0.062)
Land		0.285 (0.192)	0.247 (0.193)	0.232 (0.194)	0.15 (0.195)
Dependents		-0.116 (0.274)	-0.144 (0.274)	-0.155 (0.274)	-0.095 (0.273)
House		0.581* (0.258)	0.57* (0.257)	0.519* (0.262)	0.435^ (0.263)
Expenditure			0* (0)	0^ (0)	0^ (0)
Assets Owned				0.045 (0.081)	0.048 (0.081)
Learning Materials				0.12 (0.185)	0.164 (0.184)
Distance					0.018** (0.006)

Significant codes: ****' 0.001 ***' 0.01 **' 0.05 '^' 0.1

Observations	630	622	621	619	618
R Square	0.020	0.076	0.082	0.085	0.096
Control Outcome Mean	11.073	10.994	10.875	10.853	10.973
Effect Size	9.55%	8.10%	7.48%	6.64%	7.03%
Effect size in standard deviations (Cohen's d)	0.142	0.122	0.111	0.090	0.097

Table 22: Total Score- Model Specifications

Model	Variables
1	TotalScore~Treatment
2a	TotalScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House
2b	TotalScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure
3	TotalScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM
4	TotalScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM+Distance

Note:

AO: Sum of Assets (electricity, indoor bathroom or toilet, television, mobile phone, fridge, bike/2-wheeler, computer, gas stove)

LM: Sum of access to Learning Materials (Mobile Phone / Computer/Library)

- It was noted that being in the treatment group was positively and significantly correlated with the overall total score. This indicated that students in the STiR Education programme have higher scores (0.77 points) than those in the control group.
- Other variables that were significantly correlated were Gender, Highest Degree of Parents and Housing situation, Monthly Expenditure and Distance to City Centre. Female students scored much higher (0.57 points) compared to their male counterparts.
- Parents with higher education level had children who fared better academically.
- The model reinforced the assumption that families who own their homes, as opposed to renting, generally have higher incomes and/or a stronger socio-economic status. It showed that students from homeowner families scored 0.435 points higher than their peers in rented accommodations. This finding suggests that homeownership may be associated with better access to essential resources and learning opportunities, potentially contributing to improved academic outcomes.
- The variable "percentage of dependents in the family" (calculated as $1 - \text{Number of employed members} / \text{Total household members}$) showed a negative association with scores, indicating that students from households with more dependents may face additional challenges. However, this relationship was not statistically significant.
- Attending coaching classes was associated with a negative but non-significant impact on scores, potentially due to reduced time for self-study or the tendency for lower-performing students to be more likely to enrol in such classes.

The multiple regression model with all the above predictors had $R^2 = .096$, $F(13, 617) = 5.064$, $p < .001$.

2. **Model B (Literacy Score):** Here the selected outcome variable is the **Literacy Score** in the LAT given. The maximum possible score was 3 (minimum 0). Summary of the output is shown in the table below:

Table 23: Literacy Score (Dependent Variable)

Variable	Coefficients	Standard Error	t Stat	P-value
(Intercept)***	1.3100	0.1769	7.4060	0.0000
Treatment***	0.3826	0.0989	3.8670	0.0001
Gender*	0.1242	0.0557	2.2310	0.0261
Coaching	0.0482	0.0700	0.6880	0.4915
Siblings	-0.0322	0.0561	-0.5750	0.5655
Highest degree of parents	0.0185	0.0182	1.0200	0.3084
Highest degree of siblings	0.0187	0.0192	0.9750	0.3300
Land	-0.0219	0.0599	-0.3660	0.7148
Dependents	0.1323	0.0841	1.5730	0.1162

Variable	Coefficients	Standard Error	t Stat	P-value
House	0.0159	0.0808	0.1960	0.8444
Expenditure	0.0000	0.0000	0.8960	0.3704
Assets Owned	0.0004	0.0248	0.0160	0.9875
Learning Materials	0.0080	0.0567	0.1410	0.8879
Distance***	0.0072	0.0020	3.6520	0.0003

Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

Table 24: Literacy Score (Summary Output)

	Model 1	Model 2a	Model 2b	Model 3	Model 4
(Intercept)	1.721*** (0.084)	1.466*** (0.143)	1.462*** (0.143)	1.472*** (0.173)	1.31*** (0.177)
Treatment	0.368*** (0.089)	0.363*** (0.09)	0.356*** (0.091)	0.363*** (0.1)	0.383*** (0.099)
Gender		0.128* (0.056)	0.128* (0.056)	0.129* (0.056)	0.124* (0.056)
Coaching		0.046 (0.071)	0.047 (0.071)	0.047 (0.071)	0.048 (0.07)
Siblings		-0.021 (0.056)	-0.023 (0.056)	-0.023 (0.057)	-0.032 (0.056)
Highest degree of parents		0.013 (0.017)	0.01 (0.018)	0.011 (0.018)	0.019 (0.018)
Highest degree of siblings		0.018 (0.019)	0.017 (0.019)	0.018 (0.019)	0.019 (0.019)
Land		0.014 (0.059)	0.011 (0.059)	0.011 (0.06)	-0.022 (0.06)
Dependents		0.11 (0.084)	0.108 (0.085)	0.108 (0.085)	0.132 (0.084)
House		0.049 (0.079)	0.048 (0.079)	0.05 (0.081)	0.016 (0.081)
Expenditure			0 (0)	0 (0)	0 (0)
Assets Owned				-0.001 (0.025)	0 (0.025)
Learning Materials				-0.01 (0.057)	0.008 (0.057)
Distance					0.007*** (0.002)

Significant codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

Observations	630	622	621	619	618
R Square	0.026	0.042	0.042	0.042	0.062
Control Outcome Mean	2.089	2.226	2.216	2.218	2.328

Effect Size	17.62%	16.31%	16.06%	16.36%	16.45%
Effect size in standard deviations (Cohen's d)	0.165	0.162	0.157	0.146	0.156

Table 25: Literacy Score- Model Specifications

Model	Variables
1	LiteracyScore~Treatment
2a	LiteracyScore ~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House
2b	LiteracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure
3	LiteracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM
4	LiteracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM+Distance

- It is noted that in Model B, the treatment group was positively and significantly correlated with higher literacy scores similar to Model A. Students participating in the STiR programme scored 0.38 points higher than those in the control group. Considering that the maximum possible score is 3, this represented an increase of nearly 10.0%, highlighting the programme's meaningful impact.
- Gender also emerged as a significant predictor, with female students scoring 0.12 points higher than their male counterparts, consistent with common trends in educational research.
- Interestingly, variables such as parental education levels and housing status, which were significant in the Total Score Model, did not show a positive impact on literacy scores in this model. This suggests that other factors influencing literacy outcomes may not have been captured in the data.
- One notable observation was the positive impact of the "Percentage of dependents" variable, which also reflects household size to some extent. A potential explanation could be that children in larger households may have benefitted from greater exposure to conversations, which could have fostered improved comprehension and language skills. This finding suggests a nuanced interaction between household dynamics and literacy development.

The multiple regression model with all the above predictors had $R^2 = .062$, $F(13, 617) = 3.162$, $p < .001$.

3. **Model C (Numeracy Score):** Here the selected outcome variable is **the Numeracy Score** in the LAT given. The maximum possible score was 12 (minimum 0). Summary of the output is shown in the table below:

Table 26: Numeracy Score (Dependent Variable)

Variable	Coefficients	Standard Error	t Stat	P-value
(Intercept)***	6.4480	0.5056	12.7540	< 2e-16
Treatment	0.3886	0.2827	1.3750	0.1698

Variable	Coefficients	Standard Error	t Stat	P-value
Gender**	0.4496	0.1591	2.8250	0.0049
Coaching	-0.1961	0.2000	-0.9810	0.3272
Siblings	0.1459	0.1602	0.9110	0.3627
Highest degree of parents*	0.1144	0.0519	2.2030	0.0279
Highest degree of siblings	-0.0026	0.0547	-0.0470	0.9626
Land	0.1716	0.1713	1.0020	0.3169
Dependents	-0.2271	0.2404	-0.9450	0.3451
House^	0.4187	0.2310	1.8130	0.0704
Expenditure^	0.0000	0.0000	1.8850	0.0599
Assets Owned	0.0477	0.0708	0.6740	0.5007
Learning Materials	0.1557	0.1620	0.9610	0.3368
Distance^	0.0108	0.0056	1.9330	0.0537

Significant codes: '****' 0.001 '***' 0.01 '**' 0.05 '^' 0.1

Table 27: Numeracy Score (Summary Output)

	Model 1	Model 2a	Model 2b	Model 3	Model 4
(Intercept)	8.294*** (0.246)	7.014*** (0.408)	6.98*** (0.407)	6.693*** (0.491)	6.448*** (0.506)
Treatment	0.69** (0.261)	0.528* (0.257)	0.458^ (0.259)	0.359 (0.283)	0.389 (0.283)
Gender		0.466** (0.159)	0.466** (0.159)	0.456** (0.16)	0.45** (0.159)
Coaching		-0.206 (0.201)	-0.199 (0.2)	-0.198 (0.2)	-0.196 (0.2)
Siblings		0.164 (0.161)	0.150 (0.16)	0.16 (0.16)	0.146 (0.16)
Highest degree of parents		0.147** (0.049)	0.118* (0.051)	0.102* (0.052)	0.114* (0.052)
Highest degree of siblings		0.008 (0.055)	0.002 (0.055)	-0.004 (0.055)	-0.003 (0.055)
Land		0.27 (0.169)	0.236 (0.169)	0.221 (0.17)	0.172 (0.171)
Dependents		-0.226 (0.24)	-0.252 (0.24)	-0.264 (0.24)	-0.227 (0.24)
House		0.533* (0.226)	0.523* (0.225)	0.47* (0.23)	0.419^ (0.231)
Expenditure			0* (0)	0^ (0)	0^ (0)
Assets Owned				0.046 (0.071)	0.048 (0.071)
Learning Materials				0.129 (0.162)	0.156 (0.162)
Distance					0.011^ (0.006)

Significant codes: '****' 0.001 '***' 0.01 '**' 0.05 '^' 0.1

Observations	630	622	621	619	618
R Square	0.011	0.070	0.077	0.081	0.086
Control Outcome Mean	8.984	8.962	8.855	8.833	8.905
Effect Size	7.68%	5.89%	5.17%	4.06%	4.37%
Effect size in standard deviations (Cohen's d)	0.105	0.082	0.071	0.051	0.055

Table 28: Numeracy Score- Model Specifications

Model	Variables
1	NumeracyScore~Treatment
2a	NumeracyScore ~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House
2b	NumeracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure
3	NumeracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM
4	NumeracyScore~Treatment+Gender+Coaching+Siblings+Parentsdegree+Siblingsdegree+Land+Dependents+House+Expenditure+AO+LM+Distance

- With regard to Numeracy scores, being in treatment group was not a significant variable. As in the case of Model 1 (for Total Score), “Gender” (being female in this case), “highest degree of parents”, “owning a house”, “Monthly Expenditure”, “Distance to city centre” were statistically significant and had positive impact on the Numeracy scores.
- The ‘percentage of dependents’ and ‘attending coaching classes’ had a negative impact on the Numeracy scores.

The multiple regression model with all the above predictors had $R^2 = .086$, $F(13, 617) = 4.47$, $p < .001$.

Detailed Analysis of Performance in LAT

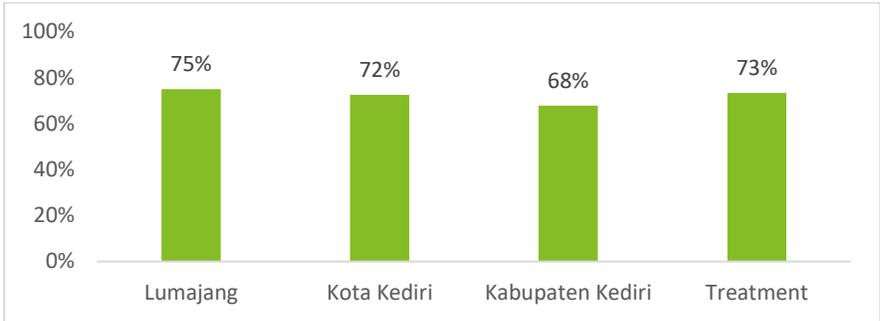
Table 29 below represents the number of students sampled in each of the districts.

Table 29: District-Wise Sample Size

Lumajang	Kota Kediri	Kabupaten Kediri (Control)
N = 258	N = 468	N = 204

Figure 18 shows district wise consolidated LAT performance (Numeracy and Literacy Clubbed)- Lumajang, the treatment district emerges as the best performer, followed by the other treatment district Kota Kediri.

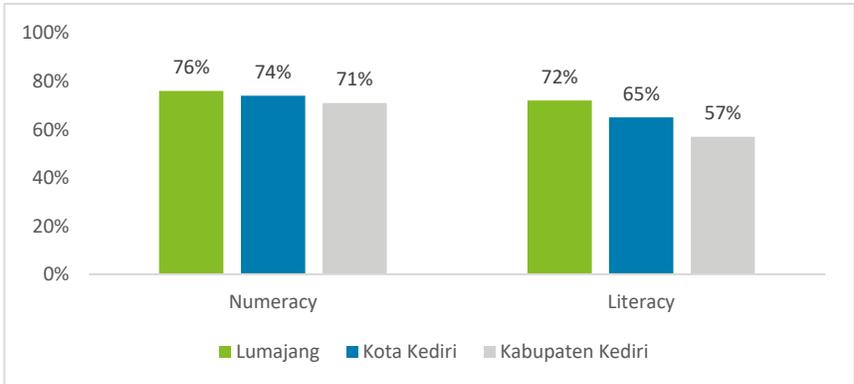
Figure 18: Overall LAT Performance



1. Section wise analysis:

When comparing the percentage (%) points (percentage of correct responses) between treatment and control schools, students in the treatment schools scored 4% point higher in numeracy and 11% point higher in literacy. Between Lumajang and Kota Kediri, **Lumajang performed better**, which can be **attributed to the longer presence of STiR** in the Lumajang compared to Kota Kediri’s, despite Kediri regency having the highest GDP in the country, influencing education budgets. Lumajang scored 2% points higher in numeracy and 7% point higher in literacy, compared to Kota Kediri.

Figure 19: Section Wise Comparisons (n=930)



2. Subsection wise analysis:

Similar trends were observed across subsections, with student LAT performance in Lumajang being the highest in most areas, except for subtraction where Kota Kediri outperformed Lumajang by 4%-point and Kabupaten Kediri by 14% points. Division was the weakest area for students across all the three districts, with the highest correct response percentage being 36%. Geometry, counting, and measurement were the strongest concepts among students, with most students scoring above 85%, except in measurement in Kabupaten Kediri.

Figure 20: Sub-section wise performance (n=930)

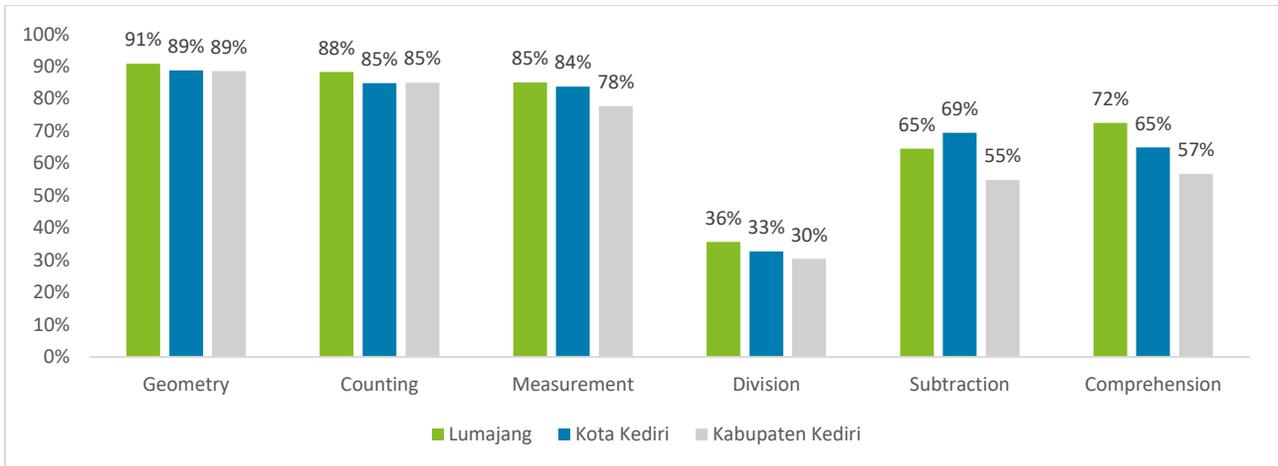
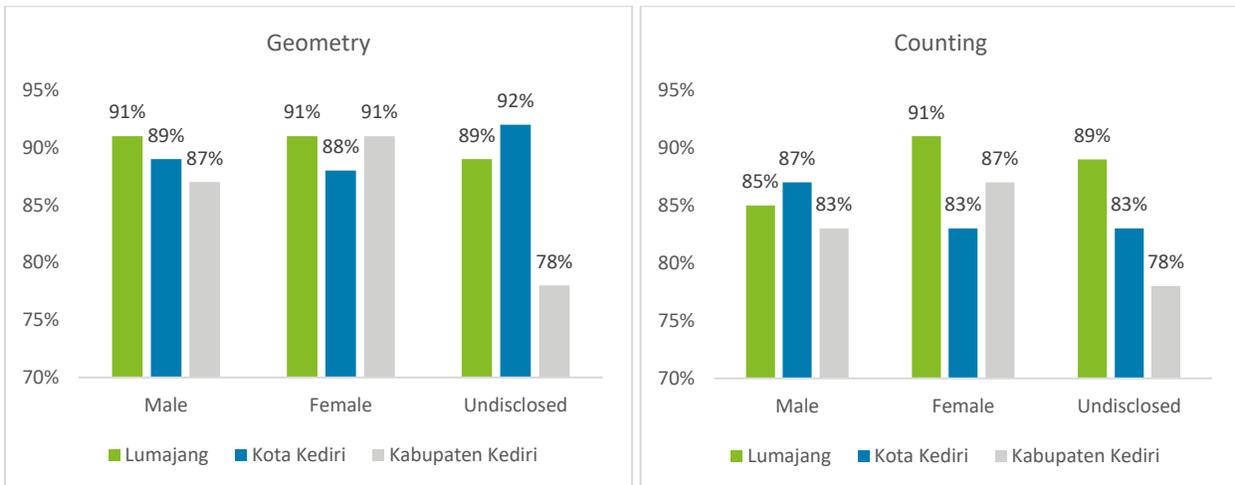
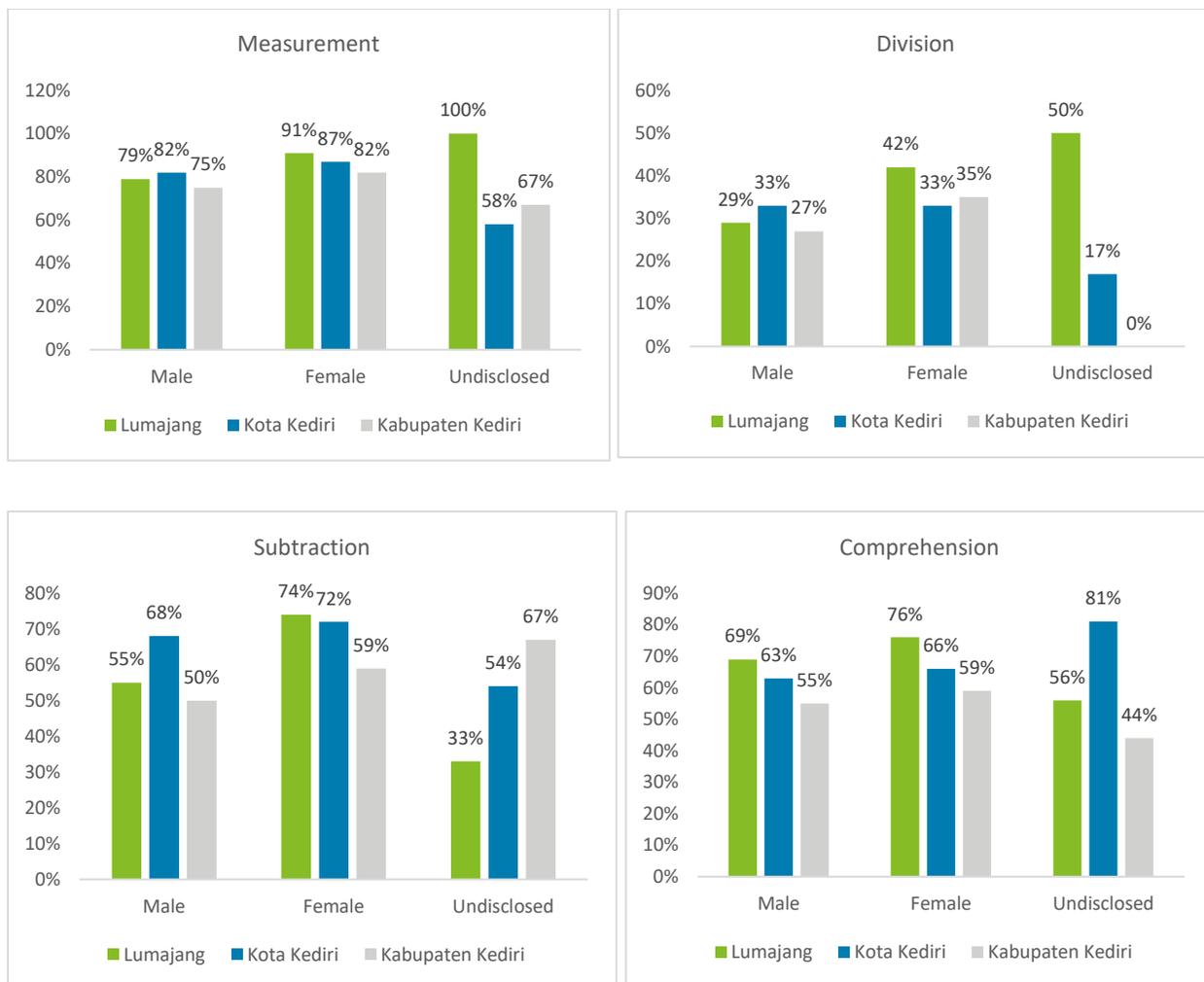


Figure 21: Subsection and gender wise student LAT performance (n = 930)





Detailed Analysis of Results on Social-Emotional Learning

1. Relationships

Students across all districts predominantly engaged with their immediate family members, especially **mothers**, with the highest rates in **Kota Kediri**. **Lumajang (49.6%)** led in reliance on peers for support, followed by **Kota Kediri (40.4%)**, while the control district **Kabupaten Kediri (27.4%)** lagged significantly.

Kota Kediri showed slightly higher reliance on extended family (**12.0%**) compared to Lumajang (**8.1%**) and Kabupaten Kediri (**5.4%**).

Lumajang (Treatment) district had the highest reliance on **friends (58.8%)** and **sisters (29.0%)** among all groups, highlighting strong peer and sibling connections. **10.5%** of Lumajang males reported having no one to talk to when sad, the highest among all groups, indicating potential isolation.

Kabupaten Kediri (Control District) students reported the lowest social relationships: lowest reliance on **mothers (34.0%)**, **fathers (10.4%)**, and **friends (16.0%)** among all groups, paired with the highest blanks (**27.4%**), reflecting disengagement or uncertainty.

Across all three districts, the female students preferred peer groups (friends and classmates) to talk to over other persons, including mothers and sisters.

Table 30: Relationship: Who do you talk to when you feel sad?

Category	Response Option	Lumajang			Kota Kediri			Kabupaten Kediri		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Immediate Family	Mother	40.3%	42.7%	41.9%	56.6%	45.1%	50.0%	34.0%	36.8%	34.8%
	Father	24.2%	17.6%	20.9%	25.1%	18.1%	21.2%	10.4%	4.2%	7.4%
	Brother	11.3%	6.1%	8.9%	10.0%	3.8%	6.6%	3.8%	1.1%	2.5%
	Sister	3.2%	29.0%	16.3%	6.8%	22.8%	14.7%	3.8%	13.7%	8.3%
Extended Family	Aunt or Uncle	0.8%	0.8%	0.8%	1.4%	2.1%	1.9%	0.0%	1.1%	0.5%
	Grandmother	5.6%	5.3%	5.4%	8.2%	6.8%	7.7%	4.7%	3.2%	3.9%
	Grandfather	3.2%	0.8%	1.9%	3.2%	1.7%	2.4%	1.9%	0.0%	1.0%
Peer	Friends	36.3%	58.8%	47.7%	27.4%	49.8%	39.3%	16.0%	34.7%	24.5%
	Classmate	2.4%	1.5%	1.9%	1.8%	0.4%	1.1%	1.9%	4.2%	2.9%
Authority Figure	Teacher	0.8%	1.5%	1.2%	2.7%	2.1%	2.6%	1.9%	0.0%	1.5%
No Support	Nobody	10.5%	3.8%	7.0%	4.1%	4.2%	4.3%	0.9%	0.0%	0.5%
	Blanks	10.5%	5.3%	7.8%	19.6%	16.0%	18.4%	27.4%	14.7%	22.1%

*Students were able to select multiple options

In the control district, Kabupaten Kediri, a significantly lower proportion of students (both male and female) reported taking help from their peers with homework, as compared with the treatment districts. This could potentially highlight a lack of peer collaboration in the control district.

Across all districts, female students showed an increased preference for either mothers or sisters to help with their homework, with the highest being noted in the treatment district Lumajang (28.2%).

Kota Kediri (Treatment) females (16.9%) and males (7.8%) showed the highest reliance on teachers for homework help. However, students in Kota Kediri also had the highest proportion of students not taking any help from any person for their homework (15.1% males, 16.0% females).

Table 31: Relationship: Who do you ask for help with homework?

Category	Response Option *	Lumajang			Kota Kediri			Kabupaten Kediri (Control)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Immediate Family	Mother	61.3%	64.9%	64%	67.1%	66.2%	66%	45.3%	49.5%	47%
	Father	37.1%	29.8%	33%	30.1%	37.6%	34%	16.0%	17.9%	17%
	Brother	12.9%	8.4%	11%	9.6%	10.1%	10%	4.7%	5.3%	5%
	Sister	10.5%	28.2%	15%	9.1%	19.4%	13%	11.3%	13.7%	3%
Extended Family	Grandmother	5.6%	3.1%	3%	3.7%	4.6%	3%	0.0%	1.1%	1%
	Grandfather	1.6%	3.1%	4%	0.9%	2.1%	4%	0.9%	0.0%	0%
	Aunt or Uncle	3.2%	3.1%	2%	0.9%	4.2%	2%	0.0%	2.1%	0%
Peer	Friends	14.5%	15.3%	19%	12.8%	11.4%	15%	1.9%	4.2%	12%
	Classmate	6.5%	7.6%	7%	0.5%	0.0%	0%	0.9%	0.0%	0%
Authority Figure	Teachers	3.2%	6.9%	5%	7.8%	16.9%	12%	9.4%	6.3%	8%

Category	Response Option *	Lumajang			Kota Kediri			Kabupaten Kediri (Control)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
No Support	Nobody	6.5%	7.6%	7%	15.1%	16.0%	17%	2.8%	7.4%	5%
	Blanks	4.8%	6.1%	5%	10.5%	8.0%	9%	12.3%	10.5%	12%

*Students were able to select multiple options

2. Empathy

This scenario involved a child crying after being bumped into while lining up to play, causing him to fall and hurt his knee. Students were asked to interpret the emotions of the crying child, suggest ways to comfort him, and reflect on why the other child might have pushed him. Additionally, they were asked how they think the other child felt after causing the incident, providing insights into empathy, problem-solving, and perspective-taking skills.

The first question dealt with recognising emotions; and aimed to understand whether students are able to appropriately identify how another child feels at a particular moment. The image in this question was that of a crying child, and students were asked to identify the emotion that the child is feeling.

The overwhelming majority of children across treatment and control districts reported an appropriate response i.e. sad, upset, hurt and in pain (99.4% across all children).

Table 32: Emotion recognition

	Treatment	Lumajang (T)	Kota Kediri (T)	Kabupaten Kediri (Control)
Response Options	N= 726	N= 258	N = 468	N= 204
Sad	88.6%	88.4%	89.0%	89.7%
Upset	1.4%	1.9%	1.0%	0.5%
Hurt	7.4%	7.0%	8.0%	6.4%
In pain	1.7%	2.3%	1.0%	2.5%
Tired	0.1%	0.0%	0.0%	0.5%
Don't know	0.4%	0.4%	0.0%	0.0%
Student left this question blank	0.4%	0.0%	1.0%	0.5%

The next question aimed to gauge emotional response of the students.

Lumajang (Treatment) district had the lowest percentage of students reporting that they would initiate a positive engagement, with only 93%, as opposed to Kota Kediri (94%) and Kabupaten Kediri (94.1%). Lumajang also had the highest percentage of students reporting avoidant behaviours (2.33%)

The avoidance behaviour was reported only by the male students in the treatment districts: in Lumajang (4.84% of all male students in the district) and Kota Kediri (0.92% of all male students in the district). In Kabupaten district, avoidance was reported by both boys (1.90% of all male students in the district) and girls (1.05% of all female students in the district).

Negative responses such as teasing was reported by a higher number of male students as compared to female students. Notably, more students reported negative engagement in the treatment districts (1.16% in Lumajang, 0.65% in Kota Kediri and 0.49% in Kabupaten Kediri).

Table 33: Emotional Response

		Treatment	Lumajang (T)	Kota Kediri (T)	Kabupaten Kediri (Control)
Category	Response Options	N= 726	N= 258	N = 468	N= 204
Positive Engagement	Ask him what is wrong	61.7%	58.5%	63.5%	65.7%
	Tell him a joke	24.8%	29.1%	22.4%	24.0%
	Give him a hug	7.2%	5.4%	8.1%	3.9%
Help-Seeking	Tell the teacher	4.3%	3.5%	4.7%	2.9%
Avoidant	Ignore him	0.3%	0.8%	0.0%	1.0%
	Run away	0.7%	1.2%	0.4%	0.0%
Negative Engagement	Tease him because boys do not cry	0.8%	1.2%	0.6%	0.5%
	Student left this question blank	0.1%	0.0%	0.2%	1.5%

The third question aimed to highlight situation analysis skills such as perception and reasoning, which in turn can be used to determine the extent of empathetic understanding that a child demonstrates.

Kota Kediri (Treatment) showed the higher percentage of students who were uncertain about the situation- 5.1%.

Table 34: Situation Perception and Reasoning

		Treatment	Lumajang (T)	Kota Kediri (T)	Kabupaten Kediri (Control)
Category	Response Options	N= 726	N= 258	N = 468	N= 204
Accidental	It was by mistake	60.5%	62.8%	59.2%	62.7%
	They did not see him	5.4%	3.9%	6.2%	5.9%
Self-caused	He fell on his own	3.0%	3.9%	2.6%	2.9%
Intentional / Malicious	Other child wanted to go first	19.0%	18.6%	19.2%	19.1%
	Other child may not like him	5.1%	6.6%	4.3%	3.4%
	Other child is a bully	1.9%	1.2%	2.4%	1.5%
Unclear	I don't know	4.1%	2.3%	5.1%	2.9%
	Student left this question blank	1.0%	0.8%	1.1%	1.5%

The next question aimed to understand empathetic reasoning, requiring students to reflect on the situation and assess the feelings of both the children involved.

Across all categories, "Appropriate Response" (guilty, bad, sad and upset) was the most common response, accounting for 89% overall, indicating strong comprehension and empathy among respondents.

Table 35: Empathetic Reasoning

	Treatment	Lumajang	Kota Kediri	Kabupaten Kediri (Control)
Response Options`	N= 726	N= 258	N = 468	N= 204
Guilty	47.9%	50.8%	46.4%	52.5%
Bad	30.2%	29.1%	30.8%	25.0%
Sorry	7.3%	6.2%	7.9%	13.2%
Pleased	0.4%	0.4%	0.4%	0.5%
Happy	1.2%	0.4%	1.7%	0.5%
Does not feel anything	6.3%	7.0%	6.0%	3.4%
I don't know	5.9%	6.2%	5.8%	3.4%

3. Solving conflict

This scenario explored a conflict involving the sharing of a toy, designed to assess students' problem-solving and social interaction skills. In the first part, students were asked how they would respond if another child wanted to play with a toy they were already using. The second part builds on this by introducing an escalation: the other child takes the toy without asking. Together, these questions aimed to evaluate students' approaches to conflict resolution, emotional regulation, and perspective-taking in challenging social situations.

Table 36: Conflict resolution (Scenario 1)

Category	Response Options	Treatment	Lumajang (Treatment)	Kota Kediri (Treatment)	Kabupaten Kediri (Control)
		N= 726	N= 258	N = 468	N= 204
Constructive Conflict Resolution	Share the toy	26.2%	24.0%	27.4%	19.6%
	Take turns	54.3%	57.8%	52.4%	61.8%
	Give the other child the toy	8.5%	6.2%	9.8%	6.9%
Help-seeking / Conflict Mitigation	Find another toy to play with	6.3%	6.6%	6.2%	6.4%
	Ask an adult for another toy	1.2%	1.9%	0.9%	2.5%
Conflict Avoidance	Avoid the child	1.1%	1.2%	1.1%	0.5%
Conflict Escalation	Run away with the toy	0.6%	0.0%	0.9%	0.0%
	Tell the child to go away	0.4%	0.8%	0.2%	1.0%
Unclear	I don't know	0.4%	1.2%	0.0%	0.5%
	Student left this question blank	1.0%	0.4%	1.3%	1.0%

- i. Kota Kediri had a slightly higher rate of conflict escalation (1.1%)
- ii. Kabupaten Kediri had higher help-seeking/alternative responses (8.9%)

Girl students consistently outperformed boys in constructive behaviours, while male students were more prone to escalation and help-seeking. Girl students also reported preferring Constructive Conflict

Resolution across all districts, with the highest rates in Kabupaten Kediri (95.7%). Girls exhibited minimal Avoidant and Conflict Escalation behaviours, with none recorded in Kabupaten Kediri and Kota Kediri.

Table 37: Conflict Behaviours and Gender - District Wise – Scenario 1

Lumajang (Treatment)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidant	1.6%	0.8%	0.0%	1.2%
Conflict Escalation	1.6%	0.0%	0.0%	0.8%
Constructive conflict resolution	83.1%	93.1%	100.0%	88.3%
Help-seeking / alternative	12.1%	5.4%	0.0%	8.6%
Total	100.0%	100.0%	100.0%	100.0%
Kota Kediri (Treatment)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidant	0.9%	1.3%	0.0%	1.1%
Conflict Escalation	2.3%	0.0%	0.0%	1.1%
Constructive conflict resolution	89.0%	92.2%	91.7%	90.7%
Help-seeking / alternative	7.8%	6.5%	8.3%	7.1%
Total	100.0%	100.0%	100.0%	100.0%
Kabupaten Kediri (Control)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidant	0.0%	0.0%	33.3%	0.5%
Conflict Escalation	1.9%	0.0%	0.0%	1.0%
Constructive conflict resolution	84.9%	95.7%	33.3%	89.1%
Help-seeking / alternative	12.3%	4.3%	33.3%	8.9%
Total	100.0%	100.0%	100.0%	100.0%

From the treatment districts, Kota Kediri students were more likely to engage in resolution behaviours and were less likely to avoid the child. Additionally, the treatment district Lumajang showed the highest number of students who did not know how to respond (1.9%).

Table 38: Conflict resolution (Scenario 2 – Escalated)

Category	Response Options	Treatment	Lumajang	Kota Kediri	Kabupaten Kediri (Control)
		N= 726	N= 258	N = 468	N= 204
Help-seeking	Ask an adult for help	15.6%	20.5%	12.8%	11.3%
Constructive resolution	Ask if we can share the toy	49.0%	43.0%	52.4%	58.3%
	Find another toy to play with	24.8%	24.0%	25.2%	20.1%
Avoidance	Avoid the child	2.6%	4.7%	1.5%	1.5%
Conflict Escalation	Run away with the toy	1.2%	2.7%	0.4%	1.0%
	Tell the child to go away	0.4%	0.8%	0.2%	2.0%
	Hit the other child	1.5%	1.2%	1.7%	1.5%
	Fight with the other child	2.1%	0.8%	2.8%	2.0%
Uncertainty	I don't know	1.7%	1.9%	1.5%	1.5%
	Student left this question blank	1.1%	0.4%	1.5%	1.0%

Key insights from the cross-district gender-wise comparisons of the response to Scenario 2:

- i. Lumajang had the highest proportion of male (22.6%) and female (18.5%) students engaging in help-seeking behaviours amongst the three districts.
- ii. Kota Kediri had the highest proportion of male students engaging in constructive resolution behaviours (74.8%) amongst the three districts.
- iii. The treatment districts (Lumajang: 20.6%, Kota Kediri: 13.0%) had a higher proportion of students reporting help-seeking behaviours (where they approached an adult to help with conflict de-escalation), while the control district (Kabupaten Kediri: 6.4%) had the highest proportion of students reporting conflict escalation behaviours.
- iv. Kabupaten Kediri had the highest proportion of male students engaging in conflict escalation behaviours (11.3%) amongst the three districts and the highest proportion of females in constructive resolution behaviours (92.5%) amongst the three districts.
- v. Males were more likely to escalate conflicts across Lumajang and Kabupaten Kediri compared to females. This reflects a pattern where males might struggle more with emotional regulation in conflict scenarios.

Constructive resolution dominated across genders and districts, but females consistently led.

Table 39: Conflict (Scenario 2)- District and Gender Wise

Lumajang (Treatment)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidance	4.8%	3.8%	33.3%	4.7%
Conflict escalation	9.7%	1.5%	0.0%	5.4%
Constructive resolution	58.9%	76.2%	33.3%	67.3%
Help-seeking	22.6%	18.5%	33.3%	20.6%
Uncertain	4.0%	0.0%	0.0%	1.9%
Total	100.0%	100.0%	100.0%	100.0%
Kota Kediri (Treatment)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidance	2.3%	0.9%	0.0%	1.5%
Conflict escalation	7.0%	3.4%	8.3%	5.2%
Constructive resolution	74.8%	83.4%	58.3%	78.7%
Help-seeking	14.0%	11.1%	33.3%	13.0%
Uncertain	1.9%	1.3%	0.0%	1.5%
Total	100.0%	100.0%	100.0%	100.0%
Kabupaten Kediri (Control)				
Conflict Behaviours	Male	Female	Undisclosed	Total
Avoidance	2.8%	0.0%	0.0%	1.5%
Conflict escalation	11.3%	1.1%	0.0%	6.4%
Constructive resolution	67.9%	92.5%	66.7%	79.2%
Help-seeking	15.1%	6.5%	33.3%	11.4%
Uncertain	2.8%	0.0%	0.0%	1.5%
Total	100.0%	100.0%	100.0%	100.0%

Evaluation Question 2:

To what extent are education officials, teachers, and students intrinsically motivated as a result of engagement with the STiR programme?

Teachers

Teacher Need Satisfaction:

Teachers from Kota Kediri (Treatment) were more likely to agree that they do not have sufficient control over their workload (23.5%), whereas in the control district, majority of teachers agreed that they do have control (66.7%).

Majority of teachers from the treatment district Kota Kediri are able to voice concerns to the school leadership (73.5%).

Teachers from the control district find it the most difficult to incorporate feedback in their work (6.7%), suggesting lack of emphasis and importance given to peer collaboration and feedback induced development.

Table 40: Teacher Need Satisfaction

Rank		1	2	3	4	5
Statement*		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel that I do not have sufficient control over my own workload. <i>(Autonomy)</i>						
	Lumajang (Treatment) (n=31)	19.4%	58.1%	9.7%	12.9%	0.0%
	Kota Kediri (Treatment) (n=34)	32.4%	14.7%	14.7%	8.8%	23.5%
	Kabupaten Kediri (Control) (n=15)	66.7%	26.7%	0.0%	6.7%	0.0%
2. I feel that my school leadership provides me choices and options about the way I work. <i>(Autonomy)</i>						
	Lumajang (Treatment)	0.0%	6.5%	12.9%	48.4%	32.3%
	Kota Kediri (Treatment)	11.8%	2.9%	0.0%	38.2%	44.1%
	Kabupaten Kediri (Control)	0.0%	13.3%	6.7%	60.0%	20.0%
3. I am able to be voice my concerns to the school leadership. <i>(Purpose)</i>						
	Lumajang (Treatment)	0.0%	0.0%	12.9%	58.1%	29.0%
	Kota Kediri (Treatment)	0.0%	0.0%	2.9%	17.6%	73.5%
	Kabupaten Kediri (Control)	0.0%	0.0%	20.0%	46.7%	33.3%
4. The school leadership has conveyed confidence in my ability to do well at my job. <i>(Mastery)</i>						
	Lumajang (Treatment)	0.0%	0.0%	12.9%	58.1%	29.0%
	Kota Kediri (Treatment)	0.0%	2.9%	0.0%	17.6%	76.5%
	Kabupaten Kediri (Control)	0.0%	0.0%	13.3%	33.3%	53.3%
5. I find it difficult to incorporate suggestions from feedback in my work. <i>(Mastery)</i>						
	Lumajang (Treatment)	29.0%	41.9%	19.4%	9.7%	0.0%
	Kota Kediri (Treatment)	64.7%	14.7%	14.7%	0.0%	0.0%
	Kabupaten Kediri (Control)	73.3%	13.3%	6.7%	0.0%	6.7%
6. I feel a lot of trust in the school leadership and how they handle school administration. <i>(Mastery)</i>						
	Lumajang (Treatment)	0.0%	3.2%	9.7%	58.1%	29.0%
	Kota Kediri (Treatment)	0.0%	0.0%	8.8%	20.6%	70.6%

Rank	1	2	3	4	5
Statement*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Kabupaten Kediri (Control)	6.7%	0.0%	6.7%	20.0%	60.0%
7. If I could choose, I would do things at work differently. <i>(Autonomy)</i>					
Lumajang (Treatment)	29.0%	32.3%	25.8%	12.9%	0.0%
Kota Kediri (Treatment)	47.1%	11.8%	8.8%	5.9%	17.6%
Kabupaten Kediri (Control)	66.7%	13.3%	6.7%	6.7%	0.0%
8. I have positive professional relationships with my peers. <i>(Purpose)</i>					
Lumajang (Treatment)	0.0%	0.0%	3.2%	54.8%	41.9%
Kota Kediri (Treatment)	2.9%	0.0%	0.0%	14.7%	76.5%
Kabupaten Kediri (Control)	6.7%	0.0%	0.0%	26.7%	60.0%
9. My job does not leave me enough time for my personal life. <i>(Autonomy)</i>					
Lumajang (Treatment)	16.1%	61.3%	22.6%	0.0%	0.0%
Kota Kediri (Treatment)	61.8%	20.6%	2.9%	2.9%	2.9%
Kabupaten Kediri (Control)	40.0%	33.3%	13.3%	6.7%	0.0%
10. Given my experience as a teacher, I would change my career path if I had a choice. <i>(Purpose)</i>					
Lumajang (Treatment)	35.5%	45.2%	19.4%	0.0%	0.0%
Kota Kediri (Treatment)	64.7%	8.8%	0.0%	0.0%	20.6%
Kabupaten Kediri (Control)	73.3%	13.3%	0.0%	0.0%	6.7%
11. Most days I feel a sense of accomplishment from working. <i>(Mastery)</i>					
Lumajang (Treatment)	0.0%	0.0%	22.6%	58.1%	19.4%
Kota Kediri (Treatment)	2.9%	0.0%	2.9%	41.2%	44.1%
Kabupaten Kediri (Control)	13.3%	6.7%	0.0%	33.3%	40.0%

*Note: Respondents were asked to rank each statement from 5 (Strongly Agree) to 1 (Strongly Disagree)

Teaching Behaviour:

Kota Kediri leads in adopting varied teaching methods, with 82.4% strongly agreeing to using different methods to improve understanding, compared to Kabupaten Kediri (60%) and Lumajang (45.2%).

Kota Kediri stands out in encouraging students to voice concerns (61.8%) and ask questions (82.4%), significantly higher than Lumajang (22.6% and 32.3%) and Kabupaten Kediri (33.3% for both).

Kota Kediri shows the strongest growth mindset, with 50% of teachers strongly disagreeing that constant student mistakes are the student's fault, compared to Kabupaten Kediri (26.7%) and Lumajang (22.6%).

Lumajang is more traditional in teaching approaches, with 38.7% disagreeing that lecturing is the best method, compared to Kabupaten Kediri (46.7%) and Kota Kediri (44.1%).

Kabupaten Kediri leads in rejecting reliance on written tests, with 66.7% strongly disagreeing, followed by Kota Kediri (44.1%) and Lumajang (16.1%).

Teachers in Kota Kediri (64.7%) are the most likely to strongly agree with adjusting teaching difficulty for student needs, compared to Kabupaten Kediri (40%) and Lumajang (22.6%).

Table 41: Teaching Behaviour

Rank	1	2	3	4	5
Statement*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I like to use different methods in class to improve understanding and retention. <i>(Autonomy)</i>					
Lumajang (Treatment)	0.0%	3.2%	3.2%	48.4%	45.2%
Kota Kediri (Treatment)	0.0%	0.0%	0.0%	8.8%	82.4%
Kabupaten Kediri (Control)	0.0%	0.0%	6.7%	33.3%	60.0%
2. If my students are not paying attention, I raise my voice in class. <i>(Autonomy)</i>					
Lumajang (Treatment)	9.7%	19.4%	29.0%	41.9%	0.0%
Kota Kediri (Treatment)	23.5%	5.9%	17.6%	14.7%	35.3%
Kabupaten Kediri (Control)	20.0%	20.0%	20.0%	20.0%	20.0%
3. I think a standard teaching style works best for all types of learners. <i>(Mastery)</i>					
Lumajang (Treatment)	9.7%	35.5%	35.5%	16.1%	0.0%
Kota Kediri (Treatment)	41.2%	26.5%	14.7%	5.9%	5.9%
Kabupaten Kediri (Control)	46.7%	33.3%	6.7%	6.7%	6.7%
4. I believe that students should solve their own issues with their classmates. <i>(Purpose)</i>					
Lumajang (Treatment)	19.4%	38.7%	29.0%	9.7%	3.2%
Kota Kediri (Treatment)	29.4%	26.5%	8.8%	14.7%	11.8%
Kabupaten Kediri (Control)	13.3%	33.3%	13.3%	33.3%	6.7%
5. I adjust the level of difficulty of my teaching to suit all types of students. <i>(Autonomy)</i>					
Lumajang (Treatment)	0.0%	0.0%	12.9%	64.5%	22.6%
Kota Kediri (Treatment)	0.0%	0.0%	0.0%	29.4%	64.7%
Kabupaten Kediri (Control)	0.0%	0.0%	0.0%	60.0%	40.0%
6. I encourage students to voice their concerns to me. <i>(Purpose)</i>					
Lumajang (Treatment)	0.0%	0.0%	16.1%	61.3%	22.6%
Kota Kediri (Treatment)	2.9%	2.9%	0.0%	26.5%	61.8%
Kabupaten Kediri (Control)	0.0%	26.7%	6.7%	33.3%	33.3%
7. If a student is making mistakes constantly, I think it is their fault. <i>(Mastery)</i>					
Lumajang (Treatment)	22.6%	54.8%	19.4%	3.2%	0.0%
Kota Kediri (Treatment)	50.0%	26.5%	8.8%	2.9%	2.9%
Kabupaten Kediri (Control)	26.7%	66.7%	6.7%	0.0%	0.0%
8. I think lecturing is the best method for presenting my subject material to students. <i>(Mastery)</i>					
Lumajang (Treatment)	12.9%	38.7%	41.9%	6.5%	0.0%
Kota Kediri (Treatment)	44.1%	17.6%	8.8%	20.6%	2.9%
Kabupaten Kediri (Control)	46.7%	13.3%	20.0%	13.3%	6.7%
9. I use only written tests to assess the degree of academic growth. <i>(Mastery)</i>					
Lumajang (Treatment)	16.1%	58.1%	22.6%	3.2%	0.0%
Kota Kediri (Treatment)	44.1%	32.4%	11.8%	2.9%	0.0%
Kabupaten Kediri (Control)	66.7%	13.3%	13.3%	6.7%	0.0%

Rank	1	2	3	4	5
Statement*	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10. Occasional scolding in class helps establish discipline faster and better. <i>(Purpose)</i>					
Lumajang (Treatment)	3.2%	16.1%	45.2%	32.3%	3.2%
Kota Kediri (Treatment)	14.7%	17.6%	26.5%	17.6%	11.8%
Kabupaten Kediri (Control)	13.3%	20.0%	60.0%	6.7%	0.0%
11. I encourage students to ask questions in class. <i>(Autonomy)</i>					
Lumajang (Treatment)	0.0%	0.0%	3.2%	64.5%	32.3%
Kota Kediri (Treatment)	2.9%	0.0%	0.0%	8.8%	82.4%
Kabupaten Kediri (Control)	0.0%	0.0%	6.7%	60.0%	33.3%
12. If students ask me questions or do not understand a concept, I think it is because they did not pay attention in class. <i>(Mastery)</i>					
Lumajang (Treatment)	29.0%	38.7%	25.8%	6.5%	0.0%
Kota Kediri (Treatment)	64.7%	17.6%	5.9%	2.9%	0.0%
Kabupaten Kediri (Control)	40.0%	53.3%	6.7%	0.0%	0.0%

*Note: Respondents were asked to rank each statement from 5 (Strongly Agree) to 1 (Strongly Disagree)

Methods of Improvement

Figure 22: Methods of Improvement and Growth



Case Study: SDN Ketami 02, Kota Kediri

As the principal at SDN Ketami 02 in Kediri City, the respondent focused on collaboration and structured growth, by addressing challenges through consistent coaching, feedback mechanisms, and community engagement.

The respondent engaged in monthly coaching sessions led by school supervisors and conducts biweekly coaching sessions for teachers, encouraging them to embrace enjoyable and effective classroom practices. The principal had nurtured strong collaborative relationships with a number of stakeholders including teachers, school guards, and students, and wished to deepen this by also engaging with parents through more intensive communication with committees and associations.

Feedback played a central role in this principal’s leadership. By actively integrating insights from supervisors into actionable plans, the respondent ensured that these were communicated effectively to

the school staff. This focus on creating a supportive environment extended to encouraging peer learning among teachers.

Officials

Figure 23: Interaction with a school supervisor in Kabupaten Lumajang.
Taken during the field visit to Indonesia in August 2024.



Figure 24: Conversations with Officials. Conducted during the field visit to Indonesia in August 2024.

"I have always aspired to be a teacher because of their role in sharing knowledge to other people is a good deed in my religion. The teaching profession has a career path, starting from a teacher, then a school principal, to becoming a school supervisor. After I became a school principal, I continued to be a school supervisor as the highest position in this career path."

- Respondent 3, Lumajang

"I wanted to support principals and teachers because, as a former principal and teacher myself, I often felt uncertain about where to seek help during challenging times. Now, as a school supervisor, I am committed to providing the necessary assistance."

- Respondent 7, Kediri

Evaluation Question 4:

To what extent does the STiR programme develop officials' and teachers' capacities to be effective learners and role-models?

Preferred Training Methods

Table 42 compares the district-wise preference of training methods among teachers. Virtual training was preferred across all regions, although the control region exhibits a higher preference. This could indicate a gap in the infrastructure or effectiveness of in-person or peer-based methods in Kabupaten Kediri.

Lumajang's higher preference for in-person training suggests effective delivery and infrastructure in this treatment districts.

The treatment districts showed a slightly stronger preference for collaboration-based methods compared to the control. This suggests that interventions in Lumajang and Kota Kediri might emphasize teamwork and shared learning, which are absent in Kabupaten Kediri.

Table 42: Preferred Training Methods- District wise

Preferred training method	Overall **		
	Lumajang	Kota Kediri	Kabupaten Kediri
In person training	64.5%	44.8%	33.3%
Peer feedback	45.2%	31.0%	20.0%
Training by external providers	22.6%	48.3%	20.0%
Learning through observation	25.8%	6.9%	0.0%
Coaching and mentoring by senior teachers	38.7%	27.6%	33.3%
Feedback from students	29.0%	31.0%	13.3%
Attending conferences	41.9%	51.7%	26.7%
Virtual training	51.6%	62.1%	73.3%
Self-learning	45.2%	51.7%	26.7%
Peer collaboration	51.6%	48.3%	20.0%

Green indicates methods embedded in STiR Education's programmes

**Multiple responses allowed

Evaluation Question 5:

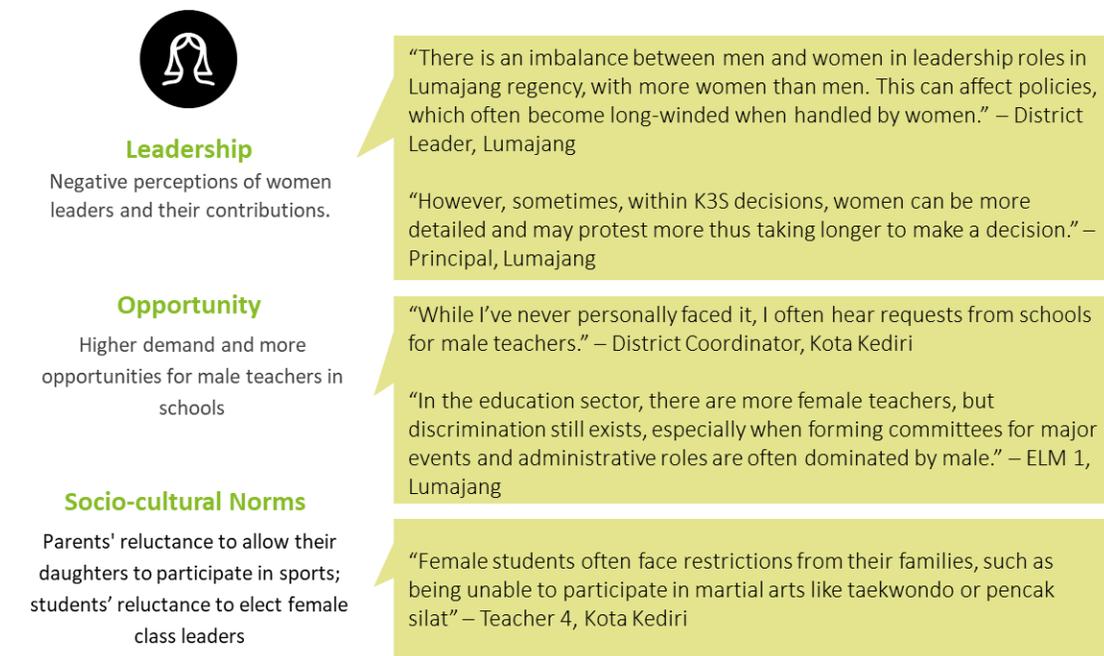
What is the impact of STiR Education’s programme on gender and equity?

Context

Gender inclusivity and gender transformational approaches remain pertinent across all ecosystems, but most particularly in education. Although Indonesia has introduced reforms and movements to address gender inequality in education, challenges persist in less urbanised and remote areas of the country.²¹ Patriarchal systems and norms continue to hinder equitable access to education and perpetuate unhealthy stereotypes of women in these regions. Interestingly, while some respondents in the study echoed these sentiments, the overwhelming majority reported not facing discrimination or challenges based on their gender. However, key gender-related challenges within the education system still exist.

In this context, the gender integration within STiR Education’s programme is paramount. The organisation’s focus on fostering a cohesive and collaborative work and learning environment aligns closely with the need for gender-sensitive interventions. These efforts are crucial for addressing the systemic barriers that continue to hinder gender equity in education.

Figure 25: Gender-related Challenges in Schools



²¹ <https://eastasiaforum.org/2024/09/04/roadblocks-to-gender-equality-remain-in-indonesian-schools/>

Performance on Learning Assessment Test

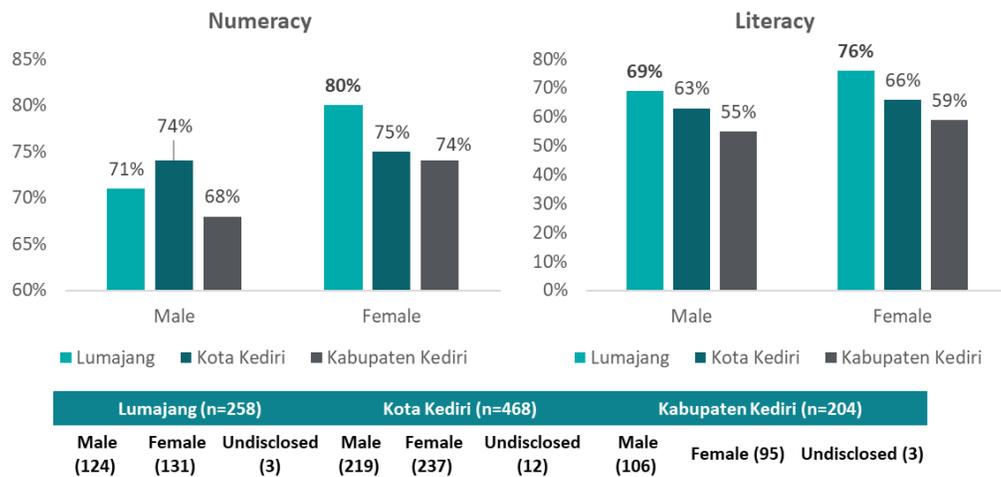
Male Students Performance

1. While male students of Kota Kediri performed the best in numeracy, the male students of Lumajang excelled in literacy.
2. In Lumajang, a 3% positive delta in numeracy and 14% delta in literacy was observed, as against control district.
3. In Kota Kediri, a 6% positive delta in numeracy and 8% delta in literacy was observed, as against control district.

Female Students Performance

1. Female students of Lumajang district outperformed all other across all topics, districts, and genders.
2. In Lumajang, a 6% positive delta in numeracy and 17% delta in literacy was observed, as against control district.
3. In Kota Kediri, a 1% positive delta in numeracy and 7% delta in literacy was observed, as against control district.

Figure 26: Sex-disaggregated Student Performance



Gender wise:

The students belonged to the following gender groups across treatment and control schools:

Table 43: Gender wise distribution for Treatment and Controls

Male Students (Treatment)	Female Students (Treatment)	Undisclosed (Treatment)	Male Students (Control)	Female Students (Control)	Undisclosed (Control)
343	368	15	106	95	3

Gender wise study of section scores (treatment vs control):

When comparing male student LAT performance between treatment and control schools, male students in Lumajang (N = 124) showed a 3% positive delta in numeracy and a 14% delta in literacy, while male students in Kota Kediri (N = 219) had a 6% positive delta in numeracy and an 8% delta in literacy. These results indicate that male students (N = 343) in treatment schools are outperforming their counterparts in control schools (N = 106).

For female student LAT performance, those in Lumajang (N = 131) showed a 6% positive delta in numeracy and a 17% delta in literacy, while female students in Kota Kediri (N = 237) had a 1% positive delta in numeracy and a 7% delta in literacy. This suggests that female students (N = 368) in treatment schools are performing better than female students (N = 95) in control schools. Within the undisclosed gender group, in Lumajang, a 14%-point delta in numeracy and 11% point delta in literacy was observed. In Kota Kediri, a 4%-point delta in numeracy and 36%-point delta in literacy was observed.

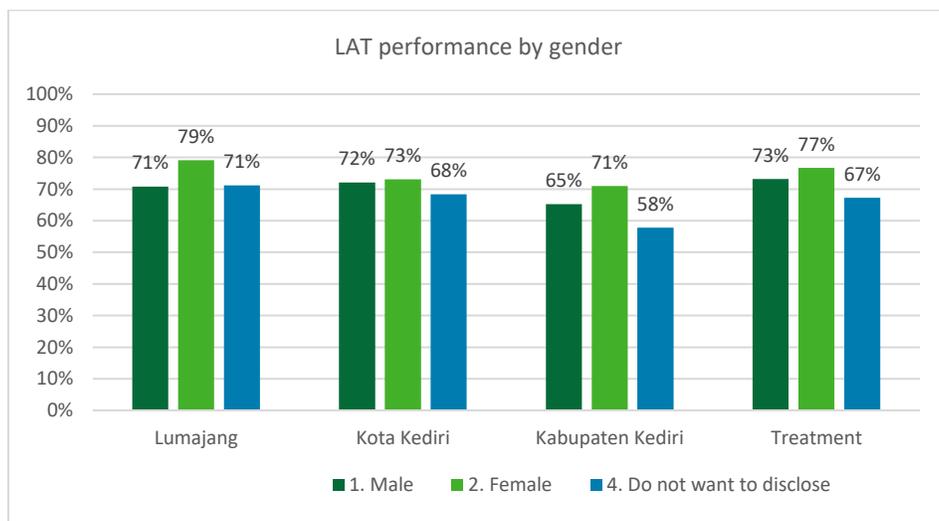
Performance between Kota Kediri and Kabupaten Kediri was almost similar, whereas Lumajang clearly outperformed Kabupaten Kediri in literacy across genders.

Gender wise study of section scores (treatment vs treatment):

Upon comparing male and female performance in treatment schools, female students in Lumajang (N = 131) outperformed their male counterparts by 9 percentage points in numeracy and 1 percentage point in literacy. In Kota Kediri, female students (N = 237) performed better than male students by 6 percentage points in numeracy and 3 percentage points in literacy

Overall, female students (N = 368) outperformed male students (N = 343) in the LAT assessment by approximately 3 percentage points. In same-gender comparisons, male students in Kota Kediri outperformed male students in Lumajang by 3 percentage points in numeracy, and students with undisclosed gender in Kota Kediri outperformed those in Lumajang by 25 percentage points in literacy. Otherwise, Lumajang outperformed Kota Kediri and Kabupaten Kediri, across all gender group and sections.

Figure 27: Overall LAT performance gender wise



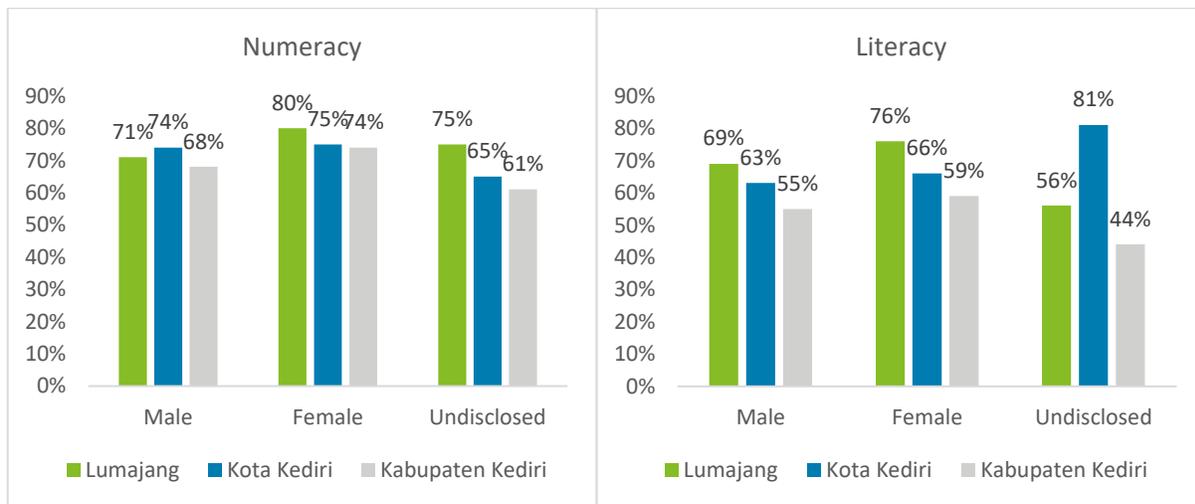
Gender wise study of subsection scores (treatment vs control):

Comparing male students in treatment vs. control schools, in Lumajang, students showed improved performance across all subsections, with positive changes observed in counting and division (2%), geometry and measurement (4%), subtraction (5%), and comprehension (15%). In Kota Kediri, male students also performed better in all subsections, with positive changes in geometry (2%), counting (4%), measurement (7%), division (6%), subtraction (17%), and comprehension (8%).

For female students, treatment vs. control comparisons in Lumajang revealed higher performance in all subsections except geometry. Positive changes were observed in counting (4%), measurement (9%), division (7%), subtraction (15%), and comprehension (17%). In Kota Kediri, female students showed negative changes in geometry (-3%), counting (-4%), and division (-1%), but positive changes were seen in measurement (5%), subtraction (12%), and comprehension (7%).

For students with undisclosed gender, treatment vs. control comparisons in Lumajang showed better performance across all sections except subtraction (-33%). Positive changes were observed in geometry and counting (11%), measurement (33%), division (50%), subtraction (11%), and comprehension (14%). In Kota Kediri, undisclosed gender students had negative changes in measurement (-8%) and subtraction (-13%), but positive changes in geometry (14%), counting (6%), division (17%), subtraction (36%), and comprehension (9%).

Figure 28: Section and gender wise performance of students across the three districts



STiR Education Programme Delivery and Content

The STiR Education Programme team members noted that they initially faced multiple challenges in engaging with male teachers and male school education leaders in districts like Lumajang: they recounted that the focus of the audience was missing, and described the overall experience of talking to men from a position of authority as “intimidating”.

While the programme team and female school supervisors responded to the gender discrimination challenges with tact, these approaches evolved in response to hostile environments. The approaches did not directly address the issue of gender discrimination.

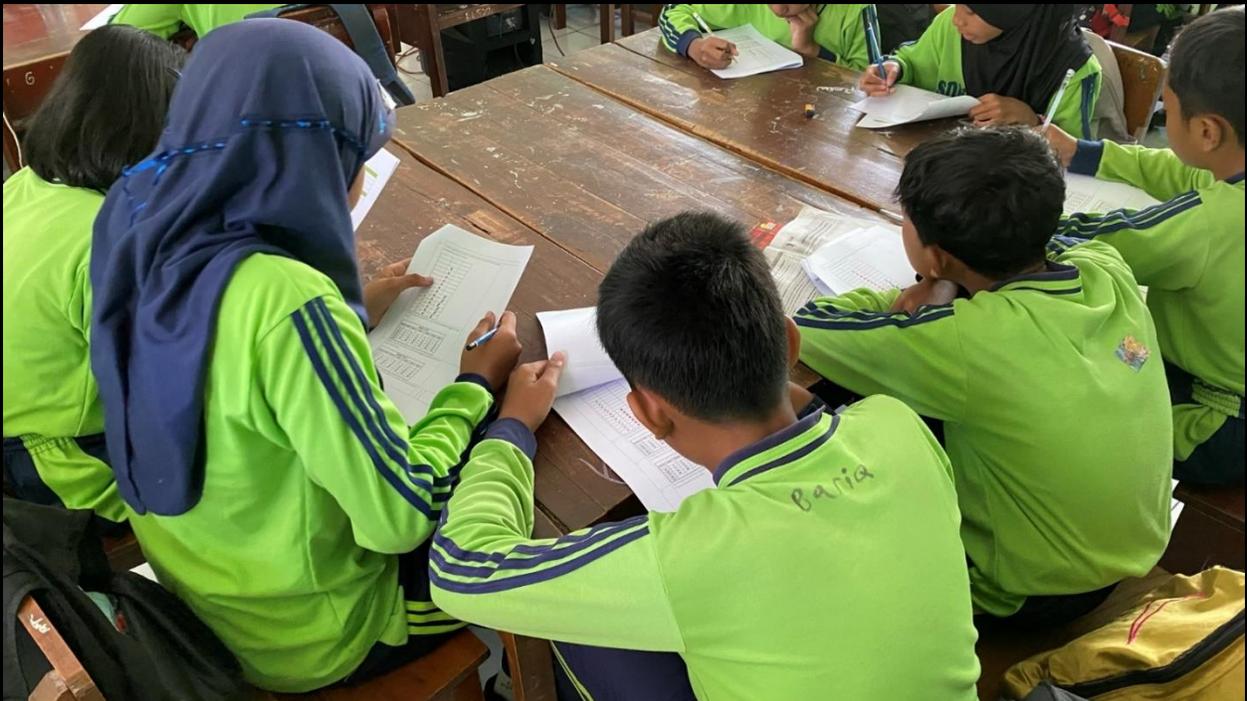
For instance, when a female school supervisor was made the head of all supervisors in Lumajang district, she was able to obtain cooperation from the male supervisors by reaffirming that she was not there to “teach them” (seen as a position of authority); rather she wished to “share knowledge from the Ministry training sessions” (seen as a position of communicator / facilitator).

Another approach used by the programme members focused on leveraging connections with the district education leaders to emphasise the importance of the training sessions and its impact on classroom methods.

In some instances, programme members also identified “champions” (gender-sensitised male teachers) and leveraged their support in district bootcamps to ensure that other male participants were receptive to the ideas and knowledge being shared.

Although gender awareness was noted as an important topic in the co-design process, in terms of avoiding gendered language and overcoming discomfort; it emerged from interviews with educators that the content itself does not contain dedicated topics on gender.

Annexure II- Framework



Demographic Details of Districts in East Java Province, Indonesia

Only districts (called regencies in Indonesia) in the East Java province have been considered. Both intervention districts will be part of the sample, and one control district has been selected.

Table 44: Districts in Indonesia²²

No	Region	No. of primary schools	Population (2020)	HDI	Selection Type
1	Bangkalan	686	1,060,377	0.607	Not a sample
2	Banyuwangi	807	1,708,114	0.673	Not a sample
3	Batu	79	213,046	0.718	Not a sample
4	Blitar	665	1,223,745	0.668	Not a sample
5	Blitar	63	149,149	0.752	Not a sample
6	Bojonegoro	711	1,301,635	0.652	Not a sample
7	Bondowoso	465	776,151	0.634	Not a sample
8	Gresik	465	1,311,215	0.728	Not a sample
9	Jember	1051	2,536,729	0.626	Not a sample
10	Jombang	522	1,318,062	0.69	Not a sample
11	Kediri Regency	701	286,796	0.746	Control
12	Kediri City	138	1,635,294	0.684	Treatment
13	Lamongan	638	1,344,170	0.694	Not a sample
14	Lumajang	559	1,119,251	0.623	Treatment
15	Madiun Regency	406	744,350	0.686	Not a sample
16	Madiun City	69	195,175	0.788	Not a sample
17	Magetan	403	670,812	0.702	Not a sample
18	Malang Regency	285	2,654,448	0.655	Not a sample
19	Malang City	116	843,810	0.789	Not a sample
20	Mojokerto Regency	420	1,119,209	0.702	Not a sample
21	Mojokerto City	55	132,424	0.75	Not a sample
22	Nganjuk	609	1,103,902	0.695	Not a sample
23	Ngawi	506	870,057	0.677	Not a sample
24	Pacitan	418	586,110	0.638	Not a sample
25	Pamekasan	476	850,057	0.626	Not a sample
26	Pasuruan Regency	724	1,605,969	0.643	Not a sample
27	Pasuruan City	67	208,006	0.732	Not a sample
28	Ponorogo	573	949,320	0.674	Not a sample
29	Probolinggo Regency	626	1,152,537	0.63	Not a sample
30	Probolinggo City	86	239,649	0.704	Not a sample
31	Sampang	628	969,694	0.569	Not a sample
32	Sidoarjo	586	2,082,800	0.767	Not a sample
33	Situbondo	426	685,967	0.639	Not a sample
34	Sumenep	651	1,124,436	0.614	Not a sample
35	Surabaya	654	2,874,314	0.788	Not a sample
36	Trenggalek	438	731,125	0.661	Not a sample
37	Tuban	567	1,198,072	0.645	Not a sample

²² Source- <https://dapo.dikdasmen.go.id/sp/3/052110>

No	Region	No. of primary schools	Population (2020)	HDI	Selection Type
38	Tulungagung	634	1,089,775	0.694	Not a sample

Schools in Indonesia

Treatment Schools

Table 45: Treatment schools in Indonesia

District	School Names
Lumajang	SDN DITOTRUNAN 01
Lumajang	SDN BORENG 02
Lumajang	SDN CITRODIWANGSAN 03
Lumajang	SDN BODANG 02
Lumajang	SDN KUDUS 02
Lumajang	SDN TUMPENG 01
Lumajang	SDN KALI PEPE 02
Lumajang	SDN KALIULING 01
Lumajang	SDN DAWUHAN WETAN 02
Lumajang	SDN PASIRIAN 01
Kota Kediri	SDN SUKORAME 04
Kota Kediri	SDN KETAMI 02
Kota Kediri	SDN SINGONEGARAN 02
Kota Kediri	SDN BANJARAN 01
Kota Kediri	SDN BANJARAN 04
Kota Kediri	SDN LIRBOYO 04
Kota Kediri	SDN BANDAR LOR 02
Kota Kediri	SDN TAMANAN
Kota Kediri	SDN JAGALAN 05
Kota Kediri	SDN CAMPUREJO 02
Kota Kediri	SDN GAYAM 01
Kota Kediri	SDN SUKORAME 01
Kota Kediri	SDN BURENGAN 02
Kota Kediri	SDN BAWANG 01

Control Schools

Table 46: Control schools in Indonesia

District	School Names
Kabupaten Kediri	SDN BRINGIN
Kabupaten Kediri	SDN BANGSONGAN 02
Kabupaten Kediri	SDN SUMBERAGUNG 02
Kabupaten Kediri	SDN JABON 01

District	School Names
Kabupaten Kediri	SDN PRANGGANG 02

List of Interviews

Table 47: List of Stakeholder Interactions

S.no	District	School Name	Name	Designation/Relation
1	Kota Kediri	NA	Ahmad Wartjiantono	DEO
2	Lumajang	NA	Heppy Septevin Gumilang	DEO
3	Kabupaten Kediri	SDN Bringin	Sunarno	EL
4	Kabupaten Kediri	SDN Bangsongan	Heru Setiyono	EL
5	Kabupaten Kediri	SDN Sumbergung	Djumiasri	EL
6	Kabupaten Kediri	SDN Jabon	Dwi Indah Winarti	EL
7	Lumajang	SDN 03 CITRODIWANGSAN	Rara Widuri	EL
8	Lumajang	SDN Ditotrnan 1	Ulik	EL
9	Lumajang	SDN Bodang 2	Titi Hasmilah	EL
10	Lumajang	SDN BORENG 02	Dema Dwija	EL
11	Lumajang	SDN KUDUS 02	Joko Prastowo	EL
12	Lumajang	SDN Tumpeng 01	Totok Herwanto	EL
13	Lumajang	SDN DAWUHAN WETAN 02	Nali	EL
14	Lumajang	SDN Kali Pepe 02	Taufik	EL
15	Lumajang	SDN Kaliuling 01	Ribut Haskharyo Hadi Yulianto	EL
16	Lumajang	SD N PASIRIAN 01	Jamiran	EL
17	Kota Kediri	SDN Sukorame 4	Dra Sri Widajati	EL
18	Kediri City	SDN Ketami 02	Sapto Ani Prastiwi S.Pd	EL
19	Kediri City	SDN Bawang 01	Yuni Kristiani	EL
20	Kediri City	SDN Singonegaran 02	Suprapni S.Th	EL
21	Kediri City	SDN Banjaran 01	Andriano S.Pd	EL
22	Kediri City	SDN Bandar Lor 02	Sudartik	EL
23	Kediri City	SDN Lirboyo 04	Toadi S.Pd	EL
24	Kediri City	SDN Jagalan 05	Edy Sudarsono	EL
25	Kediri City	SDN Gayam 01	Nur Aini	EL
26	Kediri City	SDN Sukorame 1	Zeta Dewi Julistiyati	EL
27	Lumajang	SDN 03 Citrodiwangsan	Ari Danardana Harjono	Teacher
28	Lumajang	SDN Ditotrnan 1	Bakrie	Teacher
29	Lumajang	SDN Bodang 2	Ice Asmiati	Teacher
30	Lumajang	SDN 02 Boreng	Nur Zakiyah	Teacher
31	Lumajang	SDN 02 Kudus	Geger Santoso	Teacher
32	Lumajang	SDN Tumpeng 1	Yuyun Sri Wahyuni	Teacher
33	Lumajang	SDN 02 Dawuhan Wetan	Eli Nurdiana	Teacher
34	Lumajang	SDN Kali Pepe 02	Syam	Teacher
35	Lumajang	SDN Kaliuling 01	Dian	Teacher
36	Lumajang	SDN 01 Pasirian	Edi Purnomo	Teacher
37	Kota Kediri	SDN Sukorame 4	Cecilia Permatasari	Teacher

S.no	District	School Name	Name	Designation/Relation
38	Kota Kediri	SDN Ketami 02	Ayu Riza Umami	Teacher
39	Kota Kediri	SDN Bawang 01	Roisatin	Teacher
40	Kota Kediri	SDN Singonegaran 02	Nur Intan Kurniawati	Teacher
41	Kota Kediri	SDN Banjaran 01	Belita dwi Oktaviani	Teacher
42	Kota Kediri	SDN Bandar Lor 02	Safira Qilbha	Teacher
43	Kota Kediri	SDN Lirboyo 04	Pujo Wijayayanti	Teacher
44	Kota Kediri	SDN Jagalan 05	Wismi Rohmayani	Teacher
45	Kota Kediri	SDN Gayam 01	Novi Rohmawati	Teacher
46	Kota Kediri	SDN Sukorame 1	Agus Santoso	Teacher
47	Lumajang	-	Abdul Malik Yunus Wijaya	ELM School Supervisor
48	Lumajang	-	A. Zainal Arifin	ELM School Supervisor
49	Lumajang	-	Jupri S	ELM School Supervisor
50	Lumajang (Female)	-	Qurratul A'yuunil Asmawiyah	ELM School Supervisor
51	Lumajang	-	Saiful Ali	ELM School Supervisor
52	Kota Kediri (female)	-	Mujiasih S	ELM School Supervisor
53	Kota Kediri	-	Poniatun	ELM School Supervisor
54	Kota Kediri	-	Samidi	ELM School Supervisor
55	Kota Kediri (female)	-	Sunarsih	ELM School Supervisor
56	Kota Kediri (female)	-	Tutik Mardiaty	ELM School Supervisor
57	Kediri	SDN Bringin	Nanik Rahayu	Parent
58	Kediri	SDN Bangsongan	Astri Setyaning	Parent
59	Kediri	SDN Sumberagung	Setiowati	Parent
60	Kabupaten Kediri	SDN Jabon	Zahrotunnisa	Parent
61	Kabupaten Kediri	SDN Praggang	Viktoria	Parent
62	Lumajang	Citrodiwangsan	-	Parent
63	Lumajang	Ditotrunan	-	Parent
64	Lumajang	Bodang	-	Parent
65	Lumajang	Boreng	-	Parent
66	Lumajang	Kudus	-	Parent
67	Lumajang	Tumpeng	-	Parent
68	Lumajang	Dawuhan Wetan	-	Parent
69	Kabupaten Kediri	SDN Pranggal	Junaidi Rochman Fauzi	EL
70	Kediri Regency	-	Juniarti	ELM
71	Kabupaten Kediri	SDN Bringin	-	Teacher
72	Kabupaten Kediri	SDN Bangsongan	-	Teacher
73	Kabupaten Kediri	SDN Sumberagung	-	Teacher
74	Kabupaten Kediri	SDN Jabon	-	Teacher
75	Kabupaten Kediri	SDN Pranang	-	Teacher

Itinerary of data collection:

Introduction

In August 2024, both quantitative and qualitative data collection was conducted in line with the evaluation design and schedule established for the impact evaluation of STiR Education's programme in Indonesia.

A range of data collection tools was deployed, each carefully tailored to the needs of different stakeholders. These tools were designed to assess specific areas, ensuring alignment with the overall evaluation framework. The table below details the areas covered during data collection:

Table 48: Overview of the areas covered for data collection during field visits in July and August 2024

#	Stakeholder	Data Collection Area	Purpose	Tool/s
1	Students	<ul style="list-style-type: none"> - Foundational literacy and numeracy - Social-emotional learning 	Measure the impact of STiR Education's intervention on student learning outcomes and emotional growth.	LAT – SEL Assessment Tool
2	Parents	<ul style="list-style-type: none"> - Changes in child behaviour - School support - Education quality - Teacher quality 	Assess parental support for student learning and involvement in school-related activities.	Parent IDI Tool Take-home parent survey tool (pre-assessment form)
3	Teachers	<ul style="list-style-type: none"> - Autonomy - Mastery - Purpose - Teaching experience - School experience 	Evaluate the integration of STiR LIC concepts among teachers and their motivation for teaching.	<ul style="list-style-type: none"> - Teacher Survey Questionnaire - Teacher IDI Tool
4	School Education Leaders (School Principals, Head/Deputy Head Teachers)	<ul style="list-style-type: none"> - Autonomy - Mastery - Purpose - Intrinsic motivation - Coaching and role modelling - School leadership - LIC knowledge 	Assess retention of STiR principles and the effectiveness of support provided to teachers, including process relevance to school operations.	Education Leader IDI Tool
5	Education Leader Managers (School Supervisors, Centre	<ul style="list-style-type: none"> - Autonomy - Mastery - Purpose 	Evaluate the support received to provide coaching, retention, and application of	Education Leader Manager IDI Tool

#	Stakeholder	Data Collection Area	Purpose	Tool/s
	Coordinating Tutors)	<ul style="list-style-type: none"> - Intrinsic motivation - Coaching and role modelling - Peer learning - LIC knowledge and facilitation - STiR programme influence 	STiR learning principles at the school level.	
6	District Education Leader (Dinas Pendidikan & District Education Officer)	<ul style="list-style-type: none"> - STiR programme impact - Areas of development - Alignment with district priorities - Expectations from STiR 	Measure the influence and progress of the STiR programme in improving learning outcomes and aligning with district priorities.	District Coordinator IDI Tool (adapted per department)
7	Ministry Officials (Indonesia BBPMP)	<ul style="list-style-type: none"> - Expectations from STiR - Current progress - Areas of further support 	Assess national-level impact and support ministry objectives aligned with education policies.	Govt. Officer IDI Tool (adapted per stakeholder level)
8	STiR Programme Team	<ul style="list-style-type: none"> - Programme design - Programme delivery - Government partnership/engagement - Partner expectations and progress - Delivery challenges 	Review programme design, implementation challenges, and best practices to achieve objectives.	Programme Team IDI Tool (adapted per role)
9	STiR Country Partners (Bakti Barito/YBPU)	<ul style="list-style-type: none"> - Expectations from STiR - Progress against expectations - Partner focus (vision/mission) - Ministry/govt. expectations - Areas for intervention 	Evaluate the program's performance against expectations and its alignment with partner entities' vision and mission.	Programme Team IDI Tool (adapted version)

In addition to these areas, school information sheets and student pre-assessment forms were distributed to collect contextual data. These tools were utilized to gain a deeper understanding of the environment in which the students are learning.

Process of data collection

The data collection process is illustrated below:

1

Prior to Data Collection

- Schools and stakeholders were identified in consultation with STiR Country Teams
- Key personnel in the education ecosystem were informed, and the data collection schedule was shared.
- Permission letters were sent digitally, and contact details of school-level stakeholders were obtained.
- School principals and supervisors (ELs and ELMs) were notified of the schedule and activities two days in advance.

2

School-level Introductions

- Country teams briefed principals (ELs) in the local language about the data collection purpose and provided hard copies of permission letters.
- School information sheets were given to principals to gather necessary details.
- Time slots were arranged for teacher surveys, student assessments, teacher IDIs, parent IDIs, and principal (EL) IDIs.

3

School-level Data Collection

- Data collection in schools was conducted with students, teachers, parents, and ELs simultaneously.
- Teachers accompanied an enumerator to the classrooms for the student assessments, and co-facilitated the process, particularly for special-needs children and providing additional explanations where required.
- Simultaneously, data collection was initiated with teachers and ELs.

4

Out-of-School Data Collection

- After classroom assessments with the students, the enumerators distributed pre-assessment forms to each student, to collect responses from parents.
- Once completed, the teachers collected the filled-in forms from the students and packed these in an envelope provided by the enumerators.
- These were then kept in the custody of the Head Teacher, who then handed over the forms to the STiR Education field teams.
- Apart from this, the out-of-school data collection also included interviews with ELMs, STiR country programme teams, and Ministry officials.
- For these interviews, appointments were made in advance.

Data quality review and assurance protocols

The details and methodology of the data quality process are provided below.

a) Stage-wise Quality Review Process

Table 49: Quality Review Process- Stage Wise

#	Stage	Quality assurance mechanism	Details
1	Preparatory / prior to data collection	Orientation and training	<p>Indonesia</p> <ul style="list-style-type: none"> In Indonesia, remote training sessions and orientations were conducted in July and August 2024. This covered the objectives of the assessment, STiR Education's purpose and objectives specific to Indonesia, and the process to executing the field assessment, data recording, and checking mechanisms.
2	Field level – general	On-site supervision	<ul style="list-style-type: none"> Field level monitoring of questionnaire administration and data collection processes with students, teachers, parents, and other stakeholders. Feedback to enumerators was provided on real-time basis.
2	Field level – student data collection	On-site supervision	<ul style="list-style-type: none"> In-class supervision to ensure students were not engaging in dishonest practices. Support for timekeeping and moderation.
		Data corroboration	<ul style="list-style-type: none"> Cross-checking paper-based responses against the Kobo responses, and ensuring that the enumerators retained all the information provided by the students in their paper forms, including spelling and grammatical errors, sentence construction, etc. Undertaken for 2-3 forms per school.
3	Field level – teacher data collection	On-site supervision	<ul style="list-style-type: none"> Field supervision conducted to ensure that enumerators were following the agreed protocols and processes.
		Spot check	<ul style="list-style-type: none"> Spot checks conducted for the teacher survey processes to ensure mitigation of recency bias or survey response bias. These were particularly crucial for the Likert-scale typology of questions. Undertaken for at least 1 teacher per school.

#	Stage	Quality assurance mechanism	Details
4	Post data collection	Backend check	<ul style="list-style-type: none"> The purpose of this was to identify and address errors that occur during data submission. Validation of number of entries submitted for each school, district and country against the field team's daily status update.
		Consistency check	<ul style="list-style-type: none"> Consistency checks were conducted to ensure uniformity in data (for example: spellings of school names) and that responses were complete (for example: specifications provided when "Others" have been marked, missing entries, etc.) As there were two sets of data for the student assessment forms (Set 1 and Set 2), consolidation was undertaken. Consistency check was performed for the consolidation process to identify potential errors.

b) Tool-wise data quality review

Each tool had a slightly varied method of data collection and data recording, and the quality review process was customised to ensure data integrity and validity.

Table 50: Quality Review Process- Tool Wise

#	Tool	Field execution	Method of recording	Quality checks
1	Student assessment form	Facilitated by enumerator with support from teacher	<ol style="list-style-type: none"> Directly by the students on paper forms Digitisation of paper entries using Kobo application 	On-site supervision, data corroboration, backend checks, consistency check
2	Teacher survey	Facilitated by enumerator	Directly entered into Kobo application	On-site supervision, spot checks, backend checks, consistency checks
3	Pre-assessment forms	Forms provided to students to take home, parents to fill in responses, and return form.	<ol style="list-style-type: none"> Directly by the parents on paper forms Digitisation of paper entries using Kobo application 	Backend checks, consistency checks

#	Tool	Field execution	Method of recording	Quality checks
		School to compile all forms and handover to STiR field team		
4	Teacher / parent / EL / ELM interviews	Evaluation agency	Bahasa in Indonesia Handwritten notes, information consolidated on templates	On-site supervision
5	Programme / Ministry interviews	Evaluation agency	Conducted in English Handwritten notes, information consolidated on templates	On-site supervision

c) Findings from Quality Review and Redressal Strategies

While the training and orientation workshops were geared towards establishing the data collection processes, principles, and norms, local field-level contexts typically necessitate a slight modification from the agreed strategies to further strengthen data collection processes and address emerging challenges through quality reviews. The key issues from the data quality reviews and the mitigation / redressal strategies adopted are provided below:

Table 51: Issues Identified and their Mitigation/Redressal Strategies

#	Issue	Identification method	Details and Mitigation / Redressal strategy
1	Respondent required question to be explained multiple times	On-site supervision	<ul style="list-style-type: none"> Modifications to the in-depth interview questions to ensure better quality responses from the respondent.
2	Respondent did not provide detailed responses	On-site supervision	<ul style="list-style-type: none"> Addition of further probes and follow-up questions.
3	Enumerator waits for all students to complete each question in the LAT section, leading to excess time spent in class	On-site supervision	<ul style="list-style-type: none"> Timekeeping and moderation support provided. Encouraging active involvement of class teachers for special needs students.
4	Duration of teacher survey in excess of 2 hours	Backend check	<ul style="list-style-type: none"> Issue identified as delayed submission by enumerator on account of low internet connectivity, no action was required.

#	Issue	Identification method	Details and Mitigation / Redressal strategy
5	Responses to certain questions were not provided, lack of clarity on whether enumerator had not filled the response or whether respondent chose to not respond to the particular question	Backend check	<ul style="list-style-type: none"> • Rapid discussions with relevant enumerators to understand nature of missing responses. • Refining student and teacher Kobo forms to include option of “respondent did not answer”. • No further action was required after modification of tools.
6	Data in student assessment forms was incorrectly digitised	Data corroboration	<ul style="list-style-type: none"> • It was observed that enumerators corrected spelling and grammatical errors while digitising paper forms. • Enumerators advised to retain all errors and mistakes made by students. • Discussion with all field team SPOCs to reiterate the same.
7	Duplicate entries observed	Consistency check	<ul style="list-style-type: none"> • Certain forms were erroneously submitted multiple times. • Usage of UUID to delete duplicates entries from backend.

Annexure III- Tools



Assessments

Assessment for Students – Grade 6

Interviewer Prompt for Teachers / Officials / Parents

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different levels of the education system, including education leadership, teachers, and students. The programme aims to ensure that teachers enjoy teaching, and students enjoy learning, and through this process, effectuate an improvement in learning outcomes is envisaged.

With your permission, we would like to ask for the students' time to understand their level of learning and their learning behaviours in classroom in terms of interaction, decision making and learning strategies. Their responses will help STiR Education to understand the outcomes of their programme. This survey has two components – the learning assessment survey, where we would like to understand the students' level of achievement in numeracy and literacy, and the social and emotional learning survey, with which we aim to understand students' behaviours.

This process will take roughly 40 minutes. Please note, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment as you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be confidential. Our findings will be summarized in a report as a whole and you will not be quoted anywhere.

Interviewer Prompt for Students

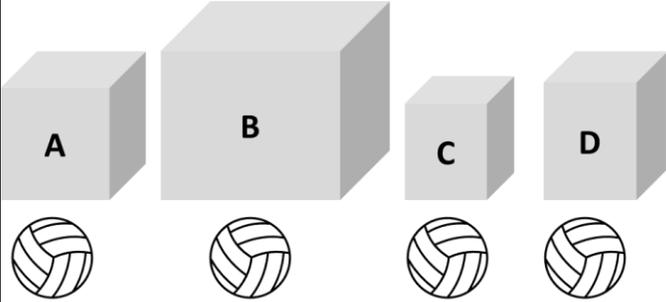
STiR Education wants to make school more fun and help you learn better! We want teachers to love teaching and for you to enjoy learning. We have a special programme to make this happen.

We'd like to talk to you about how you learn in class, like how you talk with others, make decisions, and study. We're going to ask you some questions to understand how well you're doing in math and reading, and also how you feel about school and your friends.

This will take about an hour, but don't worry, it's not a test! There are no right or wrong answers, and you don't have to answer any question if you don't want to. If you ever feel uncomfortable, just let us know, and we'll stop. Your answers will be private, and we won't tell anyone what you said. We'll use all the answers together to help make school better for everyone.

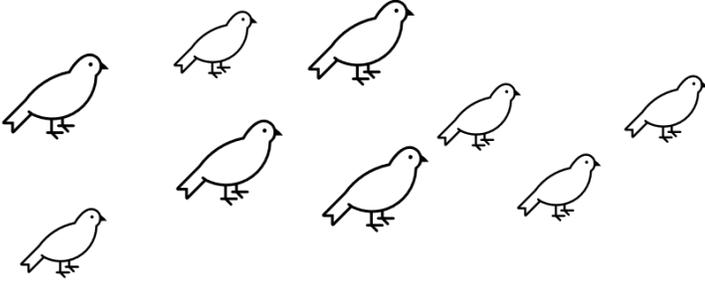
Table 52: Student Assessment- Set 1

No.	Question	Response
	SECTION A - BASIC DETAILS	
	Student ID / Roll number	
	Student Gender	1. Male 2. Female
	Class Stream / Section / Number	
	Name of class teacher	
	Name of school	
	Name of town / city	

No.	Question	Response
	District	
	Country	
	Which Set has been answered	
	<p>Here are four balls of the same size. Now look at the box kept next to each ball. If we completely fill each box with the kind of balls shown, which box will have the highest number of balls?</p> 	<ol style="list-style-type: none"> 1. A 2. B 3. C 4. D 5. None of the above 6. Do not know
	Look at the chart below carefully. How many apples are there?	

No.	Question	Response
		
		
		
		
		
		
		
		
		
		
		
		
	Look at the chart below carefully. How many more bananas are there than pineapples?	

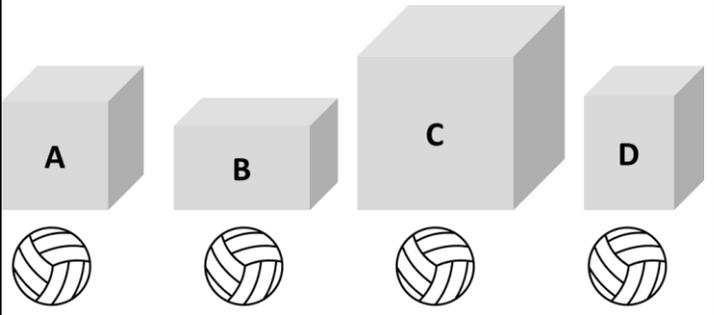
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<p>Read the passage below and answer the questions:</p> <p>Nina was a little girl. She lived near a big garden. One day, she went to the garden. She saw a man selling flowers. Nina asked him for a flower. The man gave her two big red</p>	

<p>flowers. Then Nina ran back to her home. She gave the flowers to her mother. They both felt very happy.</p> <p>Where did Nina go? What colour flowers did the man give Nina? How do Nina and her mother feel?</p>	
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Table 53: Student Assessment- Set 2

SECTION C - FOUNDATION LEARNING & NUMERACY TESTING TOOL (SET 2)			
	<p>Here are four balls of the same size. Now look at the box kept next to each ball. If we completely fill each box with the kind of balls shown, which box will have the highest number of balls?</p> 	<ol style="list-style-type: none"> 1. A 2. B 3. C 4. D 5. None of the above 6. Do not know 	<p>SET 2 Question, Enumerator to enter details appropriately in the digital tool.</p>
	<p>Look at the chart below carefully. How many apples are there?</p>		<p>Enumerator to type in the number based on student response</p>

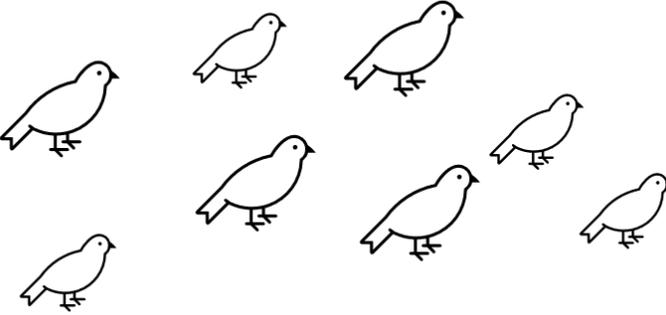
SECTION C - FOUNDATION LEARNING & NUMERACY TESTING TOOL (SET 2)			
			
			
			
			
			
			
			
			
			
			
			
			
	Look at the chart below carefully. How many more bananas are there than pineapples?		Enumerator to type in the number based on student response

SECTION C - FOUNDATION LEARNING & NUMERACY TESTING TOOL (SET 2)

	Look at the calendar given below. What is the day on 8 th March?																																																									
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	Look at the calendar given below. What is the date on the second Wednesday of March?	
		Enumerator to type in the response based on student response

SECTION C - FOUNDATION LEARNING & NUMERACY TESTING TOOL (SET 2)																																																														
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<p>Read the passage below and answer the questions:</p> <p>Dina loves her village. She goes there during holidays. Her uncle and aunt live there. Her aunt is very nice. She tells her stories and gives her sweets.</p>																																																														

SECTION C - FOUNDATION LEARNING & NUMERACY TESTING TOOL (SET 2)		
	<p>Her uncle is a farmer. He takes Dina to his farm. There is a pond near the farm. Dina loves to swim in the pond.</p> <p>Where does Dina go during holidays? What does Dina’s aunt give her? What does Dina’s uncle do?</p>	

Table 54: Student Assessment- SEL Questionnaire

SECTION D – SOCIAL AND EMOTIONAL LEARNING TOOL		
No.	Question	Response
1.	Have you ever had to miss school for longer than one month?	1. Yes 2. No
2.	Who do you talk to when you feel sad?	1. Mother 2. Father 3. Grandmother 4. Grandfather 5. Aunt or Uncle 6. Brother 7. Sister 8. Friends 9. Teacher 10. Nobody, I do not talk to anybody
3.	Who do you ask for help with homework?	1. Mother 2. Father 3. Grandmother 4. Grandfather 5. Aunt or Uncle 6. Brother 7. Sister 8. Friends 9. Teacher 10. Classmate 11. Nobody, I do not ask for help
4.	 <p>Now let’s look at this picture. How do you think this child is feeling right now?</p>	1. Sad 2. Upset 3. Hurt 4. In pain 5. Tired 6. Happy 7. Excited 8. Don’t know

SECTION D – SOCIAL AND EMOTIONAL LEARNING TOOL		
No.	Question	Response
5.	What would you do to help him feel better?	<ol style="list-style-type: none"> 1. Ask him what is wrong 2. Tell the teacher 3. Tell him a joke 4. Give him a hug 5. Ignore him 6. Run away 7. Tease him because boys do not cry 8. Do nothing 9. I don't know
6.	<p>Why is this child crying? Here is the reason: One day the teacher told all the children in the classroom to make a line so that they can go out to play. As they were making the line another child bumped into this boy. He fell down and hurt his knee. This is why he is crying in this picture.</p> <p>Why do you think that the other child pushed the girl while making a line?</p>	<ol style="list-style-type: none"> 1. It was by mistake 2. They did not see him 3. He fell on his own 4. Other child wanted to go first 5. Other child may not like him 6. Other child is a bully 7. I don't know
7.	How do you think the other child felt after the boy started crying?	<ol style="list-style-type: none"> 1. Bad 2. Guilty 3. Sorry 4. Happy 5. Pleased 6. Does not feel anything 7. I don't know
8.	<p>I want you to imagine a situation where you are playing with a toy that you like. Another child wants to play with that same toy, but there is only one toy.</p> <p>What would you do in this situation?</p>	<ol style="list-style-type: none"> 1. Share the toy 2. Take turns 3. Give the other child the toy 4. Ask an adult for another toy 5. Find another toy to play with 6. Avoid the child 7. Run away with the toy 8. Tell the child to go away 9. I don't know
9.	<p>Now, I want you to imagine the same situation: you are playing with a toy that you like, another child wants to play with the same toy, but there is only one toy. This time the other child takes the toy away from you and starts playing with it without asking you.</p> <p>What would you do in this situation?</p>	<ol style="list-style-type: none"> 1. Ask an adult for help 2. Ask if we can share the toy 3. Find another toy to play with 4. Avoid the child 5. Run away with the toy 6. Tell the child to go away 7. Hit the other child 8. Fight with the other child 9. I don't know
10.	In the last week, did you feel afraid in your school?	<ol style="list-style-type: none"> 1. Yes 2. No

SECTION D – SOCIAL AND EMOTIONAL LEARNING TOOL		
No.	Question	Response
11.	In the last week, did a child in your school leave out another child from an activity or game?	<ol style="list-style-type: none"> 1. Yes 2. No
12.	When a child is left out from the activity or game, how did you feel about this?	<ol style="list-style-type: none"> 1. Sad 2. Bad 3. Upset 4. Did not feel anything 5. Happy 6. Pleased 7. I don't know

Assessment for School Teachers

Interviewer Prompt:

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different levels of the education system, including education leadership, teachers, and students. The programme aims to ensure that teachers enjoy teaching, and students enjoy learning, and through this process effectuate an improvement in learning outcomes.

With your permission, we would like to ask for your time to understand your views on your work, teaching methods, and classroom interactions. Your responses will help STiR Education to understand the outcomes of their programme. Your responses are important and will help us improve our assistance to teachers and overall education ecosystem.

This process will take roughly 60 minutes. Please note, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment as you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be confidential. Our findings will be summarized in a report as a whole and you will not be quoted anywhere.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we start with the interview? (Wait for verbal response.)

Table 55: Teacher Assessment

No.	Question	Responses	Remarks
SECTION A – BASIC DETAILS			
1.	Date & Time of Survey		
2.	Country		
3.	District	1.	
4.	Name of City / Town / Village		City / town / village names can also be pre-coded in the form to

No.	Question	Responses	Remarks
			avoid spelling issues and data cleaning efforts
5.	GPS Coordinates		
6.	School Name		School names can also be pre-coded in the form to avoid spelling issues and data cleaning efforts
7.	Gender of Respondent	Male/Female/Others/Do not want to disclose	
8.	Age of Respondent	<ol style="list-style-type: none"> 1. 18 to 25 years 2. 26 to 35 years 3. 36 to 45 years 4. 46 to 55 years 5. Above 55 years 	
9.	Total teaching experience	<ol style="list-style-type: none"> 1. Less than 1 year 2. 1 to 3 years 3. 4 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. More than 30 years 	
10.	Number of years working in present school	<ol style="list-style-type: none"> 1. Less than 1 year 2. 1 to 3 years 3. 3 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. More than 30 years 	
11.	Employment type	<ol style="list-style-type: none"> 1. Permanent 2. Temporary / Contractual 	
12.	What is the highest level of formal education that you have completed?	<ol style="list-style-type: none"> 1. Bachelors' Degree only 2. Professional Diploma 3. Master's Degree 4. Bachelor's Degree 5. Doctoral Studies 6. Other _ Please specify 	Please note that country-specific qualifications such as "Primary level" and "Ordinary level" would come under Option 6
SECTION B – NATURE OF WORK			
(This section will provide an understanding of the teacher's overall role and work profile)			
13.	Subjects handled	<ol style="list-style-type: none"> 1. Language 2. Maths & Science 3. Social Science 4. Other (please specify) 	Please input other subjects such as art, religion, physical education, etc. under Option 4
14.	Grades handled	<ol style="list-style-type: none"> 1. Grade I to VI (Primary) 2. Grade VII to X (Secondary) 3. Grade XI and XII (Higher secondary) 	Multiple allowed. In many locations, schools offer both primary and secondary education.
15.	What is your current professional level / designation?	<ol style="list-style-type: none"> 1. Teacher 2. Head of Department 3. Head of Faculty 4. Principal / headmaster 	

No.	Question	Responses	Remarks
		5. Other (please specify)	
16.	What is the average size of your class (where you teach)?		
17.	How many hours on average do you spend on teaching daily?	<ol style="list-style-type: none"> 1. Less than 2 hours 2. 2-3 hours 3. 4-5 hours 4. More than 5 hours 	
18.	How many hours in a week do you spend on teaching?	<ol style="list-style-type: none"> 5. Less than 5 hours 6. 5 to 10 hours 7. 11 to 20 hours 8. 21 to 30 hours 9. More than 30 hours 	
19.	What non-teaching activities are you involved in within the school?	<ol style="list-style-type: none"> 1. Supporting school management (admissions, timetable development, coordination for internal and external examinations, coordination with government officers, etc.) 2. Documentation, communication, and reporting (RTI, submissions to government, school records management, etc.) 3. Upkeep, maintenance, and repairs of school facilities (library, labs, playground, campus, general cleanliness, etc.) 4. Management of student extracurriculars including events and programmes (field trips, annual day, sports day, cultural programmes, competitions, etc.) 5. Supporting student affairs (guidance and counselling, grievance redressal, student safety, etc.) 6. Others (please specify) 	The options need not have to be read out in detail, but can be prompted to help the teacher respond to the question.
20.	Are you a member of any of the following?	<ol style="list-style-type: none"> 1. School Management Committee 2. Teacher Welfare Unions 3. Local Teacher Association 4. Other (please specify) 	

Table 56: Teaching Environment

SECTION C – TEACHING ENVIRONMENT			
This section provides an overall context within which teachers operate and identify what other interventions or programmes are being implemented. This would highlight any other factors that could potentially impact the results of the evaluation. Questions that are associated with STiR programmes are in green.			
21.	According to you, what are the typical challenges faced by all teachers in this school?	<ol style="list-style-type: none"> 1. Remote location of school 2. Teaching workload 3. Non-teaching / administrative tasks workload 4. Large class sizes 5. Mixed grade classes 6. Lack of support from school leadership 7. Lack of support from parents 8. Lack of support from government 9. Student behaviour 10. Student performance 11. Lack of adequate school infrastructure 12. Lack of teaching materials 13. No challenges faced 14. Others (please specify) 	Do not prompt the survey responses, only mark against the relevant choices based on the response
22.	In what ways do these challenges affect performance in the classroom?	<ol style="list-style-type: none"> 1. Less time and effort spent on lesson planning 2. Reduces instructional effectiveness 3. Lower engagement with students 4. Contributes to increased stress levels and impacts overall well being 5. Impacts overall time management 6. Negatively impacts professional relationships 	<p>Multiple options</p> <p>Do not prompt the survey responses, only mark against the relevant choices based on the response</p>
23.	How would you generally categorise the motivation levels of all teachers in this school?	<ol style="list-style-type: none"> 5 –Highly motivated 4- Motivated 3- Neither motivated nor unmotivated 2- Unmotivated 1 - Highly unmotivated 	
24.	In your view, what are the most important contributing factors to motivation in this school? (across all teachers)	<ol style="list-style-type: none"> 1. Teacher workload and working conditions 2. Remuneration and incentives 3. Recognition and prestige 4. Management style of school administration 5. Accountability and teacher support 6. Career development opportunities 7. Teacher involvement 8. Supplies and infrastructure 9. General interest and enjoyment in teaching 10. Student’s interest in the subject 11. Support of colleagues 12. Other (Please specify) 	Rank top 5 responses
SECTION D – TRAINING AND DEVELOPMENT			
25.	For what areas or skills do you personally require training and development?	<ol style="list-style-type: none"> 1. Instructional Methods and Strategies 2. Classroom management techniques 3. Differentiation and Inclusive Education 4. Assessment and Feedback Practices 5. Professional Development and Collaboration 	

		6. IT and Computer related 7. Others, please specify	
30.	Can you list some of the training and development programmes you have attended over the past 1 year?		To include a list of programmes, based on secondary review – tailored for each state / country Do not prompt the survey responses, only mark against the relevant choices based on the response
31.	Which modes of learning were used in the training and development programmes that you attended over the previous year?	1. In-person lecture type training 2. Feedback from peers 3. Training designed and delivered by external providers 4. Learning through observation (watching other teachers teach) 5. Coaching / mentoring by senior teachers / officers 6. Feedback from students 7. Attending conferences / seminars 8. Virtual training 9. Self-learning 10. Peer collaboration	Multiple choice
32.	What mode of learning do you prefer?	1. In-person lecture type training 2. Feedback from peers 3. Training designed and delivered by external providers 4. Learning through observation (watching other teachers teach) 5. Coaching / mentoring by senior teachers / officers 6. Feedback from students 7. Attending conferences / seminars 8. Virtual training 9. Self-learning 10. Peer collaboration	Rank top 3 methods.

Table 57: Teacher Need Satisfaction Scale

Teacher Need Satisfaction Scale	
For each of the following statements, please respond with the statement that best describes your situation. Rank each from 5 (strongly agree) to 1 (Strongly disagree).	
33.	Please state your views on the following statements: <ol style="list-style-type: none"> 1. I feel that I do not have sufficient control over my own workload. 2. I feel that my school leadership provides me choices and options about the way I work. 3. I am able to be voice my concerns to the school leadership. 4. The school leadership has conveyed confidence in my ability to do well at my job. 5. I find it difficult to incorporate suggestions from feedback in my work 6. I feel a lot of trust in the school leadership and how they handle school administration. 7. If I could choose, I would do things at work differently. 8. I have positive professional relationships with my peers. 9. My job does not leave me enough time for my personal life.

Teacher Need Satisfaction Scale			
For each of the following statements, please respond with the statement that best describes your situation. Rank each from 5 (strongly agree) to 1 (Strongly disagree).			
	10. Given my experience as a teacher, I would change my career path if I had a choice. 11. Most days I feel a sense of accomplishment from working.		
34.	Over the last one year, who did you receive feedback from on your teaching or classroom practices?	1. Fellow teachers 2. Parents 3. Students 4. Head of department 5. Headmaster / Headmistress 6. Did not receive any feedback 7. Other (please specify)	Do not prompt the responses.
35.	What was the feedback about?	1. Instructional Methods and Strategies 2. Classroom management techniques 3. Differentiation and Inclusive Education 4. Assessment and Feedback Practices 5. Professional Development and Collaboration 6. Others (please specify)	
36.	What did you think about the feedback you received?	Your agreement with the following statements (5 – strongly agree, 1 – strongly disagree) 1. Feedback was relevant. 2. Feedback was insufficient / incomplete. 3. Feedback helped in improving my methods. 4. Feedback could have been worded differently. 5. Found it difficult to implement feedback.	
37.	Over the last one year, did you give feedback to your peers?	1. Yes 2. No	

Table 58: Teaching Behaviour

Teaching Behaviour	
For each of the following statements, please respond with the statement that best describes your situation. Rank each from 5 (strongly agree) to 1 (Strongly disagree)	
38.	Please state your views on the following statements: 1. I like to use different methods in class to improve understanding and retention. 2. If my students are not paying attention, I raise my voice in class. 3. I think a standard teaching style works best for all types of learners. 4. I believe that students should solve their own issues with their classmates. 5. I adjust the level of difficulty of my teaching to suit all types of students. 6. I encourage students to voice their concerns to me. 7. If a student is making mistakes constantly, I think it is their fault. 8. I think lecturing is the best method for presenting my subject material to students. 9. I use only written tests to assess the degree of academic growth. 10. Occasional scolding in class helps establish discipline faster and better. 11. I encourage students to ask questions in class. 12. If students ask me questions or do not understand a concept, I think it is because they did not pay attention in class.

Table 59: Work Motivation Scale

Work Task Motivation Scale – Simplified Version	
For each of the following statements, please respond with the statement that best describes your situation.	
Why are you engaged in the following task?	Reasons (statements in blue are intrinsic motivation / identified regulation). Rank each from 5 (strongly agree) to 1 (Strongly disagree)
1. Preparing for class	<ul style="list-style-type: none"> i. Because it is important for me to carry out this task ii. Because I like doing this task / I find this task interesting to do iii. Because I find this task important for the academic success of my students iv. Because I would feel guilty not doing it v. Because my work / school demands it. vi. Because I'm paid to do it. vii. I feel that this task is mostly irrelevant.
2. Teaching in class	
3. Classroom management	
4. Administrative Tasks	
5. Complementary Tasks (extracurriculars, committees, etc.)	

In-depth Interviews – Teachers²³

Interviewer Prompt:

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different various levels of the education system, including encompassing education leadership, teachers, and students. The programme aims strives to ensure that teachers enjoy teaching, and students enjoy find joy in learning, and through this process effectuate an improvement in learning outcomes.

With your permission, we would like to request for your time to understand your views on your perspective on intrinsic motivation, peer learning, action-based feedback, and data-based reflections. Your responses will help STiR Education to understand the outcomes of its programme.

This process will take approximately 30 minutes. Please note that this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be kept confidential, and our findings will be summarized in a report without quoting any individual.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we proceed with the interview? (Wait for verbal response.)

Note for Interviewer: *In case the respondent does not give consent to audio record, please reinstate that you would still like to go ahead with the interview and will be taking notes while the interview is on.*

Table 60: Teacher IDI Questionnaire

No.	Question	Responses	Remarks
SECTION A – BASIC DETAILS			
1.	Date & Time of Interview		
2.	Name of respondent		
3.	Country		
4.	District		
5.	Name of City / Town		
6.	Gender of Respondent		
7.	Name of school		
8.	Age of Respondent	1. 18 to 24 years 2. 25 to 35 years 3. 36 to 45 years 4. 46 to 55 years 5. 56 to 65 years 6. Above 65 years	
9.	Total teaching experience	1. Less than 3 years	

²³ Note: Teachers here refers to Mentor teachers, Head teachers, Principals

No.	Question	Responses	Remarks
		2. 3 to 6 years 3. 7 to 10 years 4. 11 to 15 years 5. 16 to 20 years 6. 21 to 30 years 7. 31 to 40 years 8. More than 40 years	
10.	Number of years working in the current school	1. Less than 1 year 2. 1 to 3 years 3. 4 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. 31 to 40 years 9. More than 40 years	
11.	Employment type	1. Permanent 2. Temporary/ Contract 3. Other _ Please specify	
12.	What is the highest level of formal education that you have completed?	1. Bachelors’ Degree only 2. Professional Diploma 3. Master’s Degree 4. Bachelor’s Degree 5. Doctoral Studies 6. Other _ Please specify	Please note that country-specific qualifications such as “Primary level” and “Ordinary level” would come under Option 6
13.	Which subjects do you handle?		
14.	What is your current designation within your school?		This can be subject teacher, class teacher, head of department, head teacher, etc.
15.	How many hours in a week do you spend on engaging with other teachers for coaching, mentoring, and learning purposes?	1. No time spent 2. 1 to 5 hours 3. 6 to 10 hours 4. 11 to 20 hours 5. 21 to 30 hours 6. More than 30 hours	

	Area	Question
SECTION B – MOTIVATION DRIVERS AND CHALLENGES		
1.	PURPOSE	<ul style="list-style-type: none"> Why did you decide to become a teacher? What goals (both personal and career) did you want to achieve? How is your work contributing towards achieving these goals? What are the specific elements of this role that you particularly enjoy and why? What motivates you to continue in this profession? Can you describe how your motivation to continue teaching has evolved since the beginning of your career? Can you share a specific example of a time when you felt particularly motivated? What contributed to that sense of motivation?

	Area	Question
2.	AUTONOMY	<ul style="list-style-type: none"> What decisions do you usually make about your work? (<i>probes – classroom management, teaching style, curriculum development, planning extracurricular activities for students, school management, etc.</i>) What decisions do you wish to make but find yourself unable to? How do you apply your own learning from your coaches to the classroom? In what ways do you incorporate your own interests and passions into your teaching to make the learning experience more engaging?
3.	RELATEDNESS	<ul style="list-style-type: none"> Do you feel that the school management or school leadership consult your views on important matters and for making key decisions? Please elaborate with an example. To what extent does the school management / leadership support your own goals and in what ways? Can you provide an example of when you were consulted with for any issue? What was the result? Can you also tell us about a time you were not consulted with for a decision?
4.	SCHOOL ENVIRONMENT	<ul style="list-style-type: none"> Have you felt that your gender is a drawback in your profession? How and why? In what ways do you think your school contributes to a positive workplace environment? What else can be done to improve the school environment for you, and for the students?
5.	COACHING	<ul style="list-style-type: none"> How often do you get to be coached and who is the one coaching you? What kind of inputs do they share and how? How often do you receive these feedbacks? What is the value that is brought in by teacher network meetings for teachers? How have these meetings influenced your personal behaviour or perspective? What type of feedback have you received in the network meetings and peer-to-peer learning? When was the last time you received feedback and how did that make you feel? What was communicated and how did you implement it? How do you frame your feedback? What is the recent feedback exercise that you engaged in and how did you share that feedback?
6.	LEARNING IMPROVEMENT CYCLES	<ul style="list-style-type: none"> What are some of the key topics discussed during network meetings? How do you incorporate these in your work? What were the key 5 things you learned from the learning improvement cycles? Were you able to apply any of these learnings to enable gender sensitivity in the classroom? (for instance – providing examples of men taking care of children and women earning in a job, encouraging boys to express themselves, etc.)
7.	CHALLENGES	<ul style="list-style-type: none"> What type of challenges do you face in your work/workplace? When you face challenges, how do you stay motivated? Can you share a specific instance of when this happened? What are the challenges that your students face in learning? How do you help them overcome these challenges? What are the specific challenges faced by boys and girls? Do you feel equipped to deal with their issues?
8.	CLOSING	<ul style="list-style-type: none"> Do you feel that you are a good teacher and role model for your students / peers? Can you give us examples? How do you think you can improve as a teacher? (<i>probe- any specific trainings/ materials required to do so</i>)

Area (School Principals - ELs)	Questions
PURPOSE	<p>Why did you decide to become a School Principal? What goals (both personal and career) do you want to achieve? Is your work contributing towards achieving these goals?</p> <p>What are the specific elements of this role that you particularly enjoy and why?</p>

Area (School Principals - ELs)	Questions
	<p>What motivates you to continue in this profession? Do you feel that your motivation to continue in this profession is different from what it used to be when you started your career? In what ways?</p> <p>Can you share a specific example of a time when you felt particularly motivated and what contributed to that sense of motivation?</p>
AUTONOMY	<p>What decisions do you usually make about your work? (Probes – Coaching topics, LIC focus areas, classroom management, teaching style, curriculum development, etc.)</p> <p>What other decisions do you want to make but cannot?</p> <p>How do you apply your own learning from your coaches to the Learning Improvement Cycle meetings and one on one coaching sessions with teachers?</p> <p>In what ways do you incorporate your own interests and passions into your teaching to make the learning experience more engaging?</p>
RELATEDNESS	<p>Do you feel that the district leadership or school supervisors consult your views on important matters and for making key decisions?</p> <p>To what extent does the district leadership or school supervisors support your own goals and in what ways?</p> <p>Can you provide an example of when you were consulted with for any issue? What was the result?</p> <p>Can you also tell us about a time you were not consulted with for a decision?</p>
SCHOOL ENVIRONMENT	<p>Have you felt that your gender is a drawback in your profession? How and why?</p> <p>Do you believe that your school has a positive workplace? Why? What else can be done to improve the school environment for you, and for the students?</p>
COACHING	<p>How often do you get to be coached and who is the one coaching you? When was the last time you received feedback and how did that make you feel? What was communicated and how did you implement it?</p> <p>What is the value that you try to bring into teacher network meetings for teachers? What are the key observations/shifts about your own behaviour due to these meetings? Where and how do you apply feedback that you received in your coaching sessions? How do you enable peer to peer learning?</p> <p>How often do you conduct one on one coaching sessions with your teachers? What are the kind of feedback points you need to cover?</p> <p>How do you frame your feedback? What is the recent feedback exercise that you engaged in and how did you share that feedback, can you share what the exact feedback was?</p>
LEARNING IMPROVEMENT CYCLES	<p>What are some of the key topics discussed during network meetings? How do you facilitate the knowledge of the same across the teachers?</p> <p>What were new things you tried to introduce into the learning improvement cycles, i.e. contextualization, personal teaching experiments etc.?</p> <p>Did you bring focus on gender sensitivity in the classroom during coaching or learning improvement cycle sessions? (for instance – providing examples of men taking care of children and women earning in a job, encouraging boys to express themselves, etc.)</p>
CHALLENGES	<p>What type of challenges do you face in your work?</p> <p>When you face challenges, how do you stay motivated? Can you share a specific instance of when this happened?</p> <p>What are the challenges that your students face in learning? How do you help them overcome these challenges?</p> <p>What are the specific challenges faced by boys and girls? Do you feel equipped to deal with their issues?</p>
CLOSING	<p>Do you feel that you are a good teacher and role model for your students / peers? Can you give us examples?</p>

In-depth Interviews – Education Leader Manager

Interviewer Prompt:

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different various levels of the education system, including encompassing education leadership, teachers, and students. The programme aims strives to ensure that teachers enjoy teaching, and students enjoy find joy in learning, and through this process effectuate an improvement in learning outcomes.

With your permission, we would like to request for your time to understand your views on your perspective on intrinsic motivation, peer learning, action-based feedback and data-based reflections. Your responses will help STiR Education to understand the outcomes of its programme.

This process will take approximately 30 minutes. Please note that, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be kept confidential and our findings will be summarized in a report without quoting any individual.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we proceed with the interview? (Wait for verbal response.)

Note for Interviewer: *In case the respondent does not give consent to audio record, please reinstate that you would still like to go ahead with the interview and will be taking notes while the interview is on.*

Table 61: Education Leader Manager (ELM) IDI Questionnaire

No.	Question	Responses	Remarks
SECTION A – BASIC DETAILS			
1.	Date & Time of Interview		
2.	Name of respondent		
3.	Country		
4.	District		
5.	Name of City / Town		
6.	Gender of Respondent		
7.	Name of school		
8.	Age of Respondent	1. 18 to 24 years 2. 25 to 35 years 3. 36 to 45 years 4. 46 to 55 years 5. 56 to 65 years 6. Above 65 years	
9.	Total teaching experience	1. Less than 3 years 2. 3 to 6 years 3. 7 to 10 years 4. 11 to 15 years 5. 16 to 20 years 6. 21 to 30 years	

No.	Question	Responses	Remarks
		7. 31 to 40 years 8. More than 40 years	
10.	Number of years working in the current school	1. Less than 1 year 2. 1 to 3 years 3. 4 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. 31 to 40 years 9. More than 40 years	
11.	Employment type	1. Permanent 2. Temporary/ Contract 3. Others _Please Specify	
12.	What is the highest level of formal education that you have completed?	1. Bachelors’ Degree only 2. Professional Diploma 3. Master’s Degree 4. Bachelor’s Degree 5. Doctoral Studies 6. Other _ Please specify	Please note that country-specific qualifications such as “Primary level” and “Ordinary level” would come under Option 6

	Area	Question
SECTION B – MOTIVATION DRIVERS AND CHALLENGES		
1.	PURPOSE	<ul style="list-style-type: none"> Why did you decide to get into this profession? ? What goals (both personal and career) do you want to achieve? Is your work contributing towards achieving these goals? What are the specific elements of this role that you particularly enjoy and why? What motivates you to continue in this profession? Can you describe how your motivation to continue teaching has evolved since the beginning of your career? Can you share a specific example of a time when you felt particularly motivated and what contributed to that sense of motivation?
2.	AUTONOMY	<ul style="list-style-type: none"> What decisions do you usually make about your work? (Probes – Coaching topics, LIC focus areas, classroom management, teaching style, curriculum development, etc.) What decisions do you wish to make but find yourself unable to? How do you apply your own learning from your coaches to the Learning Improvement Cycle meetings and one on one coaching sessions with teachers. ? In what ways do you incorporate your own interests and passions into your teaching to make the learning experience more engaging?
3.	RELATEDNESS	<ul style="list-style-type: none"> Do you feel that the district or CCT/ASSHU leadership consult your views on important matters and for making key decisions? To what extent does the district or CCT/ASSHU leadership support your own goals and in what ways? Can you provide an example of when you were consulted with for any issue? What was the result?

	Area	Question
		<ul style="list-style-type: none"> Can you also tell us about a time you were not consulted with for a decision?
4.	SCHOOL ENVIRONMENT	<ul style="list-style-type: none"> Have you felt that your gender is a drawback in your profession? How and why? In what ways do you think your school contributes to a positive workplace environment? What else can be done to improve the school environment for you, and for the students?
5.	COACHING	<ul style="list-style-type: none"> How often do you get to be coached and who is the one coaching you? When was the last time you received feedback and how did that make you feel? What was communicated and how did you implement it? What is the value that you try to bring into teacher network meetings for teachers? How have these meetings influenced your personal behaviour or perspective? Where and how do you apply feedback that you received in your coaching sessions? How do you enable peer to peer learning? How do you frame your feedback? What is the recent feedback exercise that you engaged in and how did you share that feedback, can you share what the exact feedback was?
6.	LEARNING IMPROVEMENT CYCLES	<ul style="list-style-type: none"> What are some of the key topics discussed during network meetings? How do you facilitate the knowledge of the same across the School Principal cohort? What were new things you tried to introduce into the learning improvement cycles, i.e. contextualization, personal teaching experiments etc.? Did you bring focus on gender sensitivity in the classroom during coaching or learning improvement cycle sessions? (for instance – providing examples of men taking care of children and women earning in a job, encouraging boys to express themselves, etc.)
7.	CHALLENGES	<ul style="list-style-type: none"> What type of challenges do you face in your work? When you face challenges, how do you stay motivated? Can you share a specific instance of when this happened? What are the challenges that your students face in learning? How do you help them overcome these challenges? What are the specific challenges faced by boys and girls? Do you feel equipped to deal with their issues?
8.	CLOSING	<ul style="list-style-type: none"> Do you feel that you exceling in your job and a role model for peers? Can you give us examples? How do you think you can improve?

In-depth Interviews – District Coordinators

Interviewer Prompt:

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different various levels of the education system, including encompassing education leadership, teachers, and students. The programme aims strives to ensure that teachers enjoy teaching, and students enjoy find joy in learning, and through this process effectuate an improvement in learning outcomes. With your permission, we would like to request for your time to understand your views on your perspective on intrinsic motivation, peer learning, action-based feedback and data based reflections. Your responses will help STiR Education to understand the outcomes of its programme.

This process will take approximately 30 minutes. Please note that, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be kept confidential and our findings will be summarized in a report without quoting any individual.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we proceed with the interview? (Wait for verbal response.)

Note for Interviewer: *In case the respondent does not give consent to audio record, please reinstate that you would still like to go ahead with the interview and will be taking notes while the interview is on.*

Table 62: District Coordinator IDI Questionnaire

No.	Question	Responses	Remarks
SECTION A – BASIC DETAILS			
1.	Date & Time of Interview		
2.	Name of respondent		
3.	Country		
4.	District		
5.	Name of City / Town		
6.	Gender of Respondent		
7.	Name of school		
8.	Age of Respondent	1. 18 to 24 years 2. 25 to 35 years 3. 36 to 45 years 4. 46 to 55 years 5. 56 to 65 years 6. Above 65 years	
9.	Total teaching experience	1. Less than 3 years 2. 3 to 6 years 3. 7 to 10 years 4. 11 to 15 years 5. 16 to 20 years 6. 21 to 30 years 7. 31 to 40 years 8. More than 40 years	
10.	Number of years working in the current role	1. Less than 1 year 2. 1 to 3 years 3. 4 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. 31 to 40 years	

No.	Question	Responses	Remarks
		9. More than 40 years	
11.	Employment type	1. Permanent 2. Temporary/ Contract 3. Others _Please specify	
12.	What is the highest level of formal education that you have completed?	1. Bachelors’ Degree only 2. Professional Diploma 3. Master’s Degree 4. Bachelor’s Degree 5. Doctoral Studies 6. Other _ Please specify	Please note that country-specific qualifications such as “Primary level” and “Ordinary level” would come under Option 6
13.	How many hours in a week do you spend on engaging with other teachers/team members/subordinates for coaching, mentoring, and learning purposes?	1. No time spent 2. 1 to 5 hours 3. 6 to 10 hours 4. 11 to 20 hours 5. 21 to 30 hours 6. More than 30 hours	

	Area	Question
SECTION B – MOTIVATION DRIVERS AND CHALLENGES		
1.	PURPOSE	<ul style="list-style-type: none"> Why did you decide to get into this profession? What goals (both personal and career) did you want to achieve? Is your work contributing towards achieving these goals? How has your journey been to reach the role that you are at? What are the specific elements of this role that you particularly enjoy and why? What motivates you to continue in this profession? Can you share a specific example of a time when you felt particularly motivated? What contributed to that sense of motivation?
2.	AUTONOMY	<ul style="list-style-type: none"> What decisions do you usually make about your work, what are the implications of those decisions and how does the decision making process impact your motivation etc.? (probes – allocation of funds/resources, training design and implementation etc.) What other decisions do you want to make but cannot, where you believe your inputs, or an individual in your role needs to contribute to? In what way do the CCT/ASSHU representatives trained under the STiR programme contribute to your operations and objectives? Are you able to leverage them adequately?
3.	WORK ENVIRONMENT	<ul style="list-style-type: none"> Have you felt that your gender is a drawback in your profession? How and why? Do you believe that you have a positive workplace? Why? What else can be done to improve the school environment for you, and for the teachers in your district?

SECTION C – STiR PROGRAMME / TEACHER DEVELOPMENT		
4.	TEACHER DEVELOPMENT AND POLICY	<ul style="list-style-type: none"> Are you consulted with for framing teacher development plans? What is the current policy for teacher development in your district? What are the major challenges faced by teachers in your district? What are the key skill gaps you have identified and how are you planning to address this?

SECTION C – STiR PROGRAMME / TEACHER DEVELOPMENT		
		<ul style="list-style-type: none"> • What are the major motivation challenges for teachers in your district? (<i>probe – pay, class size, lack of parental support, administrative work, etc.</i>) • Are the challenges faced by female teachers different from what male teachers face? How? • Do you feel that the STiR Education programmes are aligned with government policies and mandates, interventions etc? If not, do you think these are of value? • What measures have been taken to ensure a more inclusive and supportive learning environment for all students in the district? How is the programme aligned to districts objectives?
5.	CHALLENGES	<ul style="list-style-type: none"> • What type of challenges do you face in your work? When you face challenges, how do you stay motivated? Can you share a specific instance of when this happened?
6.	CLOSING	<ul style="list-style-type: none"> • Do you feel that you are a good leader and role model for teachers in your district/ peers? Can you give us examples? What else would you like to improve on? • What feedback do you have for STiR Education to improve their programmes?

In-depth Interviews with STiR Programme staff

Interviewer Prompt:

STiR Education works to enable change in behaviours and attitudes by reigniting intrinsic motivation across different various levels of the education system, including encompassing education leadership, teachers, and students. The programme aims strives to ensure that teachers enjoy teaching, and students enjoy find joy in learning, and through this process effectuate an improvement in learning outcomes.

With your permission, we would like to request for your time to understand your views on your perspective on intrinsic motivation, peer learning, action-based feedback and data based reflections. Your responses will help STiR Education to understand the outcomes of its programme.

This process will take approximately 30 minutes. Please note that, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be kept confidential and our findings will be summarized in a report without quoting any individual.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we proceed with the interview? (Wait for verbal response.)

Note for Interviewer: *In case the respondent does not give consent to audio record, please reinstate that you would still like to go ahead with the interview and will be taking notes while the interview is on.*

Table 63: STiR Staff IDI Questionnaire

Questions		Responses	Remarks
SECTION A – BASIC DETAILS			
1.	Date & Time of Interview		
2.	Name of Respondent		
3.	Gender of Respondent		
4.	City / town		
5.	Country		
6.	District		
7.	Designation		
8.	Age of Respondent	1. 18 to 25 years 2. 26 to 35 years 3. 36 to 45 years 4. 46 to 55 years 5. Above 55 years	
9.	Number of years in the present role at STiR Education	1. Less than 1 year 2. 1 to 3 years 3. 4 to 6 years 4. 7 to 10 years 5. 11 to 15 years 6. 16 to 20 years 7. 21 to 30 years 8. More than 30 years	
Area		Question	
SECTION B – OVERVIEW OF WORK			
9.	ROLE	<ul style="list-style-type: none"> What type of work does your role entail? What outputs / outcomes are you responsible for? What are the daily tasks you engage in? Which external stakeholders do you interact with, how often and in what context? (<i>probe – government officers, teachers, students, donors, partners, etc.</i>) What are the most challenging aspects of your work, and how do you address it? How do you think gender influences the challenges or dynamics you encounter in your workplace? How do you address this? 	
10.	PROGRAMME WORK	<ul style="list-style-type: none"> Are you engaged in the following processes: co-design, review meetings, teacher peer network meetings, government review meetings conducted with STiR, etc.? In what capacity? What role do you play in each of these? Can you describe the process of implementing each of these – review meetings, strategy meetings, co-design processes, selection of learning improvement cycles, etc.? What kind of roles are played by the government officers at each stage? What is your understanding of intrinsic motivation, and how do you think it is relevant to the needs of the people you work with? According to you, what are the key factors driving motivation based on your experience and interactions with the teachers / officials in your district? 	

		<ul style="list-style-type: none"> • What elements of the programme are major contributors to building intrinsic motivation? • How do you differentiate between intrinsic and external driven motivation? Do you feel that the stakeholders you work with also understand these concepts?
SECTION C – PROGRAMME IMPLEMENTATION		
11.	STAKEHOLDERS	<ul style="list-style-type: none"> • How do the different stakeholders you work with demonstrate intrinsic motivation in their work? Can you give us a few examples? • In your experience, what have been the major changes in the behaviours of district officials, school principals and teachers? (both positive and negative) • What are the typical challenges faced by district officials, school principals and teachers, and how do they usually address these challenges? Have these methods changed since initiation of STiR programmes? • To what extent do the stakeholders drive and implement key aspects of the STiR programme such as co-design, review meeting, peer network meetings, etc.?
12.	CLASSROOM / SCHOOL	<ul style="list-style-type: none"> • How have teachers demonstrated their own learnings from the peer network meetings in the classroom? How have teachers adapted these learnings – particularly when it comes to gender? • What do you usually notice about classroom behaviours of students? How do these differ between male and female students? • How would you describe the teaching styles and classroom engagement of the teachers at your school? (<i>probe- are they consistent?</i>) • Do you believe that the desired changes in behaviour are translating from the official level to classrooms? What are examples of this?
13.	GOVERNMENT ALIGNMENT	<ul style="list-style-type: none"> • How does STiR ensure that the programme delivered is aligned to government priorities and mandates? Share examples. • How does LIC content link back to teacher development needs that the government may have identified? • To what degree do government officials and stakeholders take lead in implementation of LICs and the other interventions?

In-depth interview with Parents/ Guardians

Interviewer Prompt:

We are reviewing a programme implemented by a non-profit agency called STiR Education. This nonprofit works with teachers and government officials to improve their skills and motivation, to ensure that children learn better.

With your permission, we would like to request for your time to understand your views on your perspective of your child's learning outcomes and impact of school education. Your responses will help STiR Education to understand the outcomes of its programme.

This process will take approximately 20 to 30 minutes. Please note that, this is not a test and there are no right or wrong answers. Further, you are not obliged to answer any question, and can stop at any moment you please. If you feel uncomfortable answering any of the questions, please let us know so that we can stop. Your responses will be kept confidential and our findings will be summarized in a report without quoting any individual.

Your answers will not influence our future cooperation. Thank you for your time.

If I have your permission, can we proceed with the interview? (Wait for verbal response.)

Note for Interviewer: *In case the respondent does not give consent to audio record, please reinstate that you would still like to go ahead with the interview and will be taking notes while the interview is on.*

Table 64: Parents/Guardians IDI Questionnaire

	Question	Responses	Remarks																				
	SECTION A – BASIC DETAILS																						
1.	Date & Time of Interview																						
2.	Name of respondent																						
3.	Relation to the student	1. Father 2. Mother 3. Guardian																					
4.	Country																						
5.	District																						
6.	Name of city / town																						
7.	Number, age, and gender of children	<table border="1"> <thead> <tr> <th></th> <th>Age</th> <th>Gender</th> <th>Grade level</th> </tr> </thead> <tbody> <tr> <td>Child 1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Child 4</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Age	Gender	Grade level	Child 1				Child 2				Child 3				Child 4				Please highlight the child studying in the grade & school where the impact assessment is being conducted
	Age	Gender	Grade level																				
Child 1																							
Child 2																							
Child 3																							
Child 4																							
8.	Age of Respondent	1. 18 to 24 years 2. 25 to 35 years																					

	Question	Responses	Remarks
		3. 36 to 45 years 4. 46 to 55 years 5. Above 55 years	
9.	Number of members in the household		
10.	Primary occupation		
11.	Annual Income		
12.	Highest level of education completed	1. Not educated / no formal education 2. Primary level 3. Secondary level 4. Bachelors' Degree only 5. Professional Diploma 6. Master's Degree 7. Bachelor's Degree 8. Doctoral Studies 9. Other _ Please specify	Please note that country-specific qualifications such as "Primary level" and "Ordinary level" would come under Option 6

SECTION B – ACADEMIC PERFORMANCE AND MOTIVATION		
	AREA	Questions
1.	INVOLVEMENT IN CHILD'S EDUCATION	<ul style="list-style-type: none"> Do you get involved in your child's education? <i>Probe: attending parent teacher meetings, regular interactions with teacher and head-teacher, sports, arts, cultural education, etc.</i> If yes, please explain how you get involved? If no, please explain why. <i>Probes: Ask about homework completion, remedial lessons, any additional time spent on foundational skills, purchase of additional learning materials, educational trips to museums / zoos / libraries, etc.</i> Do you encourage your child to spend time on non-academic interests and activities? Why? What are the challenges you face with regards to your child's education? How do you attempt to address them?
2.	ROLE OF SCHOOL	<ul style="list-style-type: none"> Could you explain what your expectations are from your child's school? <i>Probes: Marks / test scores, extracurricular activities, sports, good learning environment, friendly teachers, etc.</i>
3.		<ul style="list-style-type: none"> To what extent does the school / the teacher meet your expectations? How satisfied are you with the communication between the school and parents regarding your child's progress? Are there any specific concerns you have regarding the impact of school education on your child? Please elaborate.
4.	CHILD'S ACADEMIC PERFORMANCE	<ul style="list-style-type: none"> How do you perceive your child's overall academic achievement? <i>Probes: Any subject where the child was previously struggling but is now performing better, child's performance on favourite subjects, changes in academic performance</i> Have you noticed any particular subjects or areas where your child excels or struggles? If yes, please specify. Are you satisfied with your child's performance? What do you think is required to help your child perform better?

5.	CHALLENGES FACED BY CHILD	<ul style="list-style-type: none"> In your opinion, how well does the school prepare your child for future academic challenges? <i>Probe: Challenges such as technology, language issues, etc.</i>
6.		<ul style="list-style-type: none"> What do you think are your child’s biggest challenges in education? How are you addressing these challenges? <i>Probes: In school and at home challenges</i> How does your child typically respond to challenges or setbacks in their academic work?
7.	CLOSING	<ul style="list-style-type: none"> What improvements would you like to see in the school's approach to education? Do you have any suggestions for enhancing the overall educational experience for your child?

School Information Sheet

Kindly fill in the details pertaining to your school in the format below

Table 65: School Information Sheet

No.	Question	Response	Remarks
1.	Name of the School		
2.	District name		
3.	State		
4.	Country		
5.	Founding Year	_____ (mention the year)	
6.	Part of STiR Education’s intervention since	_____ (mention the year)	
7.	School Type	I.Co-educational / mixed II.Only boys III.Only girls	
8.	Levels / Classes Offered		
9.	Average class size		
10.	Number of students in the school	Boys: Girls:	
11.	Children With Special Needs (CWSN) enrolment	Boys: Girls:	
12.	Number of students in Grade 6	Boys: Girls:	
13.	Number of teachers	Male: Female:	
14.	Repetition Rate		
15.	Dropout Rate		
16.	School has a dedicated principal	<input type="checkbox"/> <input type="checkbox"/> Yes No	
17.	Functional drinking water facility	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No NA	

No.	Question	Response	Remarks
18.	Functional electricity	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No NA	
19.	Number of functionals toilets	Girls: Boys:	
20.	School has a library	<input type="checkbox"/> <input type="checkbox"/> Yes No	

Student Pre-assessment Form

This form has been designed to be filled in by the parents / guardians of the student.

Table 66: Student Pre-assessment Form

No.	Question	Response	Remarks
1.	Name of the school		
2.	District name		
3.	State		
4.	Name of city / town / village		
5.	Class section		
6.	Student roll number / School ID number		
7.	Who pays for your child’s tuition?	1. Parent 2. Other family member 3. Government 4. NGO	
8.	Does your child take coaching classes?	1. Yes 2. No 3. Not applicable	

List of Household Members of Student						
No.	Relation to student	Gender	Age (years)	General education	General principal activity status	Nature of employment (if employed)
1	Mother	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)

List of Household Members of Student						
No.	Relation to student	Gender	Age (years)	General education	General principal activity status	Nature of employment (if employed)
				6. Higher secondary 7. Graduate 8. Post graduate and above	6. Not able to work due to disability / old age 7. Housewife	
2	Father	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)
3	Sibling	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)
4	Sibling	1. Male		1. Not literate	1. Employed – Informal (farming, mining, etc.)	1. Regular salaried

List of Household Members of Student						
No.	Relation to student	Gender	Age (years)	General education	General principal activity status	Nature of employment (if employed)
		2. Female 3. Other 4. Do not want to disclose		2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)
5	Sibling	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)
6	Sibling	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)

List of Household Members of Student						
No.	Relation to student	Gender	Age (years)	General education	General principal activity status	Nature of employment (if employed)
				6. Higher secondary 7. Graduate 8. Post graduate and above	6. Not able to work due to disability / old age 7. Housewife	
7	Other relative	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)
8	Other relative	1. Male 2. Female 3. Other 4. Do not want to disclose		1. Not literate 2. Literate without any schooling 3. Below primary 4. Primary 5. Secondary 6. Higher secondary 7. Graduate 8. Post graduate and above	1. Employed – Informal (farming, mining, etc.) 2. Employed – formal (professional, factory, teacher, etc.) 3. Unemployed 4. Attending education 5. Pensioner 6. Not able to work due to disability / old age 7. Housewife	1. Regular salaried 2. Casual / daily wage 3. Agriculture & allied 4. Other (please specify)

Annexure IV- Detailed Tables



Regression Tables

Regression Equations

Total Score (Y) = 7.758401 + 0.771*Treatment + 0.574*Gender -0.148*Coaching Classes+ 0.114* Number of Siblings + 0.133*Highest Degree Parents + 0.016* Highest Degree Siblings + 0.15*Own Land - 0.095*Percentage of dependents + 0.435*Own house + 0*Monthly Expenditure + 0.048*Sum of Assets Owned + 0.164*Access to Learning Materials + 0.018*Distance to city centre

Literacy Score (Y) = 1.310374 + 0.383*Treatment + 0.124*Gender + 0.048* Coaching Classes -0.032* Number of Siblings + 0.019* Highest Degree Parents + 0.019* Highest Degree Siblings - 0.022* Own Land + 0.132* Percentage of dependents + 0.016* Own house + 0*Monthly Expenditure + 0* Sum of Assets Owned + 0.008*Access to Learning Materials + 0.007*Distance to city centre

Numeracy Score (Y) = 6.448026 + 0.389*Treatment + 0.45*Gender - 0.196* Coaching Classes + 0.146* Number of Siblings + 0.114* Highest Degree Parents - 0.003* Highest Degree Siblings + 0.172* Own Land -0.227* Percentage of dependents + 0.419* Own house + 0*Monthly Expenditure + 0.048* Sum of Assets Owned + 0.156*Access to Learning Materials + 0.011*Distance to city centre

Bound Analysis

Although the main regression model controls for ability by including division dummy variables, there remains concern about other unobserved abilities not fully captured by scholastic performance, as well as household factors that could bias the estimated results. This section evaluates the extent of potential bias arising from excluding these variables in the model by applying the strategy developed by Altonji et al. (2005) and Oster (2017). This method relies on the idea that selection on observable variables can serve as a valuable reference for assessing selection on unobservable.

Equation 5

$$Y = \beta_t X + \beta_z Z + W$$

where X is the main variable of interest, Z is observed, and W contains all the unobserved components. The objective is to estimate the bias on β_t because of W. Altonji et al. (2005) estimate this bias by assuming the following:

Equation 6

$$\frac{\text{Cov}(X, W)}{\text{Var}(W)} = \delta \frac{\text{Cov}(X, \beta_z Z)}{\text{Var}(\beta_z Z)}$$

In other words, the relation of X and unobservables is proportional to the relationship between X to observables, the degree of proportionality determined by δ . This basic insight has been extended by Oster (2017) to incorporate the idea that one can look at coefficient movements (of β_t) when covariates are added and deduce a similar bias. This extension also accounts for movement in the R-squared value due to addition of control variables. Following this method, we derive a consistent estimator for the effect of treatment as a function of two parameters: δ and R^2_{\max} , denoted by $\beta_t R^2_{\max}, \delta$). R^2_{\max} is the R-square of a hypothetical regression which includes the complete set of controls including the unobservable variables.

To operationalize this method, a baseline regression was conducted where the logarithm of earnings was regressed on treatment, followed by the inclusion of additional control variables. In the second step, we estimate R^2_{\max} . One approach to setting this value is by examining R-squared values reported in similar studies within the same context that account for the omitted variables.

Numeracy Score					
Coefficient of Treatment (STiR programme)			Identified Estimate Bias		
			$R^2_{\max} = 0.1119$	$\delta = 1$	
	Uncontrolled	Controlled	β_t for $\delta = 1$	δ for $\beta_t = 0$	R^2_{\max} for $\beta_t = 0$
β_t	0.69	0.389	0.253	2.5	0.15
R^2	0.011	0.086			

Total Score					
Coefficient of Treatment (STiR programme)			Identified Estimate Bias		
			$R^2_{\max} = 0.1253$	$\delta = 1$	
	Uncontrolled	Controlled	β_t for $\delta = 1$	δ for $\beta_t = 0$	R^2_{\max} for $\beta_t = 0$
β_t	1.058	0.771	0.627	3.25	0.21
R^2	0.020	0.096			

$$1.3 * R^2_{\text{controlled}} = 0.125346$$

Given the lack of a known R^2_{\max} , we followed Oster (2017)'s suggestion and set R^2_{\max} as 1.3 times the R-square of the regression that controls for Z (controlled regression). Since the R-square in our main specification is .096, we set $R^2_{\max} = .1253$. The robustness check suggested by Oster (2017) is that the interval $[\beta_t^{\text{controlled}}, \beta_t(\min(1.3 * R^2_{\text{controlled}}, 1), 1)]$ should not contain 0. We observed that this is, in fact, not the case. In our case, the $\beta_t(0.1253, 1) = 0.627$.

Moreover, we provided the value of δ for which β_t would become 0. The obtained value is 3.25.

Alternatively, we showed the R^2_{\max} needed to make $\beta_t = 0$ when $\delta = 1$ is 0.21, is almost twice the R-square from the controlled regression. Thus, this exercise indicated that the total score associated with treatment (presence in STiR programme) are robust to potential omitted variable bias. However, it is important to note that the values taken for this bound analysis are necessarily ad-hoc.²⁴

Similar calculations were done for numeracy and literacy scores. The results are shown in the tables below:

$$1.3 * R^2_{\text{controlled}} = 0.11193$$

²⁴ <https://www.nishithprakash.com/published-papers>

Literacy Score					
Coefficient of Treatment (STiR programme)			Identified Estimate Bias		
			$R^2_{max} = 0.0806$		$\delta = 1$
	Uncontrolled	Controlled	β_t for $\delta = 1$	δ for $\beta_t = 0$	R^2_{max} for $\beta_t = 0$
β_t	0.368	0.383	0.393	5	0.065
R^2	0.026	0.062			

1.3 * R2 controlled = 0.0806

Detailed Tables

Table 67: Details on missing school in a month

	N= 726	N= 258	N = 468	N= 204
	Treatment	Lumajang	Kota Kediri	Kabupaten Kediri (Control)
Have you ever had to miss school for longer than one month?				
2. No	89.7%	91.0%	89.0%	93.0%
1. Yes	5.2%	4.0%	6.0%	4.0%
3. Student left this question blank	5.1%	4.0%	5.0%	2.0%

Table 68: Details on feeling afraid in school

	N= 726	N= 258	N = 468	N= 204
	Treatment	Lumajang	Kota Kediri	Kabupaten Kediri (Control)
In the last week, did you feel afraid in your school?				
2. No	93.0%	91.0%	94.0%	95.0%
1. Yes	6.1%	9.0%	5.0%	4.0%
3. Student left this question blank	1.0%	0.0%	2.0%	1.0%

Table 69: Details on whether a child was left from any activity or game

	N= 726	N= 258	N = 468	N= 204
	Treatment	Lumajang	Kota Kediri	Kabupaten Kediri (Control)
In the last week, did a child in your school leave out another child from an activity or game?				
2. No	79.1%	81.0%	78.0%	86.0%
1. Yes	19.7%	19.0%	20.0%	12.0%
3. Student left this question blank	1.2%	0.0%	1.0%	1.0%

Table 70: Details on missing school for longer than a month- gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
Have you ever had to miss school for longer than one month?			
1. Yes			
Male	5.5%	5.0%	0.8%
Female	5.2%	4.0%	0.1%
Do not want to disclose	0.0%	0.0%	0.0%
2. No			
Male	89.5%	92.0%	-2.0%
Female	89.9%	95.0%	-4.8%
Do not want to disclose	86.7%	100.0%	-13.3%
3. Student left this question blank			
Male	5.0%	4.0%	1.2%
Female	4.9%	1.0%	3.9%
Do not want to disclose	13.3%	0.0%	13.3%

Table 71: Details on whether a child was left from any activity or game- gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
In the last week, did a child in your school leave out another child from an activity or game?			
1. Yes			
Male	20.7%	15.0%	5.7%
Female	19.0%	9.0%	10.0%
Do not want to disclose	13.3%	0.0%	13.3%
2. No			
Male	78.7%	85.0%	-6.3%
Female	79.1%	86.0%	-6.9%
Do not want to disclose	86.7%	100%	-13.3%
3. Student left this question blank			
Male	0.6%	0.0%	0.6%
Female	1.9%	4.0%	-2.1%

Table 72: Details on whether a child was left from any activity or game- gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
In the last week, did you feel afraid in your school?			
1. Yes			
Male	6.1%	5.7%	0.5%
Female	6.0%	2.0%	4.0%
Do not want to disclose	6.7%	0%	6.7%
2. No			
Male	92.4%	94.0%	-1.6%
Female	93.5%	96.0%	-2.5%
Do not want to disclose	93.3%	100%	-6.7%
3. Student left this question blank			
Male	1.5%	0.0%	0.9%
Female	0.5%	2.0%	0.5%

Table 73: Emotions displayed in picture- gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
Now let’s look at this picture. How do you think this child is feeling right now?			
1. Sad			
Male	90.1%	88.7%	1.40%
Female	87.0%	90.5%	-3.60%
Do not want to disclose	93.3%	100%	-6.70%
2. Upset			
Male	1.2%	1%	0.20%
Female	1.4%	0%	1.40%
Do not want to disclose	6.7%	0%	6.70%
3. Hurt			
Male	6.1%	6.6%	-0.50%
Female	9.0%	6.3%	2.70%

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
4. In pain			
Male	1.5%	2.8%	-1.40%
Female	1.9%	2.1%	-0.20%
5. Tired			
Male	0.3%	0.0%	0.30%
Female	0.0%	1.1%	-1.10%
8. Don't know			
Male	0.6%	0.0%	0.60%
Female	0.3%	0.0%	0.30%
9. Student left this question blank			
Male	0.3%	0.9%	-0.70%
Female	0.5%	0.0%	0.50%

Table 74: Providing support - gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
What would you do to help him feel better?			
1. Ask him what is wrong			
Male	57.1%	55.7%	1.50%
Female	65.5%	76.8%	-11.40%
Do not want to disclose	73.3%	66.7%	6.60%
10. Student left this question blank			
Male	0.0%	1.9%	-1.90%
Female	0.3%	1.1%	-0.80%
2. Tell the teacher			
Male	4.4%	3.8%	0.60%
Female	4.3%	2.1%	2.20%
3. Tell him a joke			
Male	29.2%	33.0%	-3.90%

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
Female	21.2%	13.7%	7.50%
Do not want to disclose	13.3%	33.3%	-20%
4. Give him a hug			
Male	5.8%	2.8%	3.00%
Female	8.2%	5.3%	2.90%
Do not want to disclose	13.3%	0%	13.30%
5. Ignore him			
Male	0.6%	0.9%	-0.40%
Female	0.0%	1.1%	-1.10%
6. Run away			
Male	1.5%	0.0%	1.50%
Female	0.0%	0.0%	0.00%
7. Tease him because boys do not cry			
Male	1.2%	0.9%	0.20%
Female	0.5%	0.0%	0.50%
8. Do nothing			
Male	0.3%	0.9%	-0.70%
Female	0.0%	0.0%	0.00%

Table 75: Scenario Question - Empathy- gender comparison

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
Why do you think that the other child pushed the girl while making a line?			
1. It was by mistake			
Male	55.4%	55.7%	-0.30%
Female	65.2%	70.5%	-5.30%
Do not want to disclose	60.0%	66.7%	-6.70%
2. They did not see him			

	Male N – 343	Male N – 106	
	Female N – 368	Female N – 95	
	Undisclosed N - 15	Undisclosed N – 3	
	Treatment	Kabupaten Kediri (Control)	Treatment- Control
Male	5.5%	7.5%	-2.00%
Female	5.2%	4.2%	1.00%
Do not want to disclose	6.7%	0.0%	6.70%
3. He fell on his own			
Male	4.4%	5.7%	-1.30%
Female	1.4%	0.0%	1.40%
Do not want to disclose	13.3%	0.0%	13.30%
4. Other child wanted to go first			
Male	21.0%	17.0%	4.00%
Female	17.7%	21.1%	-3.40%
Do not want to disclose	6.7%	33.3%	-26.70%
5. Other child may not like him			
Male	1.7%	2.8%	-1.10%
Female	1.9%	0.0%	1.90%
6. Other child is a bully			6.70%
Male	1.7%	2.8%	-1.10%
Female	1.9%	0.0%	1.90%
Do not want to disclose	6.7%	0.0%	6.70%
7. I don't know			
Male	5.5%	4.7%	0.80%
Female	2.7%	1.1%	1.70%
Do not want to disclose	6.7%	0.0%	6.70%
8. Student left this question blank			
Male	0.9%	0.9%	0.10%
Female	1.1%	2.1%	-1.00%

LAT Continuous Variables

Table 76: LAT Continuous Variable

Continuous variables	Count	Mean	Standard Deviation
Total score (LAT)	930	10.82	2.37
Numeracy score	930	8.87	2.06
Literacy score	930	1.96	0.72

Parents form

Table 77: Demographic Details

Continuous Var	Count	Mean	Standard Deviation
20. How much does your household spend every month on household necessities?	442	2928176	2653166
# of relatives living in household	792	2.58	1.24
# of people employed in household	792	1.15	0.80
Age - mother	580	39.33	6.01
Age - father	499	43.15	6.88
Age - sibling 1	399	14.27	7.75
Age - sibling 2	112	11.75	6.85
Age - sibling 3	18	6.39	3.45
Age - sibling 4	0	0.00	0.00
Age - other relative 1	112	63.36	12.56
Age - other relative 2	21	57.14	14.94

Continuous Var	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
20. How much does your household spend every month on household necessities?	2580891	3039624	458733
# of relatives living in household	2.60	2.57	-0.034
# of people employed in household	1.12	1.13	0.007
Age - mother	38.99	39.42	0.432
Age - father	44.08	42.89	-1.192
Age - sibling 1	13.38	14.53	1.152
Age - sibling 2	11.85	11.72	-0.129
Age - sibling 3	5.50	6.64	1.143
Age - sibling 4	0.00	0.00	0
Age - other relative 1	62.48	63.56	1.084
Age - other relative 2	57.50	57.06	-0.441

Variable	Count	Mean	Standard Deviation
18. Do you own any land?	765	0.50	0.50
19. Can you describe your housing situation? Own house	754	0.88	0.32
10. Does your child take coaching classes?	487	0.29	0.45
21.1 Does your house have electricity?	772	0.99	0.07
21.2 Does your house have indoor bathroom or toilet?	779	0.93	0.26
21.3 Does your house have television?	771	0.91	0.29
21.4 Does your house have mobile phone?	773	0.92	0.27
21.5 Does your house have fridge?	775	0.84	0.37
21.6 Does your house have bike/2-wheeler?	775	0.96	0.20

Variable	Count	Mean	Standard Deviation
21.7 Does your house have computer?	772	0.27	0.45
21.8 Does your house have gas stove?	766	0.99	0.10
Sum of Assets Owned (AO)	792	6.64	1.38
Sum of Access to Learning Materials (LM)	792	1.59	0.70
Highest Degree of Parents	631	4.41	1.70
Highest Degree of Siblings	631	2.08	2.28

Note: Sum of Assets Owned = Sum of questions 21.1 to 21.8 (each response gets 1 or 0)

Note: Sum of Learning Materials = Access to mobile phone + Access to Computer + Access to Library

Variable	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
18. Do you own any land?	0.53	0.50	-0.039
19. Can you describe your housing situation? Own house	0.89	0.88	-0.014
10. Does your child take coaching classes?	0.31	0.28	-0.029
21.1 Does your house have electricity?	0.99	1.00	0.009
21.2 Does your house have indoor bathroom or toilet?	0.90	0.93	0.029
21.3 Does your house have television?	0.89	0.91	0.019
21.4 Does your house have mobile phone?	0.88	0.93	0.048
21.5 Does your house have fridge?	0.73	0.87	0.142**
21.6 Does your house have bike/2-wheeler?	0.96	0.96	-0.004
21.7 Does your house have computer?	0.15	0.31	0.155**
21.8 Does your house have gas stove?	0.98	0.99	0.018
Sum of Assets Owned (AO)	6.40	6.71	0.304
Sum of Access to Learning Materials (LM)	1.39	1.64	0.246
Highest Degree of Parents	3.94	4.46	0.522**
Highest Degree of Siblings	2.31	2.05	-0.261

Note: Sum of Assets Owned = Sum of questions 21.1 to 21.8 (each response gets 1 or 0)

Note: Sum of Learning Materials = Access to mobile phone + Access to Computer + Access to Library

Detailed Teacher Assessment Tables:

Table 78: Average Class Size

Teacher survey	Count	Mean	Standard Deviation
18. What is the average size of your class (where you teach)?	75	22.45	6.90

Teacher survey	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
18. What is the average size of your class (where you teach)?	24.47	21.95	-2.517**

Table 79: Background details of teachers (Age), District Wise

Age categories	N = 31			N = 29			N = 15		
	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
1. 18 to 25 years	6%	0%	6%	3%	3%	0%	7%	7%	0%
2. 26 to 35 years	29%	3%	26%	28%	0%	28%	53%	7%	47%
3. 36 to 45 years	48%	19%	29%	59%	14%	45%	33%	7%	27%
4. 46 to 55 years	10%	0%	10%	3%	0%	3%	7%	7%	0%
5. Above 55 years	6%	6%	0%	7%	3%	3%	0%	0%	0%

Table 80: Background details of teachers (Age), Gender Wise

	N = 75	N = 19	N = 56
	Total	Male	Female
18 - 25 years	5%	11%	4%
26 - 35 years	33%	11%	41%
36 - 45 years	49%	58%	46%
46 - 55 years	7%	5%	7%
> 55 years	5%	16%	2%

Table 81: Background details of teachers (Years of Experience), District Wise

Age categories	N = 31			N = 29			N = 15		
	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
1. Less than 1 year	3%	0%	3%	0%	0%	0%	0%	0%	0%
2. 1 to 3 years	6%	0%	6%	3%	3%	0%	7%	7%	0%
3. 4 to 6 years	10%	0%	10%	10%	0%	10%	7%	0%	7%
4. 7 to 10 years	6%	0%	6%	21%	0%	21%	40%	7%	33%
5. 11 to 15 years	23%	6%	16%	28%	7%	21%	20%	7%	13%
6. 16 to 20 years	39%	13%	26%	24%	7%	17%	20%	0%	20%
7. 21 to 30 years	10%	6%	3%	7%	0%	7%	0%	0%	0%
8. More than 30 years	3%	3%	0%	7%	3%	3%	7%	7%	0%

Table 82: Background details of teachers (Years of Experience), Gender Wise

	N = 75	N = 19	N = 56
	Total	Male	Female
<1 year	1%	0%	2%
1 to 3 years	5%	11%	4%
4 to 6 years	9%	0%	13%
7 to 10 years	19%	5%	23%
11 to 15 years	24%	26%	23%
16 to 20 years	29%	32%	29%
21 to 30 years	7%	11%	5%
> 31 years	5%	16%	2%

Table 83: Background details of teachers (Number of years working in the school), District Wise

	N = 31			N = 29			N = 15		
	Lumajang			Kota Kediri			Kabupaten Kediri		
Age categories	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
1. Less than 1 year	3%	0%	3%	7%	0%	7%	7%	0%	7%
2. 1 to 3 years	13%	0%	13%	10%	7%	3%	20%	13%	7%
3. 3 to 6 years	29%	6%	23%	28%	0%	28%	27%	0%	27%
4. 7 to 10 years	3%	3%	0%	17%	3%	14%	13%	0%	13%
5. 11 to 15 years	19%	3%	16%	17%	7%	10%	20%	13%	7%
6. 16 to 20 years	29%	13%	16%	17%	3%	14%	13%	0%	13%
7. 21 to 30 years	3%	3%	0%	3%	0%	3%	0%	0%	0%

Table 84: Background details of teachers (Number of years working in the school), Gender Wise

	N = 75	N = 19	N = 56
	Total	Male	Female
<1 year	5%	0%	7%
1 to 3 years	13%	21%	11%
4 to 6 years	28%	11%	34%
7 to 10 years	11%	11%	11%
11 to 15 years	19%	26%	16%
16 to 20 years	21%	26%	20%
21 to 30 years	3%	5%	2%
> 31 years		16%	2%

Table 85: Teacher Background Details- Gender Distribution

	N = 31	N = 29	N = 15
	Lumajang	Kota Kediri	Kabupaten Kediri
Male	29%	21%	27%

	N = 31	N = 29	N = 15
	Lumajang	Kota Kediri	Kabupaten Kediri
Female	71%	79%	73%

Table 86: Academic Details

	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Subjects									
Language	39%	33%	41%	14%	17%	13%	0%	0%	0%
Maths & Science	39%	33%	41%	0%	0%	0%	0%	0%	0%
Social Science	39%	33%	41%	0%	0%	0%	0%	0%	0%
Other	100%	100%	100%	86%	83%	87%	100%	100%	100%
Grades Taught									
Primary	100%	100%	100%	97%	100%	96%	100%	100%	100%
Secondary	0%	0%	0%	0%	0%	0%	0%	0%	0%
Higher Secondary	0%	0%	0%	0%	0%	0%	0%	0%	0%
Posts held in School									
Teacher	100%	100%	100%	100%	100%	100%	100%	100%	100%
Head of Department	0%	0%	0%	0%	0%	0%	0%	0%	0%
Head of Faculty	0%	0%	0%	0%	0%	0%	0%	0%	0%
Principal	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 87: Time Spent Teaching in Class

Time spent teaching in class	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
1. Less than 2 hours	0%	0%	0%	0%	0%	0%	0%	0%	0%
2. 2-3 hours	0%	0%	0%	0%	0%	0%	0%	0%	0%
3. 4-5 hours	48%	6%	42%	45%	45%	10%	67%	27%	60%
4. More than 5 hours	52%	23%	29%	55%	7%	10%	87%	0%	13%

Table 88: Ranking of Motivating Factors

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)					
	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Ranking of Motivation Factors												
Accountability and teacher support	7	8	8	6%	6%	13%	3%	10%	3%	27%	20%	20%
Career development opportunities	3	6	6	0%	6%	10%	10%	7%	7%	0%	13%	7%
General interest and enjoyment in teaching	6	1	4	3%	0%	10%	14%	3%	3%	7%	0%	0%
Student’s interest in the subject	5	5	13	6%	3%	26%	0%	14%	10%	20%	0%	13%
Management style of school administration	7	5	3	3%	10%	0%	21%	3%	7%	0%	7%	7%
Other (Please specify)	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%
Recognition and prestige	2	5	3	0%	6%	3%	3%	7%	7%	7%	7%	0%
Remuneration and incentives	8	7	4	19%	16%	6%	7%	7%	3%	0%	0%	7%
Supplies and infrastructure	7	9	10	6%	23%	23%	14%	7%	10%	7%	0%	0%
Support of colleagues	11	18	2	16%	16%	0%	10%	34%	3%	20%	20%	7%
Teacher involvement	11	10	18	26%	13%	0%	10%	7%	41%	0%	27%	40%
Teacher workload and working conditions	8	1	4	13%	0%	10%	7%	0%	3%	13%	7%	0%

Table 89: Work task motivation- Statistical Analysis

Work Task Motivation Scale: Preparing for class	Count	Mean	Standard Deviation
i. Because it is important for me to carry out this task	75	4.83	0.55
ii. Because I like doing this task / I find this task interesting to do	75	4.65	0.69
iii. Because I find this task important for the academic success of my students	75	4.72	0.67
iv. Because I would feel guilty not doing it			
v. Because my work / school demands it.	75	4.25	1.05
vi. Because I’m paid to do it.	75	3.31	1.44
vii. I feel that this task is mostly irrelevant.	75	2.72	1.48
Work Task Motivation Scale: Teaching in class	Count	Mean	Standard Deviation
i. Because it is important for me to carry out this task	75	4.85	0.51
ii. Because I like doing this task / I find this task interesting to do	75	4.76	0.59
iii. Because I find this task important for the academic success of my students	75	4.85	0.48
iv. Because I would feel guilty not doing it			
v. Because my work / school demands it.	75	4.41	1.01
vi. Because I’m paid to do it.	73	3.47	1.51
vii. I feel that this task is mostly irrelevant.	75	3.09	1.56
Work Task Motivation Scale: Classroom management	Count	Mean	Standard Deviation
i. Because it is important for me to carry out this task	75	4.83	0.50

ii. Because I like doing this task / I find this task interesting to do	75	4.61	0.63
iii. Because I find this task important for the academic success of my students	74	4.72	0.59
iv. Because I would feel guilty not doing it			
v. Because my work / school demands it.	75	4.24	1.04
vi. Because I'm paid to do it.	75	3.56	1.40
vii. I feel that this task is mostly irrelevant.	75	2.89	1.56
Work Task Motivation Scale: Administrative tasks	Count	Mean	Standard Deviation
i. Because it is important for me to carry out this task	57	4.51	0.80
ii. Because I like doing this task / I find this task interesting to do	57	4.18	0.97
iii. Because I find this task important for the academic success of my students	57	4.30	0.89
iv. Because I would feel guilty not doing it			
v. Because my work / school demands it.	57	3.93	1.27
vi. Because I'm paid to do it.	57	3.44	1.45
vii. I feel that this task is mostly irrelevant.	57	3.23	1.49
Work Task Motivation Scale: Complementary tasks	Count	Mean	Standard Deviation
i. Because it is important for me to carry out this task	49	4.41	0.89
ii. Because I like doing this task / I find this task interesting to do	49	4.29	0.91
iii. Because I find this task important for the academic success of my students	49	4.39	0.98
iv. Because I would feel guilty not doing it			
v. Because my work / school demands it.	49	3.71	1.24
vi. Because I'm paid to do it.	49	3.22	1.33
vii. I feel that this task is mostly irrelevant.	49	2.84	1.34

Table 90: Work Task Motivation- Treatment vs Control

Work Task Motivation Scale: Preparing for class	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
i. Because it is important for me to carry out this task	4.67	4.87	0.2
ii. Because I like doing this task / I find this task interesting to do	4.67	4.65	-0.017
iii. Because I find this task important for the academic success of my students	4.80	4.70	-0.1
iv. Because I would feel guilty not doing it	4.13	4.28	0.15
v. Because my work / school demands it.	3.27	3.32	0.05
vi. Because I'm paid to do it.	3.20	2.60	-0.6**
vii. I feel that this task is mostly irrelevant.	1.87	1.85	-0.017
Work Task Motivation Scale: Teaching in class	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
i. Because it is important for me to carry out this task	4.87	4.85	-0.017
ii. Because I like doing this task / I find this task interesting to do	4.87	4.73	-0.133
iii. Because I find this task important for the academic success of my students	4.93	4.83	-0.1
iv. Because I would feel guilty not doing it	4.40	4.42	0.017
v. Because my work / school demands it.	3.20	3.53	0.334**
vi. Because I'm paid to do it.	3.20	3.07	-0.133

vii. I feel that this task is mostly irrelevant.	1.80	1.65	-0.15
Work Task Motivation Scale: Classroom management	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
i. Because it is important for me to carry out this task	4.93	4.80	-0.133
ii. Because I like doing this task / I find this task interesting to do	4.80	4.57	-0.233
iii. Because I find this task important for the academic success of my students	4.80	4.69	-0.105
iv. Because I would feel guilty not doing it	4.20	4.25	0.05
v. Because my work / school demands it.	3.60	3.55	-0.05
vi. Because I'm paid to do it.	3.33	2.78	-0.55**
vii. I feel that this task is mostly irrelevant.	1.80	1.73	-0.071
Work Task Motivation Scale: Administrative tasks	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
i. Because it is important for me to carry out this task	4.64	4.47	-0.178
ii. Because I like doing this task / I find this task interesting to do	4.36	4.12	-0.241
iii. Because I find this task important for the academic success of my students	4.36	4.28	-0.078
iv. Because I would feel guilty not doing it	3.93	3.93	0.002
v. Because my work / school demands it.	3.57	3.40	-0.176
vi. Because I'm paid to do it.	3.14	3.26	0.113
vii. I feel that this task is mostly irrelevant.	1.57	2.16	0.591**
Work Task Motivation Scale: Complementary tasks	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
i. Because it is important for me to carry out this task	4.13	4.46	0.338**
ii. Because I like doing this task / I find this task interesting to do	4.38	4.27	-0.107
iii. Because I find this task important for the academic success of my students	4.38	4.39	0.015
iv. Because I would feel guilty not doing it	3.63	3.73	0.107
v. Because my work / school demands it.	3.75	3.12	-0.628**
vi. Because I'm paid to do it.	3.38	2.73	-0.643**
vii. I feel that this task is mostly irrelevant.	1.50	1.63	0.134

Table 91: Non-Teaching Activities

	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Within School									
School management	55%	56%	55%	55%	67%	52%	87%	75%	91%
Documentation and communication	23%	11%	27%	34%	33%	35%	20%	0%	27%
Upkeep and maintenance	19%	22%	18%	21%	33%	17%	27%	0%	36%
Extra curricular activities	65%	89%	55%	72%	83%	70%	53%	50%	55%
Student affairs	29%	22%	32%	28%	17%	30%	40%	75%	27%
Others	3%	0%	5%	0%	0%	0%	0%	0%	0%
Affiliation to other groups									
Member of School Management Committee	3%	11%	0%	0%	0%	0%	0%	0%	0%
Teacher Welfare Union	0%	0%	0%	0%	0%	0%	0%	0%	0%

	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Local Teacher Association	23%	11%	27%	21%	17%	22%	53%	50%	55%
Other	94%	100%	91%	100%	100%	100%	67%	75%	64%

Other tasks in the school besides teaching	Count	Mean	Standard Deviation
20. Supporting school management (admissions, timetable development, coordination for internal and external examinations, coordination with government officers, etc.)	75	0.61	0.49
20. Documentation, communication, and reporting (RTI, submissions to government, school records management, etc.)	75	0.27	0.45
20. Upkeep, maintenance, and repairs of school facilities (library, labs, playground, campus, general cleanliness, etc.)	75	0.21	0.41
20. Management of student extracurriculars including events and programmes (field trips, annual day, sports day, cultural programmes, competitions, etc.)	75	0.65	0.48
20. Supporting student affairs (guidance and counselling, grievance redressal, student safety, etc.)	75	0.31	0.46
20. Others (please specify)	75	0.01	0.12

Other tasks in the school besides teaching	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
20. Supporting school management (admissions, timetable development, coordination for internal and external examinations, coordination with government officers, etc.)	0.87	0.55	-0.317**
20. Documentation, communication, and reporting (RTI, submissions to government, school records management, etc.)	0.20	0.28	0.083
20. Upkeep, maintenance, and repairs of school facilities (library, labs, playground, campus, general cleanliness, etc.)	0.27	0.20	-0.067
20. Management of student extracurriculars including events and programmes (field trips, annual day, sports day, cultural programmes, competitions, etc.)	0.53	0.68	0.15
20. Supporting student affairs (guidance and counselling, grievance redressal, student safety, etc.)	0.40	0.28	-0.117
20. Others (please specify)	0.00	0.02	0.017

Part of any other bodies	Count	Mean	Standard Deviation
1. School Management Committee	75	0.01	0.12
2. Teacher Welfare Unions	75	0.00	0.00
3. Local Teacher Association	75	0.28	0.45
4. Other (please specify)	75	0.91	0.29

Part of any other bodies	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. School Management Committee	0.00	0.02	0.017
2. Teacher Welfare Unions	0.00	0.00	0
3. Local Teacher Association	0.53	0.22	-0.317**

Part of any other bodies	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
4. Other (please specify)	0.67	0.97	0.3**

Table 92: Challenges Faced by teachers

	Lumajang			Kota Kediri			Kabupaten Kediri		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Challenges Faced									
Remote location	10%	0%	14%	0%	0%	0%	0%	0%	0%
Teaching workload	10%	0%	14%	10%	17%	9%	0%	0%	0%
Non teaching workload	35%	11%	45%	31%	17%	35%	47%	25%	55%
Large class size	3%	0%	5%	3%	0%	4%	20%	0%	27%
Mixed grade classes	0%	0%	0%	3%	0%	4%	0%	0%	0%
Lack of support from school	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lack of support from parents	35%	22%	41%	41%	17%	48%	33%	50%	27%
Lack of support from government	3%	0%	5%	0%	0%	0%	0%	0%	0%
Student behaviour	58%	67%	55%	24%	0%	30%	47%	50%	45%
Student performance	19%	33%	14%	0%	0%	0%	0%	0%	0%
Infrastructure and supplies	19%	22%	18%	59%	67%	57%	27%	0%	36%
Teaching material	16%	11%	18%	0%	0%	0%	0%	0%	0%
No challenges	0%	0%	0%	3%	17%	0%	7%	25%	0%
Other	0%	0%	0%	10%	17%	9%	0%	0%	0%
Implications of challenges									
Affects lesson planning	10%	11%	9%	21%	17%	22%	33%	50%	27%
Affects instructional effectiveness	6%	11%	5%	24%	33%	22%	0%	0%	0%
Lowers student engagement	6%	11%	5%	10%	17%	9%	7%	0%	9%
Affects wellbeing	23%	11%	27%	10%	33%	4%	7%	0%	9%
Affects time management	65%	44%	73%	45%	17%	52%	60%	50%	64%
Affects professional relationships	0%	0%	0%	0%	0%	0%	0%	0%	0%
No implication	10%	11%	9%	7%	0%	9%	0%	0%	0%
Others	0%	0%	0%	0%	0%	0%	0%	0%	0%

Challenges faced	Count	Mean	Standard Deviation
1. Remote location of school	75	0.04	0.20
2. Teaching workload	75	0.08	0.27
3. Non-teaching / administrative tasks workload	75	0.36	0.48
4. Large class sizes	75	0.07	0.25
5. Mixed grade classes	75	0.01	0.12

Challenges faced	Count	Mean	Standard Deviation
6. Lack of support from school leadership	75	0.00	0.00
7. Lack of support from parents	75	0.37	0.49
8. Lack of support from government	75	0.01	0.12
9. Student behaviour	75	0.43	0.50
10. Student performance	75	0.08	0.27
11. Lack of adequate school infrastructure	75	0.36	0.48
12. Lack of teaching materials	75	0.07	0.25
13. No challenges faced	75	0.03	0.16
14. Others (please specify)	75	0.04	0.20

Challenges faced	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Remote location of school	0.00	0.05	0.05
2. Teaching workload	0.00	0.10	0.1
3. Non-teaching / administrative tasks workload	0.47	0.33	-0.133
4. Large class sizes	0.20	0.03	-0.167**
5. Mixed grade classes	0.00	0.02	0.017
6. Lack of support from school leadership	0.00	0.00	0
7. Lack of support from parents	0.33	0.38	0.05
8. Lack of support from government	0.00	0.02	0.017
9. Student behaviour	0.47	0.42	-0.05
10. Student performance	0.00	0.10	0.1
11. Lack of adequate school infrastructure	0.27	0.38	0.117
12. Lack of teaching materials	0.00	0.08	0.083
13. No challenges faced	0.07	0.02	-0.05
14. Others (please specify)	0.00	0.05	0.05

Implication of the challenge faced	Count	Mean	Standard Deviation
1. Less time and effort spent on lesson planning	75	0.19	0.39
2. Reduces instructional effectiveness	75	0.12	0.33
3. Lower engagement with students	75	0.08	0.27
4. Contributes to increased stress levels and impacts overall well being	75	0.15	0.36
5. Impacts overall time management	75	0.56	0.50
6. Negatively impacts professional relationships	75	0.00	0.00
7. None of the above	75	0.07	0.25
8. Others (Please specify)	75	0.00	0.00

Implication of the challenge faced	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Less time and effort spent on lesson planning	0.33	0.15	-0.183
2. Reduces instructional effectiveness	0.00	0.15	0.15
3. Lower engagement with students	0.07	0.08	0.017
4. Contributes to increased stress levels and impacts overall well being	0.07	0.17	0.1
5. Impacts overall time management	0.60	0.55	-0.05
6. Negatively impacts professional relationships	0.00	0.00	0
7. None of the above	0.00	0.08	0.083
8. Others (Please specify)	0.00	0.00	0

Table 93: Ranking of Motivation Factors

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)					
	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Ranking of Motivation Factors												
Accountability and teacher support	7	8	8	6%	6%	13%	3%	10%	3%	27%	20%	20%
Career development opportunities	3	6	6	0%	6%	10%	10%	7%	7%	0%	13%	7%
General interest and enjoyment in teaching	6	1	4	3%	0%	10%	14%	3%	3%	7%	0%	0%
Student’s interest in the subject	5	5	13	6%	3%	26%	0%	14%	10%	20%	0%	13%
Management style of school administration	7	5	3	3%	10%	0%	21%	3%	7%	0%	7%	7%
Other (Please specify)	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%
Recognition and prestige	2	5	3	0%	6%	3%	3%	7%	7%	7%	7%	0%
Remuneration and incentives	8	7	4	19%	16%	6%	7%	7%	3%	0%	0%	7%
Supplies and infrastructure	7	9	10	6%	23%	23%	14%	7%	10%	7%	0%	0%
Support of colleagues	11	18	2	16%	16%	0%	10%	34%	3%	20%	20%	7%
Teacher involvement	11	10	18	26%	13%	0%	10%	7%	41%	0%	27%	40%
Teacher workload and working conditions	8	1	4	13%	0%	10%	7%	0%	3%	13%	7%	0%

Table 94: Training and Learning & Development

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)		
	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Training Areas									
Instructional Methods and Strategies	23%	6%	16%	45%	14%	31%	20%	7%	13%
Classroom management techniques	16%	0%	16%	28%	7%	21%	27%	0%	27%
Differentiation and Inclusive Education	35%	3%	32%	45%	3%	41%	67%	7%	60%
Assessment and Feedback Practices	16%	3%	13%	3%	0%	3%	0%	0%	0%
Professional Development and Collaboration	42%	13%	29%	41%	10%	31%	27%	7%	20%
IT and Computer related	61%	19%	42%	41%	17%	24%	20%	7%	13%
Others	0%	0%	0%	14%	0%	14%	0%	0%	0%
Training Delivery Approach									
In person training	65%	13%	52%	45%	7%	38%	33%	7%	27%
Training by peers	45%	13%	32%	31%	7%	24%	20%	0%	20%
Training by external person	23%	3%	19%	48%	10%	38%	20%	0%	20%
Learning through observation	26%	6%	19%	7%	3%	3%	0%	0%	0%
Coaching and mentoring from senior teachers	39%	13%	26%	28%	14%	14%	33%	20%	13%
Feedback from students	29%	6%	23%	31%	7%	24%	13%	7%	7%
Attending conferences and seminars	42%	16%	26%	52%	3%	48%	27%	7%	20%
Virtual training	52%	10%	42%	62%	14%	48%	73%	20%	53%
Self-learning	45%	6%	39%	52%	7%	45%	27%	0%	27%
Peer collaboration	52%	6%	45%	48%	17%	31%	20%	0%	20%

Training and Development Areas	Count	Mean	Standard Deviation
1. Instructional Methods and Strategies	75	0.31	0.46
2. Classroom management techniques	75	0.23	0.42
3. Differentiation and Inclusive Education	75	0.45	0.50
4. Assessment and Feedback Practices	75	0.08	0.27
5. Professional Development and Collaboration	75	0.39	0.49
6. IT and Computer related	75	0.45	0.50
7. Others, please specify	75	0.05	0.23

Training and Development Areas	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Instructional Methods and Strategies	0.20	0.33	0.133
2. Classroom management techniques	0.27	0.22	-0.05
3. Differentiation and Inclusive Education	0.67	0.40	-0.267
4. Assessment and Feedback Practices	0.00	0.10	0.1
5. Professional Development and Collaboration	0.27	0.42	0.15
6. IT and Computer related	0.20	0.52	0.317**
7. Others, please specify	0.00	0.07	0.067

Mode of training delivery	Count	Mean	Standard Deviation
1. In-person lecture type training	75	0.51	0.50
2. Feedback from peers	75	0.35	0.48
3. Training designed and delivered by external providers	75	0.32	0.47
4. Learning through observation (watching other teachers teach	75	0.13	0.34
5. Coaching / mentoring by senior teachers / officers	75	0.33	0.47
6. Feedback from students	75	0.27	0.45
7. Attending conferences / seminars	75	0.43	0.50
8. Virtual training	75	0.60	0.49
9. Self-learning	75	0.44	0.50
10. Peer collaboration	75	0.44	0.50

Mode of training delivery	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. In-person lecture type training	0.33	0.55	0.217
2. Feedback from peers	0.20	0.38	0.183
3. Training designed and delivered by external providers	0.20	0.35	0.15
4. Learning through observation (watching other teachers teach	0.00	0.17	0.167
5. Coaching / mentoring by senior teachers / officers	0.33	0.33	0
6. Feedback from students	0.13	0.30	0.167
7. Attending conferences / seminars	0.27	0.47	0.2
8. Virtual training	0.73	0.57	-0.167
9. Self-learning	0.27	0.48	0.217
10. Peer collaboration	0.20	0.50	0.3**

Table 95: Teacher need satisfaction scale- Statistical Analysis

Teacher Need Satisfaction Scale	Count	Mean	Standard Deviation
1. I feel that I do not have sufficient control over my own workload.	75	0.04	0.20
2. I feel that my school leadership provides me choices and options about the way I work.	74	3.97	1.09
3. I am able to be voice my concerns to the school leadership.	73	4.36	0.67
4. The school leadership has conveyed confidence in my ability to do well at my job.	74	4.41	0.70
5. I find it difficult to incorporate suggestions from feedback in my work	73	1.78	0.96
6. I feel a lot of trust in the school leadership and how they handle school administration.	74	4.34	0.82
7. If I could choose, I would do things at work differently.	71	2.08	1.24

Teacher Need Satisfaction Scale	Count	Mean	Standard Deviation
8. I have positive professional relationships with my peers.	72	4.50	0.79
9. My job does not leave me enough time for my personal life.	71	1.86	0.87
10. Given my experience as a teacher, I would change my career path if I had a choice.	72	1.65	1.04
11. Most days I feel a sense of accomplishment from working.	71	4.04	0.93

Table 96: Teacher need satisfaction scale- Treatment vs Control

Teacher Need Satisfaction Scale	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. I feel that I do not have sufficient control over my own workload.	1.47	2.28	0.809**
2. I feel that my school leadership provides me choices and options about the way I work.	3.87	4.00	0.133
3. I am able to be voice my concerns to the school leadership.	4.13	4.41	0.28**
4. The school leadership has conveyed confidence in my ability to do well at my job.	4.40	4.41	0.007
5. I find it difficult to incorporate suggestions from feedback in my work	1.53	1.84	0.311**
6. I feel a lot of trust in the school leadership and how they handle school administration.	4.36	4.33	-0.024
7. If I could choose, I would do things at work differently.	1.50	2.23	0.728**
8. I have positive professional relationships with my peers.	4.43	4.52	0.089
9. My job does not leave me enough time for my personal life.	1.86	1.86	0.003
10. Given my experience as a teacher, I would change my career path if I had a choice.	1.43	1.71	0.278**
11. Most days I feel a sense of accomplishment from working.	3.86	4.09	0.231

Table 97: Teaching behaviour- Statistical Analysis

Teaching Behaviour	Count	Mean	Standard Deviation
1. I like to use different methods in class to improve understanding and retention.	72	4.58	0.62
2. If my students are not paying attention, I raise my voice in class.	74	3.14	1.36
3. I think a standard teaching style works best for all types of learners.	72	2.26	1.13
4. I believe that students should solve their own issues with their classmates.	72	2.54	1.22

Teaching Behaviour	Count	Mean	Standard Deviation
5. I adjust the level of difficulty of my teaching to suit all types of students.	73	4.36	0.59
6. I encourage students to voice their concerns to me.	73	4.12	0.93
7. If a student is making mistakes constantly, I think it is their fault.	72	1.89	0.85
8. I think lecturing is the best method for presenting my subject material to students.	73	2.33	1.16
9. I use only written tests to assess the degree of academic growth.	72	1.92	0.83
10. Occasional scolding in class helps establish discipline faster and better.	71	3.01	0.99
11. I encourage students to ask questions in class.	73	4.45	0.69
12. If students ask me questions or do not understand a concept, I think it is because they did not pay attention in class.	72	1.79	0.85

Table 98: Teaching Behaviour- Treatment vs Control

Teaching Behaviour	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. I like to use different methods in class to improve understanding and retention.	4.53	4.60	0.063
2. If my students are not paying attention, I raise my voice in class.	3.00	3.17	0.169
3. I think a standard teaching style works best for all types of learners.	1.93	2.35	0.418**
4. I believe that students should solve their own issues with their classmates.	2.87	2.46	-0.411**
5. I adjust the level of difficulty of my teaching to suit all types of students.	4.40	4.34	-0.055
6. I encourage students to voice their concerns to me.	3.73	4.22	0.491**
7. If a student is making mistakes constantly, I think it is their fault.	1.80	1.91	0.112
8. I think lecturing is the best method for presenting my subject material to students.	2.20	2.36	0.162
9. I use only written tests to assess the degree of academic growth.	1.60	2.00	0.4**
10. Occasional scolding in class helps establish discipline faster and better.	2.60	3.13	0.525**
11. I encourage students to ask questions in class.	4.27	4.50	0.233
12. If students ask me questions or do not understand a concept, I think it is because they did not pay attention in class.	1.67	1.82	0.158

Table 99: Training Delivery Preference

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)					
	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3	Rank 1	Rank 2	Rank 3
Training Delivery Preference												
In-person lecture type training	44	6	4	45%	10%	3%	66%	3%	7%	73%	13%	7%
Feedback from peers	1	10	4	3%	13%	6%	0%	21%	7%	0%	0%	0%
Training designed and delivered by external providers	3	5	1	3%	3%	0%	7%	14%	3%	0%	0%	0%
Learning through observation (watching other teachers teach)	3	6	1	10%	6%	0%	0%	3%	0%	0%	20%	7%
Coaching / mentoring by senior teachers / officers	3	9	5	10%	13%	6%	0%	14%	7%	0%	7%	7%
Feedback from students	1	8	9	0%	13%	6%	3%	7%	3%	0%	13%	40%
Attending conferences / seminars	3	4	12	0%	6%	10%	7%	0%	31%	7%	13%	0%
Virtual training	6	9	2	19%	10%	3%	0%	10%	0%	0%	20%	7%
Self-learning	2	8	12	3%	19%	13%	3%	7%	17%	0%	0%	20%
Peer collaboration	9	10	25	6%	6%	52%	14%	21%	24%	20%	13%	13%

Table 100: Feedback

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Receiving Feedback									
Feedback teacher	90%	89%	91%	90%	100%	87%	93%	100%	91%
Feedback parents	32%	44%	27%	34%	33%	35%	33%	0%	45%
Feedback students	35%	44%	32%	24%	33%	22%	20%	0%	27%
Feedback HOD	0%	0%	0%	10%	17%	9%	7%	0%	9%
Feedback HM	87%	100%	82%	66%	67%	65%	73%	75%	73%
None	0%	0%	0%	3%	0%	4%	0%	0%	0%
Others	0%	0%	0%	3%	0%	4%	0%	0%	0%
Feedback Areas									
Instructional methods and strategies	58%	78%	50%	48%	67%	43%	67%	100%	55%
Classroom management techniques	48%	44%	50%	41%	50%	39%	53%	25%	64%
Differentiation and inclusive education	23%	11%	27%	14%	33%	9%	27%	25%	27%
Assessment and feedback practices	19%	11%	23%	24%	17%	26%	13%	0%	18%
Professional development and collaboration	48%	44%	50%	59%	50%	61%	60%	75%	55%
Others	0%	0%	0%	3%	0%	4%	0%	0%	0%

Over the last year - received feedback from	Count	Mean	Standard Deviation
1. Fellow teachers	75	0.91	0.29
2. Parents	75	0.33	0.47
3. Students	75	0.28	0.45
4. Head of department	75	0.05	0.23
5. Headmaster / Headmistress	75	0.76	0.43

Over the last year - received feedback from	Count	Mean	Standard Deviation
6. Did not receive any feedback	75	0.01	0.12
7. Other (please specify)	75	0.01	0.12

Over the last year - received feedback from	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Fellow teachers	0.93	0.90	-0.033
2. Parents	0.33	0.33	0
3. Students	0.20	0.30	0.1
4. Head of department	0.07	0.05	-0.017
5. Headmaster / Headmistress	0.73	0.77	0.033
6. Did not receive any feedback	0.00	0.02	0.017
7. Other (please specify)	0.00	0.02	0.017

Feedback Topic	Count	Mean	Standard Deviation
1. Instructional Methods and Strategies	75	0.56	0.5
2. Classroom management techniques	75	0.47	0.5
3. Differentiation and Inclusive Education	75	0.2	0.4
4. Assessment and Feedback Practices	75	0.2	0.4
5. Professional Development and Collaboration	75	0.55	0.5
6. Others (please specify)	75	0.01	0.12

Feedback Topic	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Instructional Methods and Strategies	0.67	0.53	-0.133
2. Classroom management techniques	0.53	0.45	-0.083
3. Differentiation and Inclusive Education	0.27	0.18	-0.083
4. Assessment and Feedback Practices	0.13	0.22	0.083
5. Professional Development and Collaboration	0.60	0.53	-0.067
6. Others (please specify)	0.00	0.02	0.017

Table 101: Feedback Quality- teachers

		Feedback relevance	Incomplete feedback	Feedback helped improve	Feedback could have been framed differently	Found it difficult to implement
Overall	1	1%	1%	23%	7%	12%
	2	3%	0%	43%	3%	7%

		Feedback relevance	Incomplete feedback	Feedback helped improve	Feedback could have been framed differently	Found it difficult to implement
	3	4%	7%	7%	4%	16%
	4	5%	36%	16%	32%	37%
	5	7%	53%	8%	53%	24%
Lumajang	1	0%	13%	0%	0%	45%
	2	0%	61%	0%	3%	35%
	3	10%	6%	3%	29%	3%
	4	55%	16%	48%	55%	10%
	5	35%	0%	48%	10%	0%
Kota Kediri	1	0%	34%	7%	24%	69%
	2	0%	34%	0%	10%	10%
	3	7%	3%	3%	7%	7%
	4	10%	10%	21%	17%	3%
	5	76%	10%	66%	34%	0%
Kabupaten Kediri	1	7%	20%	20%	13%	87%
	2	0%	20%	13%	7%	0%
	3	0%	13%	7%	7%	7%
	4	47%	27%	20%	40%	7%
	5	47%	20%	40%	33%	0%

Feedback Quality	Count	Mean	Standard Deviation
1. Feedback was relevant	73	4.44	0.75
2. Feedback was insufficient / incomplete	72	2.42	1.25
3. Feedback helped in improving my methods.	74	4.24	1.12
4. Feedback could have been worded differently.	72	3.57	1.29
5. Found it difficult to implement feedback.	70	1.53	0.90

Feedback Quality	Control (Mean)	Treatment (Mean)	Difference (Trt - Ctrl)
1. Feedback was relevant	4.27	4.48	0.216
2. Feedback was insufficient / incomplete	3.07	2.25	-0.821**
3. Feedback helped in improving my methods.	3.47	4.44	0.974**
4. Feedback could have been worded differently.	3.73	3.53	-0.207
5. Found it difficult to implement feedback.	1.33	1.58	0.248

Table 102: Giving Feedback

	Lumajang (N = 31)			Kota Kediri (N = 29)			Kabupaten Kediri (N = 15)		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Yes	100%	100%	41%	100%	250%	26%	27%	575%	100%
No	0%	0%	0%	0%	0%	0%	0%	0%	0%

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Table 103: Teacher Need Satisfaction Rank

		Workload	Choices	Voice concern	Confidence	Suggestions	Trust	Different	Peers	Personal life	Career path	Accomplishment
Overall	1	36%	5%	0%	0%	49%	1%	43%	3%	36%	57%	4%
	2	36%	7%	0%	1%	27%	1%	21%	0%	41%	25%	1%
	3	9%	7%	11%	8%	16%	9%	16%	1%	13%	8%	11%
	4	11%	47%	41%	39%	4%	37%	9%	35%	3%	0%	49%
	5	5%	33%	45%	51%	1%	49%	5%	57%	1%	5%	29%
Lumajang	1	19%	0%	0%	0%	29%	0%	29%	0%	16%	35%	0%
	2	58%	6%	0%	0%	42%	3%	32%	0%	61%	45%	0%
	3	10%	13%	13%	13%	19%	10%	26%	3%	23%	19%	23%
	4	13%	48%	58%	58%	10%	58%	13%	55%	0%	0%	58%
	5	0%	32%	29%	29%	0%	29%	0%	42%	0%	0%	19%
Kota Kediri	1	38%	14%	0%	0%	59%	0%	45%	3%	55%	72%	3%
	2	17%	3%	0%	3%	17%	0%	14%	0%	24%	10%	0%
	3	14%	0%	3%	0%	17%	10%	10%	0%	3%	0%	3%
	4	10%	38%	21%	21%	0%	24%	7%	17%	3%	0%	48%
	5	14%	41%	69%	72%	0%	66%	14%	72%	3%	10%	34%
Kabupaten Kediri	1	67%	0%	0%	0%	73%	7%	67%	7%	40%	73%	13%
	2	27%	13%	0%	0%	13%	0%	13%	0%	33%	13%	7%
	3	0%	7%	20%	13%	7%	7%	7%	0%	13%	0%	0%
	4	7%	60%	47%	33%	0%	20%	7%	27%	7%	0%	33%
	5	0%	20%	33%	53%	7%	60%	0%	60%	0%	7%	40%

Table 104: Teaching Behaviour Rank

		Different Method	Raise voice	Standard teaching style	Solve own issues	Adjust difficulty	Encourage voice concerns	Blame students	Lecturing best method	Written test only	Scolding for discipline	Encourage questions	Blame students for questions
Overall	1	0%	17%	28%	20%	0%	1%	33%	31%	33%	8%	1%	43%

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		Different Method	Raise voice	Standard teaching style	Solve own issues	Adjust difficulty	Encourage voice concerns	Blame students	Lecturing best method	Written test only	Scolding for discipline	Encourage questions	Blame students for questions
	2	1%	15%	33%	35%	0%	7%	45%	24%	41%	16%	0%	35%
	3	3%	21%	20%	19%	5%	8%	13%	25%	17%	43%	3%	15%
	4	31%	28%	11%	15%	52%	44%	3%	15%	4%	23%	43%	4%
	5	61%	17%	4%	8%	40%	37%	1%	3%	0%	5%	51%	0%
Lumajang	1	0%	10%	10%	19%	0%	0%	23%	13%	16%	3%	0%	29%
	2	3%	19%	35%	39%	0%	0%	55%	39%	58%	16%	0%	39%
	3	3%	29%	35%	29%	13%	16%	19%	42%	23%	45%	3%	26%
	4	48%	42%	16%	10%	65%	61%	3%	6%	3%	32%	65%	6%
	5	45%	0%	0%	3%	23%	23%	0%	0%	0%	3%	32%	0%
Kota Kediri	1	0%	24%	38%	24%	0%	3%	48%	41%	34%	10%	3%	59%
	2	0%	7%	31%	31%	0%	3%	24%	14%	38%	14%	0%	21%
	3	0%	14%	10%	10%	0%	0%	10%	10%	14%	31%	0%	7%
	4	10%	17%	7%	10%	34%	31%	3%	24%	3%	21%	10%	100%
	5	79%	34%	7%	14%	59%	55%	3%	3%	0%	10%	79%	0%
Kabupaten Kediri	1	0%	20%	47%	13%	0%	0%	27%	47%	67%	13%	0%	40%
	2	0%	20%	33%	33%	0%	27%	67%	13%	13%	20%	0%	53%
	3	7%	20%	7%	13%	0%	7%	7%	20%	13%	60%	7%	7%
	4	33%	20%	7%	33%	60%	33%	0%	13%	7%	7%	60%	0%
	5	60%	20%	7%	7%	40%	33%	0%	7%	0%	0%	33%	0%

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