Improve Teacher Uptake of Effective FLN Instruction

DIAGNOSTIC REPORT

MARCH 2023

Acronyms and glossary

NIPUN	National Initiative for Proficiency in reading with Understanding and Numeracy
FLN	Foundational Literacy and Numeracy
UP	Uttar Pradesh
CSF	Central Square Foundation
UDISE	Unified District Information System for Education
TLM	Teaching and Learning Material
KPI	Key Performance Indicator
TG	Teacher Guide
DIKSHA	Digital Infrastructure for Knowledge Sharing
TPD	Teacher Professional Development
SRG	State Resource Group
DIET	District Institute of Education and Training
SIEMAT	State Institute of Education Management and Training
ARP	Academic Resource Person
BEO	Block Education Officer
DBT	Direct Benefit Transfer
IDI	In-depth Interview
FGD	Focus Group Discussion
SC	Scheduled Caste
ST	Scheduled Tribe
ASER	Annual Status of Education Report

NAS	National Achievement Survey
UPS	User Perception Survey
CFU	Checking for Understanding
WT	Weekly Tracker
SL	School Leader
CSO	Civil Society Organisation
GRR	Gradual Release of Responsibility
LP	Lesson Plan
AII	Assessment Informed Instruction

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Executive Summary

Providing quality education to children, especially at an early age, is crucial for building a strong foundation and fostering future development. NIPUN Bharat Program is one of the key initiatives launched by the Government of India to address the problem of low levels of foundational literacy and numeracy (FLN). As teachers are the primary agents in improving learning outcomes, it is pertinent to recognize the need to help teachers improve teaching methodologies.

Teachers often function under challenging circumstances, such as having to perform non-teaching activities or manage schools in low resource settings, which leave them with limited bandwidth, time and resources to improve teaching practices. Understanding important drivers of teacher behaviours and identifying levers of change from a behavioural lens can pave the way for designing solutions to help teachers adopt and sustain effective teaching practices. This report, which is an outcome of diagnostic research conducted collaboratively by the Centre for Social and Behaviour Change, Ashoka University and the Central Square Foundation in selected districts of rural Uttar Pradesh (UP), aims to highlight underlying barriers and biases concerning adoption of effective pedagogical practices by teachers who are entrusted with the task of building FLN skills of Grade 1-3 students.

The methods employed to collect the data included in-depth discussions with teachers and teacher coaches known as the Academic Resource Persons (ARPs), classroom observations, and key informant interviews with school leaders, block education officers and Civil Society Organisations experienced in supporting important FLN-related interventions in UP. Key areas of investigation included teachers' perception of FLN, training content and teaching tools, main support system for teachers, pedagogical practices employed by teachers in the classroom and associated challenges, suggestions for solutions to the stated challenges, and teachers' valuation of rewards and recognition they receive.

Post the data collection activities, findings across different data sources were triangulated and synthesised to come up with a list of behavioural and systemic barriers. Key insights from the behavioural analysis are summarised below.

- Teachers are adopting parts of the program that are aligned to their previously held beliefs. There is evidence of status quo bias with an unwillingness to invest in new techniques and complete adoption being perceived as difficult.
- Teachers experience cognitive overload from juggling multiple teaching and non-teaching responsibilities and limited user-friendliness of teacher guides.

- Teachers believe that low learning outcomes are outside the teacher's locus of control, and exhibit low ownership by shifting the blame towards irregular student attendance, low parental engagement and mental ability of students.
- Teachers' agency is affected by the focus on complying with trackable aspects of the program, and they may feel micromanaged (by ARP, education officers at the block level etc.).
- Lack of physical resources and sufficient teaching staff, conflicting demands on their time and unreliable internet connectivity also affects teacher's ability to perform.
- Teachers believe that learning happens by default i.e. if they teach, students will learn regardless of the teaching methods used, and do not give much importance to lesson planning.
- Teachers have limited understanding of evidence-based pedagogical techniques such as gradual release of responsibility, or the link between the activities in teacher guides and learning outcomes, This suggests limited technical know-how due to inadequate training.
- Information overload from different platforms such as WhatsApp and lengthy training sessions, which often do not emphasise flexibility built into teacher guides and adaptability to context is a reflection of inadequate training and ineffective implementation.
- Teachers do not feel appreciated by the community and parents. Additionally, the extant support system is proving ineffective as ARPs have limited time, bandwidth or guidance to mentor teachers.

SECTION 01:

POLICY OVERVIEW

Policy Overview

INTRODUCTION

The country faces a foundational learning (FLN) crisis today, which cannot be solved through top-down policy approaches or business-as-usual increments in national education expenditure alone[1]. Solutions to this crisis preclude recognising that bottom-up approaches involving all stakeholders in the education ecosystem are necessary. Key amongst all these stakeholders are teachers. In order to truly improve FLN outcomes at scale, we must facilitate teachers' adoption of effective pedagogical practices envisioned in India's FLN mission, NIPUN Bharat.

POLICY CONTEXT

Teachers are the most important change-agents to achieve the goals set out in the NIPUN Bharat Mission. Higher performing students are more likely to belong to classrooms with better quality of instruction, with significant differences in instructional quality being observed in high and low performing classrooms. Classroom management, social-emotional support provided, and instructional quality have been found to significantly affect student self-efficacy in various contexts[2]. Quality of teaching has an impact on student outcomes in the long-term. It has been found that students assigned to high value-add teachers (teachers that have had a significant positive impact on students' test scores) during primary schooling are more likely to attend college and earn higher salaries[3]. Teachers have also been found to impact their students' cognitive abilities and social-emotional competencies such as grit and growth mindsets[4].

However, there are several challenges to be mitigated in order to improve teacher practices. This includes the conflicting demands placed on the scarce time resources available to teachers. On average, teachers across the world spend approximately half of their time on non-teaching activities, including planning for lessons, marking and correcting student work, engaging with other teachers and other administrative tasks[5].

In the Indian context too, teachers are obligated to perform other non-teaching functions, which compromise the time they spend teaching and engaging with their

[1] Muralidharan and Singh (2021), "India's New National Education Policy: Evidence and Challenges", Rise Programme
[2] Doan, S., & McCaffrey, D. (2020). Relationships between teaching practices and student outcomes.
[3] Chetty, R., J. Friedman and J. Rockoff (2014), "Measuring the Impact of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood", American Economic Review, Vol. 104/9, pp. 2633-2679.
[4] Kraft, M. (2019), "Teacher effects on complex cognitive skills and social-emotional competencies", Journal of Human Resources, Vol. 54/1, pp. 1-36.
[5] OECD, Education Indicators in Focus

students. Teachers spend 63% of the total instructional time (36 hours per week) on non-teaching activities, leaving only 13 hours per week for teaching, amounting to merely 2.1 hours per day. These include school-related administrative tasks, event organisation duties, morning and co-curricular activities, managing mid-day meals, coordinating official visits, data collection, and engaging with their communities[6]. They are also deployed for external tasks such as board exam invigilation, election duties, and census duties. These diverse responsibilities placed upon teachers leads to teachers experiencing conflict between the roles they are expected to play - with adverse impacts on their teaching and accountability towards student learning outcomes[7]. These non-teaching tasks are incredibly time intensive and require teachers to spend time outside of school - leading to teacher shortages in school, compelling them to combine classes and conduct lessons in multigrade settings, which further hampers learning.

Need for a Behavioral Approach

In spite of efforts at training, and providing requisite information and materials, teacher adoption of effective practices remains low[8]. Change efforts in the context of education face a diverse set of challenges such as securing buy-in for the program for the large number of stakeholders - parents, teachers, students, community members and administration officials. Additionally, maintaining momentum and motivation is an obstacle since change due to educational reforms only manifests in the long-term. Teachers are often reluctant to commit to new programs due to their iterative nature, leaving them overwhelmed[9]. Adoption may thus be influenced by lack of motivation, lack of the ability to translate their intent into action, and other behavioural biases affecting their perception of choices and options available to them. Therefore, investigating the problem from a behavioural lens, and evaluating behavioural solutions in conjunction with top-down policy changes, becomes imperative.

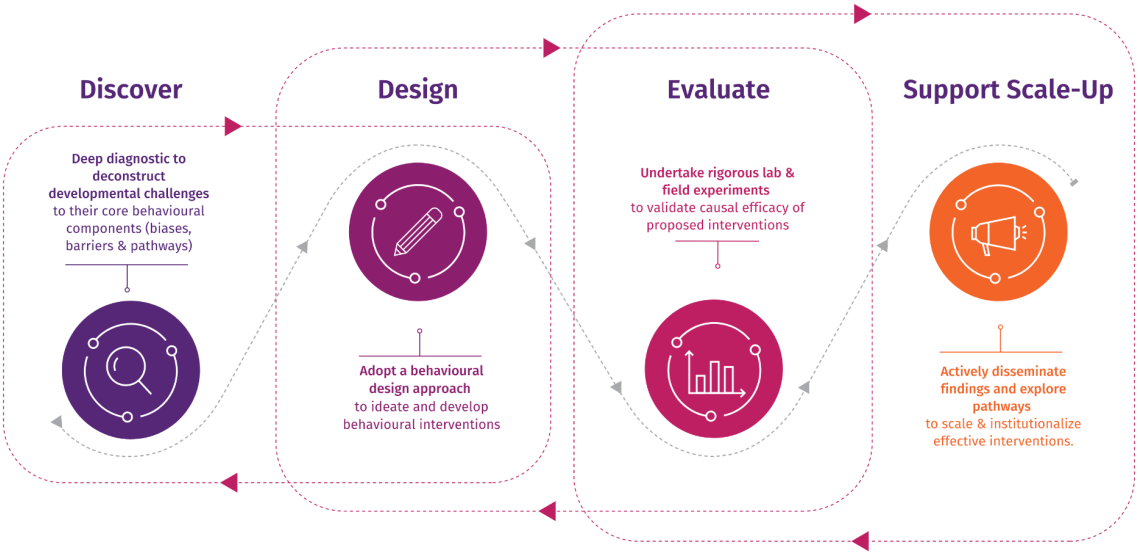
Centre for Social and Behaviour Change and Central Square Foundation are collaborating on identifying, designing and evaluating scalable and effective behaviour change interventions for teachers that can support improvement in FLN outcomes. The main objectives of the project are:

[6] Samagra Governance, For government school teachers, time is of the essence
[7] Ramachandran, Vimala, et al. Getting the right teachers into the right schools: managing India's teacher workforce. World Bank Publications, 2017.
[8] Central Square Foundation, Systemic Drivers of Foundational Learning Outcomes, 2021
[9] RTI International, Managing Change in Education

1. To understand the barriers (mindsets, attitudes and behaviours) of teachers and coaches that impact classroom instructional practices and FLN outcomes.
2. To design, test and scale behavioural interventions to improve teacher uptake of effective instructional practices.

The broad approach and timeline envisioned for the project is captured in the figure below.

FIGURE 1: BROAD APPROACH AND TIMELINE FOR THE PROJECT



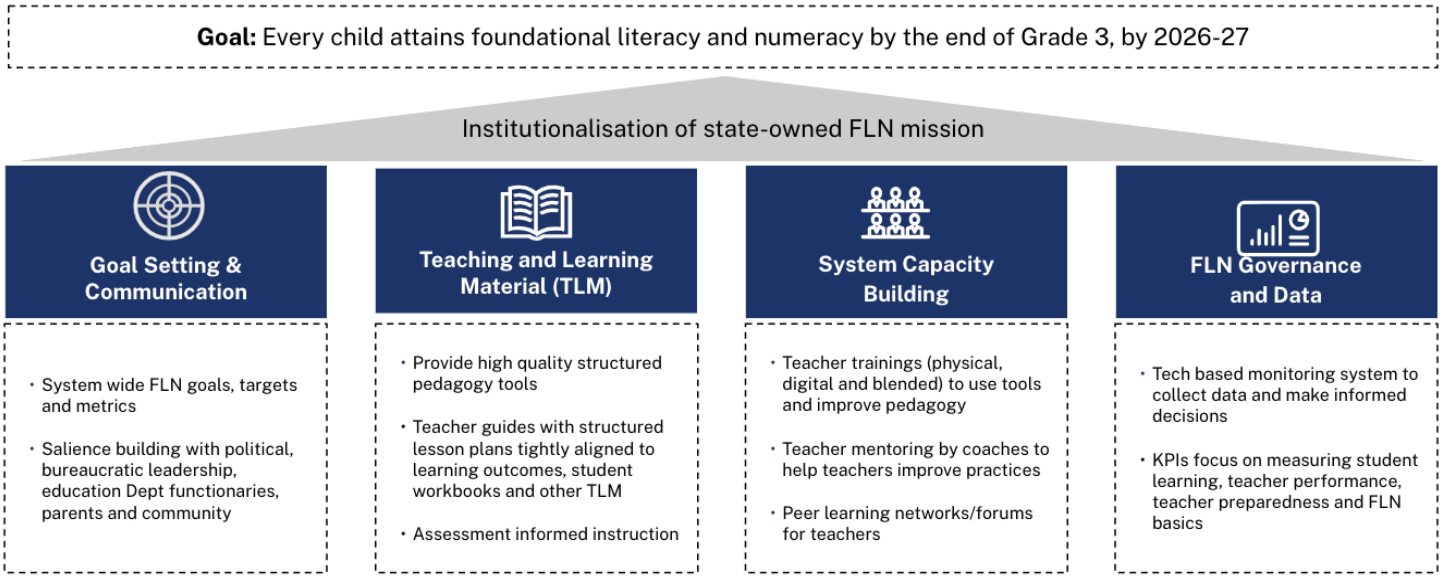
NIPUN BHARAT: PROGRAM OVERVIEW

Recognising the dire need to achieve foundational literacy and numeracy, the NIPUN Bharat Mission was launched by the Government of India in 2021 with the vision of creating an enabling environment to ensure universal foundational literacy and numeracy by 2026-27, with every child acquiring the necessary competencies in reading, writing and numeracy by the end of grade 3, and no later than grade 5[10].

CSF is supporting the state of Uttar Pradesh in the design and implementation of a state-wide FLN program - NIPUN Bharat Mission (erstwhile 'Mission Prerna') across more than 111,000 schools with 333,000+ teachers and 11.8 mn+ students in grades 1-3. The program is a state-owned initiative that is looking to improve FLN outcomes with a special focus on four key levers (shown below).

[10] Press Information Bureau, NIPUN Bharat

FIGURE 2: NIPUN PROGRAM OVERVIEW



The four key levers inform the essential workstreams which are aimed at equipping and enabling teachers to implement the FLN mission effectively.

1. Goal Setting and Communication

The overall literacy and numeracy targets to achieve the objectives of the Mission are set in the form of NIPUN Lakshya or Targets for Foundational Literacy and Numeracy. The targets start from the Balvatika, which are preparatory classes (before Grade I) run by Anganwadi workers with an aim of developing cognitive, affective, and psychomotor abilities and also early literacy and numeracy in children below 5 years of age. Salience building for these goals is interwoven with other workstreams, for instance, under Teaching Learning Material (TLM) all schools have been provided with a banner of the NIPUN goals (given below) to be displayed on school premises.

TABLE 1: NIPUN GOALS FOR FLN

NIPUN TARGETS

	LITERACY
BALVATIKA	Reads 5 two-letter words correctly from a given list.
GRADE 1	Reads sentences consisting of 5 simple (two-letter) words.

GRADE 2	Reads paragraphs with a fluency of 45 words per minute.
GRADE 3	Answers 75% questions correctly after reading the paragraph.
	NUMERACY
BALVATIKA	Recognizes and reads numerals up to 10. Arranges numbers/objects/shapes/occurrence of events in a sequence.
GRADE 1	Solves 75% questions of one-digit addition and subtraction correctly.
GRADE 2	Solves 75% questions of addition (till sum 99) and subtraction (two-digit) correctly.
GRADE 3	Solves 75% questions of addition (till sum 999) and subtraction (three-digit) correctly. Solves 75% questions of multiplication using numbers 2 to 10 (till product 100) correctly.
100% students in Grade 1-3 will achieve NIPUN target by 2025-2026	

2. Teaching and Learning Material

A key objective of the NIPUN Mission is to ensure the provision and use of coherent, structured pedagogy based material (teacher guides, workbooks, other teaching learning material) with integrated formative and summative assessments in FLN grades. The content in the FLN materials focuses on building the knowledge and skills of teachers around the NIPUN Bharat mission goals and objectives, goals for the current academic year and certain essential teaching and learning principles.

FIGURE 3: COMPONENTS OF FLN MATERIALS

The various components of FLN materials are -

A. **Teacher guides** - These are designed with a focus on structured pedagogy with daily learning objectives and corresponding scripted lesson plans with activities, checks for understanding questions to be asked to the students in between, and specified TLMs to be used. The teacher guides were made using (visual) design principles to ensure ease of use.

FIGURE 4: DESIGN PRINCIPLES (ICONS AND COLOUR CODING) USED IN A GRADE 3 NUMERACY TEACHER GUIDE

शिक्षक संदर्शिका में अलग–अलग आइकन (icon) और रंगों का संकेत के रूप में उपयोग किया गया है जिनके माध्यम से आप दी गई जानकारियों को समझ और संसाधनों को पहचान सकते हैं।

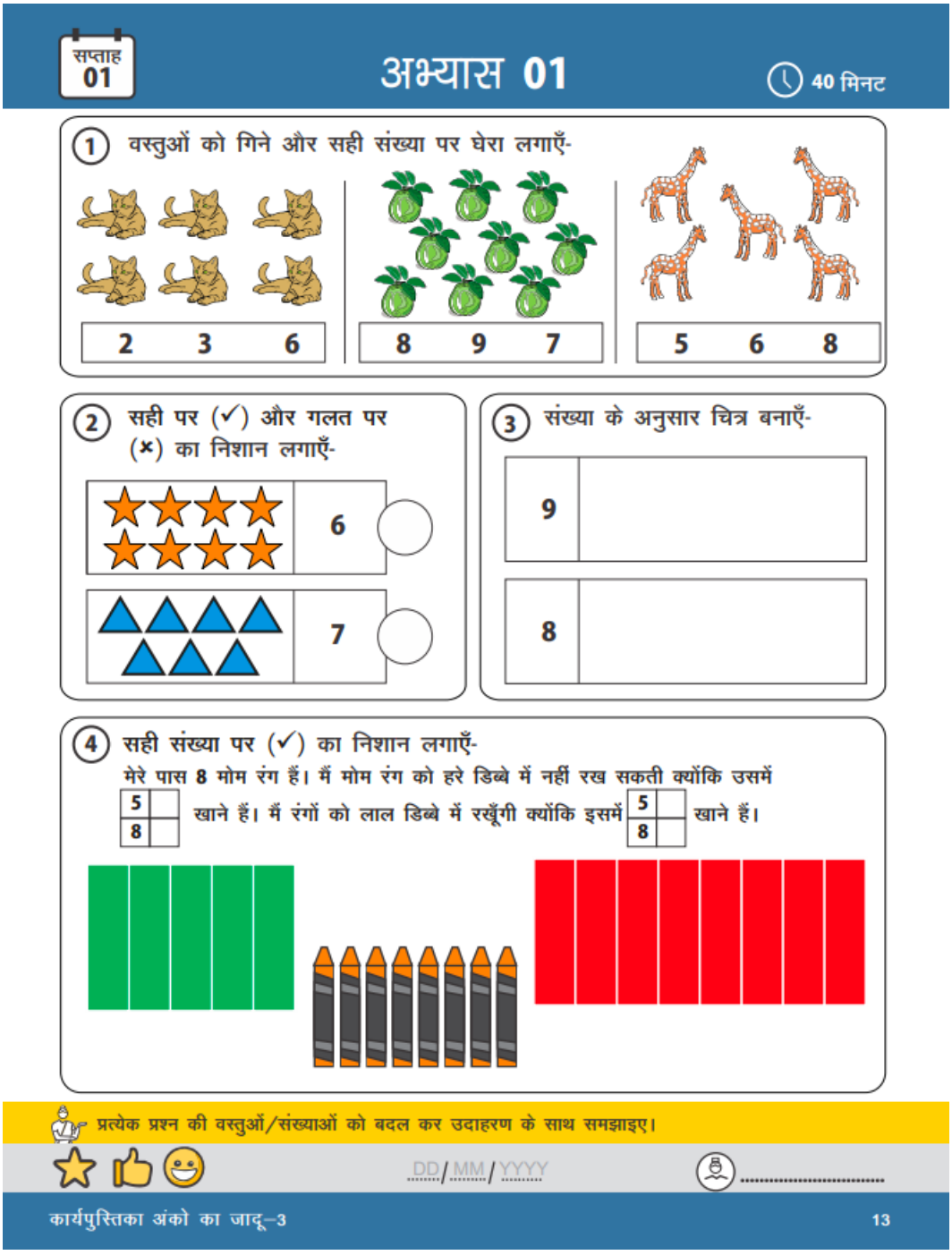
शिक्षक संदर्शिका में संसाधनः

शिक्षण योजना | अभ्यास गतिविधि | समेकन गतिविधि | रेमीडीयल गतिविधि

कार्यपुस्तिका

B. **Student workbooks** - These are provided to cater to student practice aligned to each learning objective.

FIGURE 5: WORKSHEET FROM A STUDENT WORKBOOK (GRADE 3)



C. **Other Teaching Learning Material (TLM)** - Teachers are provided with the necessary TLM to execute the lesson plan. These include print material, story

   or poem posters, flash cards, maths kits, and big books (enlarged versions of children's books based on the idea that shared reading supports joint adult-child participation and emphasises reading for meaning and enjoyment rather than accurate decoding.)

D. **Assessment-informed instruction** - This is built into the program with a weekly structure of 4+1+1 with each week including 4 days of instruction, 1 day of assessment and 1 day of remediation as well as periodic assessments twice a year. Teachers are required to maintain a record of student performance and progress by filling weekly assessment and yearly TG implementation trackers.

FIGURE 6: YEARLY TG IMPLEMENTATION TRACKER[11]

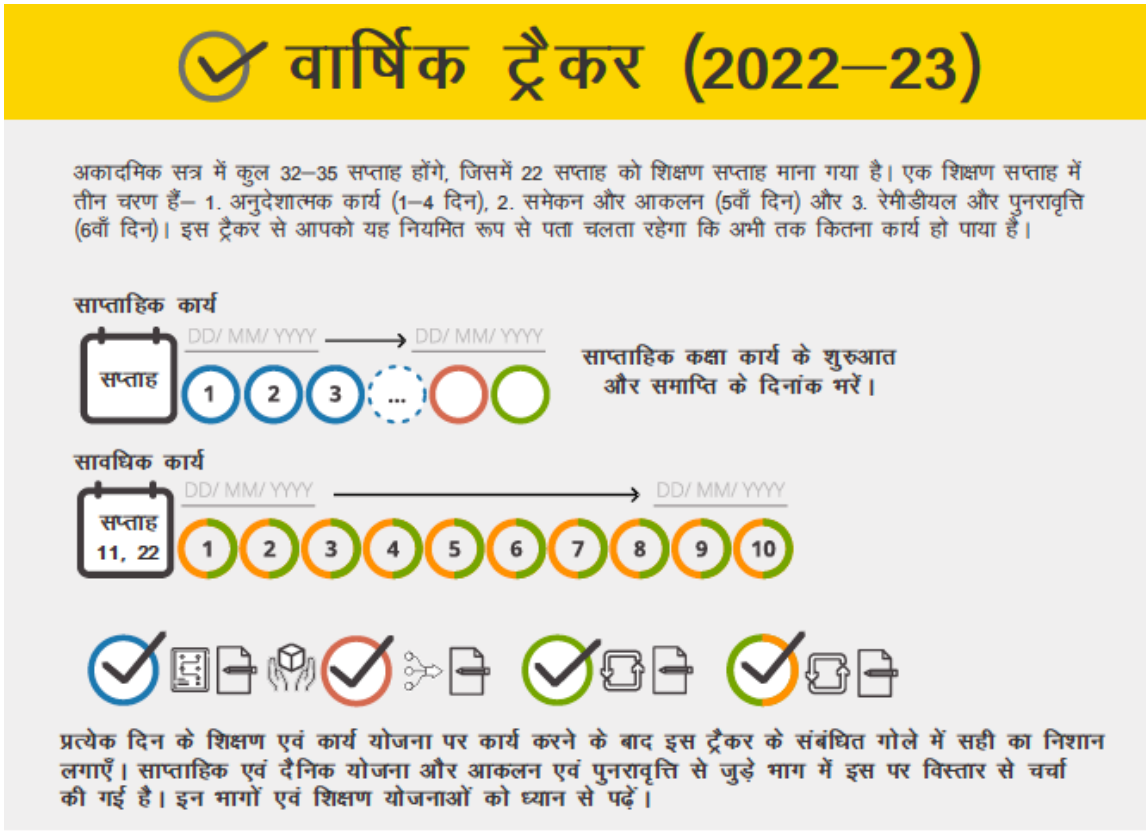


FIGURE 7: WEEKLY ASSESSMENT TRACKER[12]

[11] The tracker is intended for the teacher to keep track of progress made. The teacher is to mark the day and lesson plan completed for each week

[12] One day of each week is allocated for conducting student assessment and maintaining the record of the assessment in the weekly tracker. A is marked against students who score less than 50% and B against students who score more than 50% in the

साप्ताहिक आकलन ट्रैकर 1

हर सप्ताह
दिवस 5

प्रत्येक बच्चे का सावधिक आकलन प्रपत्र में किए गए प्रदर्शन के अनुसार ग्रेड दर्ज करें।

- **A–** सभी प्रश्नों के 50% भाग से कम का सही उत्तर
- **B–** सभी प्रश्नों के 50% भाग या ज्यादा का सही उत्तर

अनुक्रमांक	बच्चों का नाम	सप्ताह									
		1	2	3	4	5	6	7	8	9	10
1											

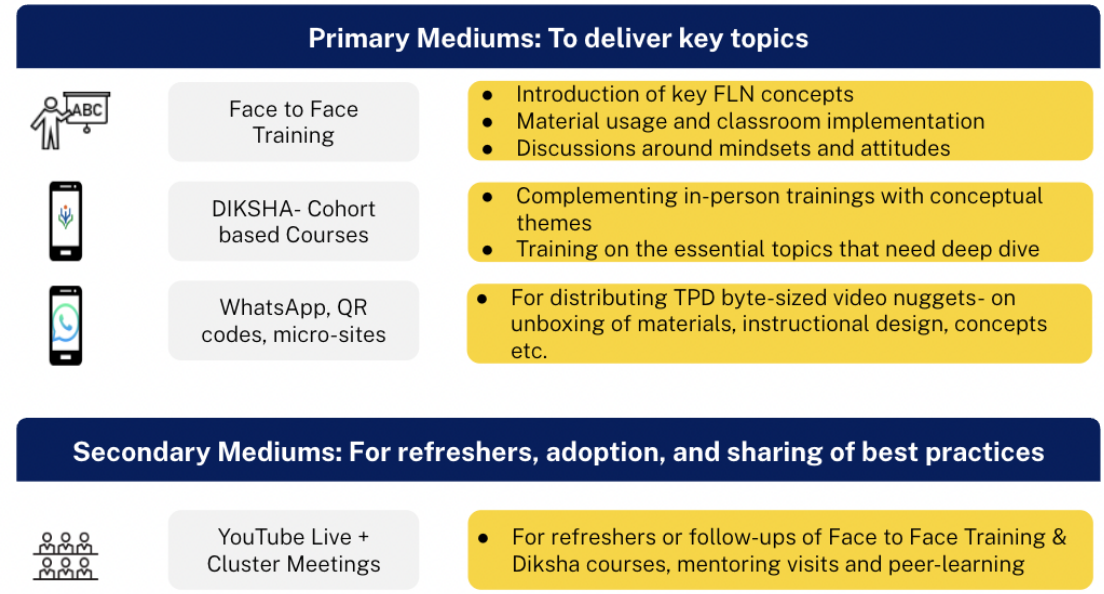
assessment. Teachers are supposed to use the data in the weekly tracker to undertake remediation with group A students, inform teaching instructions and track progress of the students against learning goals.

3. SYSTEM CAPACITY BUILDING

A. Teacher Training

In order for the program to be successful, building teacher capacity through the provision of high quality FLN teacher training to teachers is key. This capacity building of teachers for executing the program is done using a blended approach - primary instructional training and secondary refreshers/follow-ups.

FIGURE 8: BLENDED APPROACH ADOPTED FOR TEACHER PROFESSIONAL DEVELOPMENT[13]



Training is delivered through a cascade model, wherein the State Resource Group (SRG) and District Institute of Education and Training (DIET) mentors are trained by State Institute of Educational Management and Training (SIEMAT) faculty. The SRGs and DIET mentors then train the Academic Resource Persons (ARPs) at the block level, who then go on to train teachers at the school level. Cluster meetings, called Shikshak Sankuls, are used to facilitate peer-learning.

B. Teacher Mentoring and Support

The designing and rolling out of strong teacher support for FLN through continuous at-school mentoring and peer support channels has been a priority. This includes the supportive supervision role played by Academic Resource Persons (ARPs) and peer-support platforms such as the Shikshak Sankul.

[13] The training modules are designed by the state body called State Institute of Educational Management & Training (SIEMAT) in collaboration with organisations such as Vikrimshila and Language and Learning Foundation. The trainings are intended to have demonstration/practice aspects but there is tremendous transmission loss in the cascade and trainings become didactic as they reach the teachers.

A structured mentoring plan for teachers has been created as part of the FLN program which includes strengthening the ARP-teacher relationship, and building ARP capacity to conduct classroom observations and provide support to teachers. ARPs receive training on how to undertake supportive supervision. A move from compliance-based monitoring to monitoring classroom practices and student learning levels is envisaged. Mentoring is primarily provided by ARPs, who perform classroom observations, provide feedback and support to teachers on teaching and classroom processes. They discuss with teachers any difficulties faced in teaching. They also conduct spot assessments of 5 students during classroom visits, interact with parents and nudge teachers to work on key action points.

4. FLN GOVERNANCE AND DATA

The monitoring system comprises the development of technological systems, training data collectors, increased compliance and data reliability as well as the setting up of FLN data-based decision making at the district level around all key performance indicators. 64 KPIs have been identified and categorised as administrative, infrastructure, SHARDA (School Har Din Aayen), student learning, samarth, mid day meals, classroom transactions, teacher performance and teacher preparedness. Lastly, another key monitoring aspect is the tracking of student learning levels using assessment data. The data is used by education officers such as Block Education officers (BEO)or Basic Shiksha Adhikari (BSA)[14] at various levels for review meetings and plannings.

[14] Basic Shiksha Adhikari takes care of the primary education in the government schools. She/he has a team of BEO(Block Education Officers) to overlook the primary education sphere in the block.

SECTION 02:

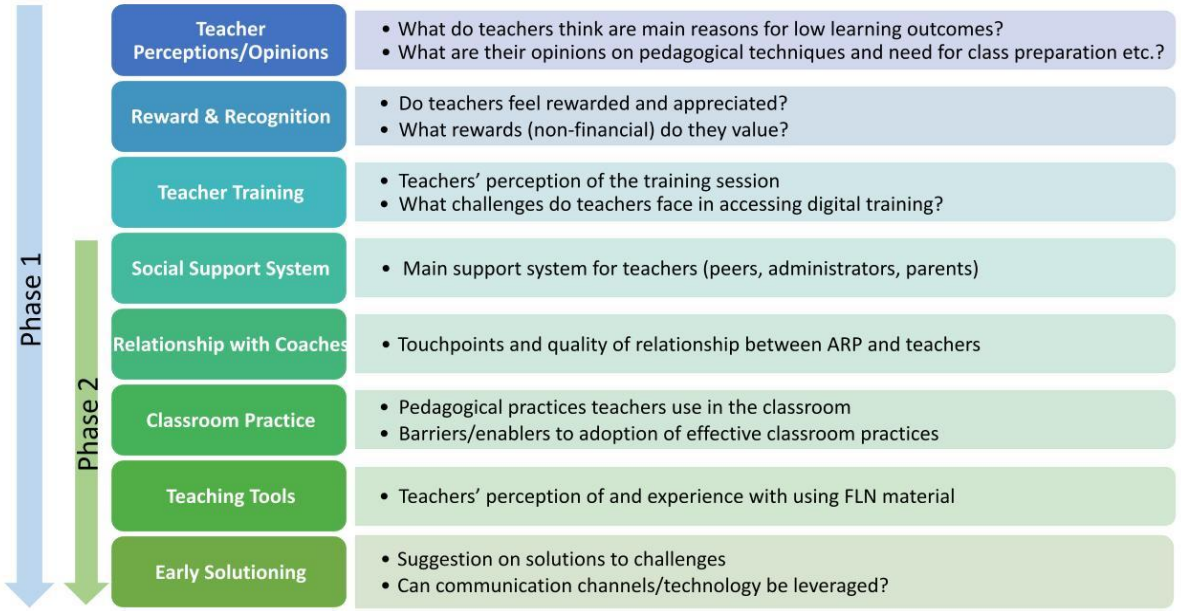
DIAGNOSTIC ACTIVITIES

Diagnostic Activities

AREA OF INVESTIGATION

The diagnostic research was conducted in two phases. All the activities were exploratory and qualitative in nature, and concentrated in three districts of Uttar Pradesh - Sitapur, Hardoi and Barabanki. The project is expected to be conducted in Sitapur and Hardoi. The districts have been chosen on the basis of size, accessibility, performance proximity to state averages on various development indicators, and likelihood of other interventions/programs overlapping with our interventions[15]. The information about the demographics, education outcomes etc. for these districts and the state are provided in the Appendix. Phase 1 of the diagnostic study was mainly focused on understanding mindset, beliefs, social support system, and other key drivers of teacher and ARP behaviour, and the second phase focused on developing a deeper understanding of actual classroom practices, perception of tools provided under the FLN program, and eliciting views of other important stakeholders (School Leaders, Block Education Officers, Civil Society Organisations etc.) in the ecosystem. Key areas of enquiries investigated during both the phases of diagnostic research are summarised in the figure below.

FIGURE 09: KEY AREAS OF INVESTIGATION OF THE DIAGNOSTIC STUDY



[15] There are some parallel programs running in all geographies. We specifically chose districts that were not saturated. For instance, Pratham is present in both the districts, and HCL foundation is working in Hardoi. However, both have limited intersections with teachers and hence lower chances of overlap with our interventions.

SAMPLE SIZE AND MODE OF DATA COLLECTION

Data collected through different methods and across various stakeholders was triangulated to identify biases and barriers to effective adoption of the program by teachers. A description of the sample size, stakeholders covered, and mode of data collection is provided in the table below.

TABLE 2: DIAGNOSTIC RESEARCH SAMPLE DESCRIPTION

NO. OF RESPONDENTS/ OBSERVATIONS	MODE OF DATA COLLECTION	PHASE	SITE
46 TEACHERS	10 IDIs	Phase 1	Sitapur and Barabanki
	4 FGDs		
	12 User Perception Surveys	Phase 2	Sitapur and Hardoi
15 ARPs	4 IDIs	Phase 1	Sitapur and Hardoi
	2 FGDs		
	2 ARP Shadowing		
40 CLASSROOM OBSERVATIONS (CO)	10 COs	Phase 1	Sitapur and Barabanki
	30 COs	Phase 2	Sitapur and Hardoi
10 SCHOOLS LEADERS	10 IDIs	Phase 2	Sitapur and Hardoi
2 BLOCK EDUCATION OFFICERS	2 IDIs	Phase 2	Sitapur and Hardoi
4 CSOs	4 Stakeholder Consultations	Phase 2	Online

Tools and Methodology

Different methods were employed to elicit subjects' knowledge, attitudes or opinions around key areas of investigation, and understand behaviours and practices, which may be prone to social desirability bias or misreporting by the respondents if asked directly. These methods also helped in making the discussions more contextual, and participatory in nature. Some of these methods are described below.

1. **Narrative Vignettes** were included in teacher/ARP IDIs and FGDs to reduce the risk of social desirability bias and level of sensitivity of questions. Example of a narrative vignette used is presented below. The responses from these narrative vignettes were used to identify barriers and facilitators.

BOX 1: TEACHER MINDSET NARRATIVE VIGNETTE

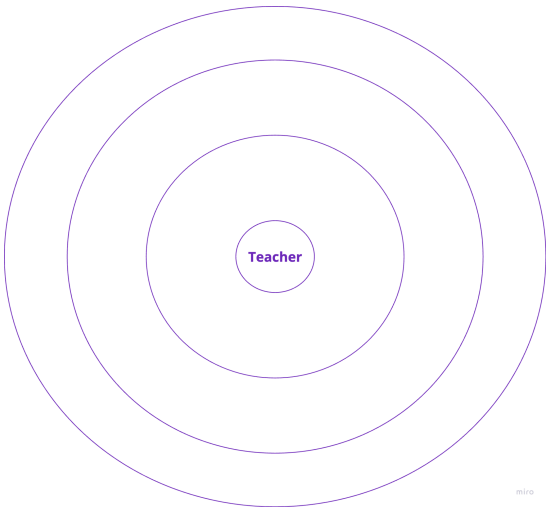
Neha and Preeti are two teachers teaching primary grade children. Neha has just started teaching primary grade children in a school not so far from Preeti. She wants to incorporate activities in her teaching style, and often one can hear songs and games going on in her class. Preeti thinks that if Neha's children keep on playing, they would not be able to perform basic addition or subtraction as they are not taught through sums and practice. Neha argues that if the children understand the concept, they would be able to apply them practically.

- Whose approach do you support more - and why? Whose students do you think would do better on an end-of-year test? Who do you think would be praised by the head-teacher of the school or the ARP? Who would the parents prefer?

2. **Participatory exercises** were included in teacher/ARP IDIs and FGDs to understand social support systems from the teachers' perspective. An example of a social mapping exercise conducted is illustrated below.

BOX 2: SOCIAL MAPPING EXERCISE

Take a look at this image. You are placed in the innermost circle. Who do you see in your social circles? Note that I would like you to think about it from the point of view of your role as a teacher.



- People who are closest to you in terms of supporting your role as a teacher - those will be in circle 1.

  You can use the cards to put down the people in circle 1. If there is someone else you would like to include in the circle whose card is not available, you can use the post-it to indicate that.

- Circle 2: People who are close to you but not as much as those in circle 1, or others who you interact with regularly

- Circle 3: Anybody else who you would like to mention

3. **Classroom observations** were conducted to observe the behaviour of interest directly as it happens, and compare them with teacher self-reports.

4. **Demonstration Exercises** (asking teachers to demonstrate a lesson plan from TG) were included in the User Perception Survey to observe how comfortable teachers are with using the teacher guides, and how well they followed evidence-based teaching practices in the absence of all other barriers.

SECTION 03:

BARRIER LISTING

Barrier Listing

BEHAVIOURAL AND SYSTEMIC BARRIERS

Findings across different data sources (IDIs, classroom observations, stakeholder consultations and user perception survey) were triangulated and synthesised to identify behavioural and systemic barriers affecting adoption of effective pedagogical practices. We focused on exploring adoption of a broad range of effective instructional practices (listed below) for diagnostic research.

- Using structured pedagogy tools (teacher guides, workbooks and other TLMs)
- Using evidence based practices such as balanced literacy, concrete-pictorial-abstract, gradual release of responsibility, etc.
- Regularly tracking student progress and identifying struggling students by asking questions during lessons
- Conducting regular assessment and using test data to remediate learning gaps and inform future instructions

The identified barriers have been categorised under five themes, and are summarised below.

1. **Take up of the program**

   Selective adoption of the program, and placing higher value on own methods by teachers could be a consequence of status quo bias, ownership effect, unwillingness to invest in new techniques or perceived difficulty of complete adoption. Cognitive overload from juggling multiple teaching and non-teaching responsibilities and limited user-friendliness of the guides could also be potential barriers affecting full uptake.

2. **Teacher's agency and accountability**

   The belief that low learning outcomes are outside the teacher's locus of control or blame-shifting for such outcomes are indicative of the low level of ownership exhibited by teachers. High focus on compliance leading to a sense of being monitored, and feeling micromanaged through detailed instructions affect teachers' sense of agency. Lack of physical and human resources, conflicting demands on limited time resources and unreliable or no internet connectivity also affects teachers' ability to perform.

3. **Teacher's mindset**

   Barriers pertaining to teacher mindset include use of heuristics to understand student levels, instead of using assessment as a tool to inform teaching instruction and track progress against learning goals. Teachers often believe in default learning i.e. if they teach, learning will happen regardless of the teaching methods used, and do not give much importance to lesson planning.

4. **Awareness and communication**

   Limited understanding of concepts such as decoding or gradual release of responsibility suggests limited capacity or technical know-how. Impression that both TG lesson plans and textbook based teaching has to be covered in an academic year, and prioritisation of syllabus completion over achievement of learning goals is indicative of gaps in program implementation. Information overload from different platforms such as WhatsApp and lengthy training sessions also suggest low effectiveness of the communication channels.

5. **Support and Appreciation**

   Teachers often do not feel appreciated by the community and parents. Additionally, the extant support system is ineffective as ARPs have limited time, bandwidth or guidance to mentor teachers.

The figure below details out a thematic representation of identified barriers. Outlined boxes with darker shades in each theme denote behavioural barriers, whereas the lighter shades denote systemic barriers. All the barriers pertaining to Teacher Mindset have been categorised as behavioural.

FIGURE 10: THEMATIC REPRESENTATION OF IDENTIFIED BEHAVIOURAL AND SYSTEMIC BARRIERS

Teachers use heuristics (own judgement) to understand student performance. Assessments, when conducted, focus on evaluating child's level and not to inform teaching instructions or track progress against learning goals.	**Use of heuristics to gauge student levels**
Teachers think that some learning will happen by default by students just attending classes. This leads to a mindset that teachers 'can't fail', they may teach less or more but there will always be some teaching and learning in class.	**Perception of Default Learning**
Teachers do not prepare for classes. If they do, they do it for 5-10 minutes before the class starts e.g. *during school assembly in the morning.*	**Belief that class preparation is not important (especially by experienced teachers)**
Teachers have trouble understanding pedagogical practices being introduced as part of FLN program e.g. decoding, GRR etc. They have limited knowledge of how the activities are linked to learning concepts. They are under the impression that both TG lesson plans and textbook based teaching has to be covered in an academic year, and end up prioritizing syllabus completion over learning goal achievement.	**Limited Know-how/ Communication Gap**
Teachers do not have practical demonstration of how to implement the guides as training sessions are long, theoretical and monotonous, and often get diluted by the time they reach teachers. Flexibility built into the TG in terms of weeks and adaptability to context is not being emphasised in training.	**Sub-optimal quality of trainings**
Teachers feel overwhelmed by amount of information they receive from different platforms such as WhatsApp, training etc. Communication around importance of adopting effective practices gets overshadowed by constant influx of non-academic information/notification.	**Information Overload** **Loss of relevant information**
Teachers do not feel supported by the local community though they consider them to be an integral part of the education ecosystem for the child. Teachers think parents appreciate instructional/rote teaching-methods more than evidence-based practices. Parents complain whenever they see teachers on phone, even if they are accessing phones to refer to resources.	**Lack of Appreciation/Support from Community and Parents**
Teachers do not reach out to ARPs or BEO for solutions as they perceive their problems to be context dependent. Even if they do, it is mostly for seeking administrative support and not for teaching-related or academic issues. ARPs do not have the time, bandwidth or framework to provide right mentorship to the teachers.	**Ineffective Support System**

BOX 3: STORIES FROM THE FIELD - QUOTES FROM PRIMARY SCHOOL TEACHERS

*"We do not get paid enough. We also do not feel appreciated for our effort leading to low motivation to teach. Students also get affected by this." (**Primary School Teacher, Barabanki)***

*"Even teacher's day is not a holiday for us. A teacher's image is not very good. Teachers should be recognised and appreciated for their efforts in front of parents and local officials." (**Primary School Teacher, Barabanki)***

*"Doing activities in class leads parents to think that we are not teaching. Parents favour traditional methods of teaching like giving written work to students." **(Primary School Teacher, Barabanki)***

*"Low attendance of students is a major challenge. Parents seem to believe that teachers stand to gain personally by getting them to send their children to school." **(Primary School Teacher, Sitapur)***

*"If the students come to the class regularly, they will learn. We cannot teach a student who comes only for 1-2 days a month." **(Primary School Teacher, Sitapur)***

*"There are too many WhatsApp groups, and a lot of messages get posted on them due to which important information/notifications often get missed." **(Primary School Teacher, Barabanki)***

*"There is a shortage of staff. Besides, we have to do a lot of paperwork. There should be enough backup teachers." (**Primary School Teacher, Barabanki)***

SECTION 04:

QUANTITATIVE ANALYSIS

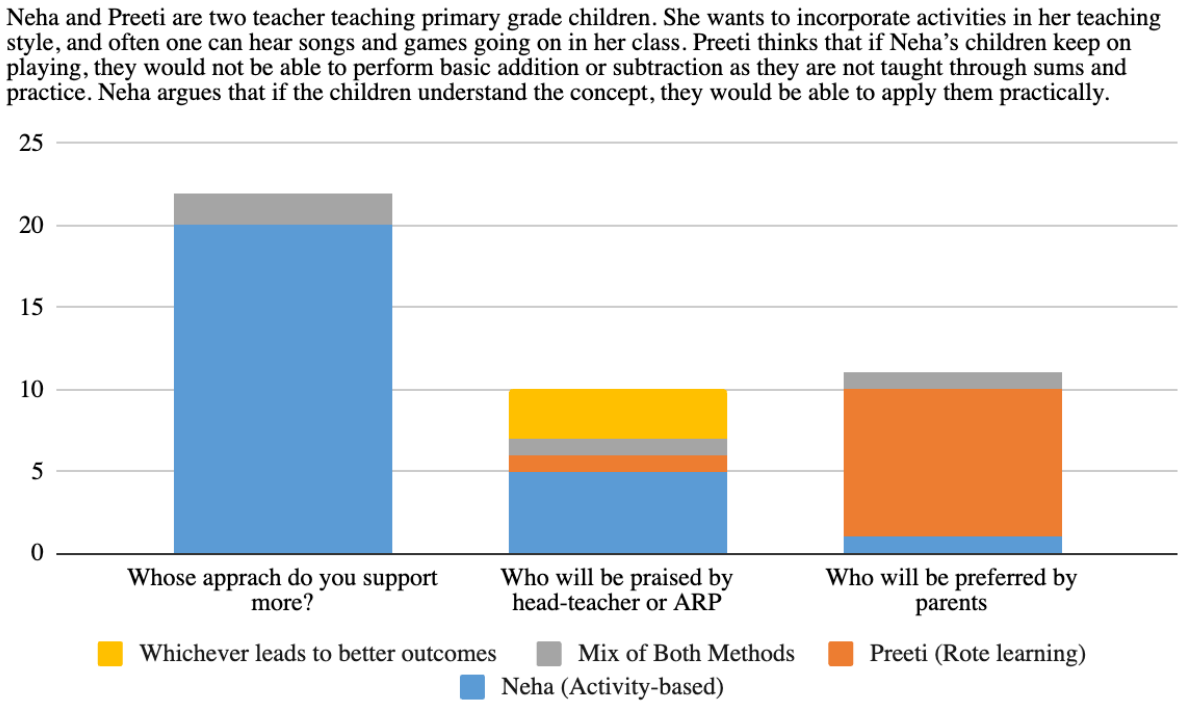
Quantitative Analysis

TEACHER INTERVIEW- INSIGHTS

Narrative Vignette

This narrative vignette explored the teacher's perceptions about different teaching methodologies, as well as the support or opposition they may receive from other stakeholders, The teachers were told about two teachers following different approaches to learning in their classrooms - Neha, who followed activity-based learning and Preeti, who preferred rote learning methods. They were then asked about their own opinions in both FGDs and IDIs. During the IDIs, the teachers were also asked about who other stakeholders might prefer. The answers to these questions are shown in figure 11.

FIGURE 11: TEACHER MINDSET NARRATIVE VIGNETTE ANSWERS

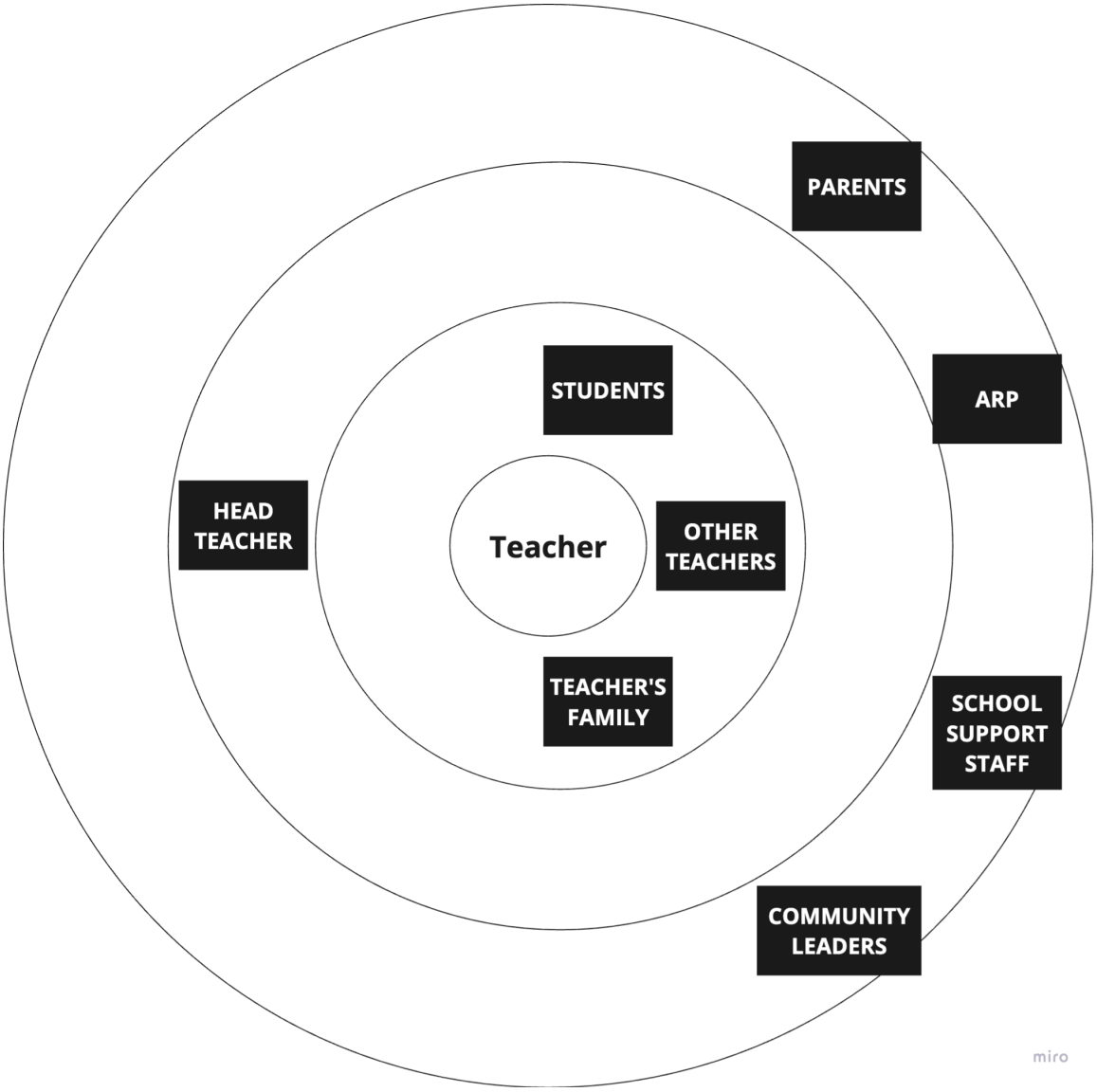


Social Mapping Exercise

The aim of this exercise is to understand how the teachers view stakeholders in their ecosystem. The teachers were provided with cards representing different people who they interact with in their role as a teacher, and asked to distribute them across

inner, middle, and outer social circles. The following figure shows which circles the different stakeholders were placed in on average:

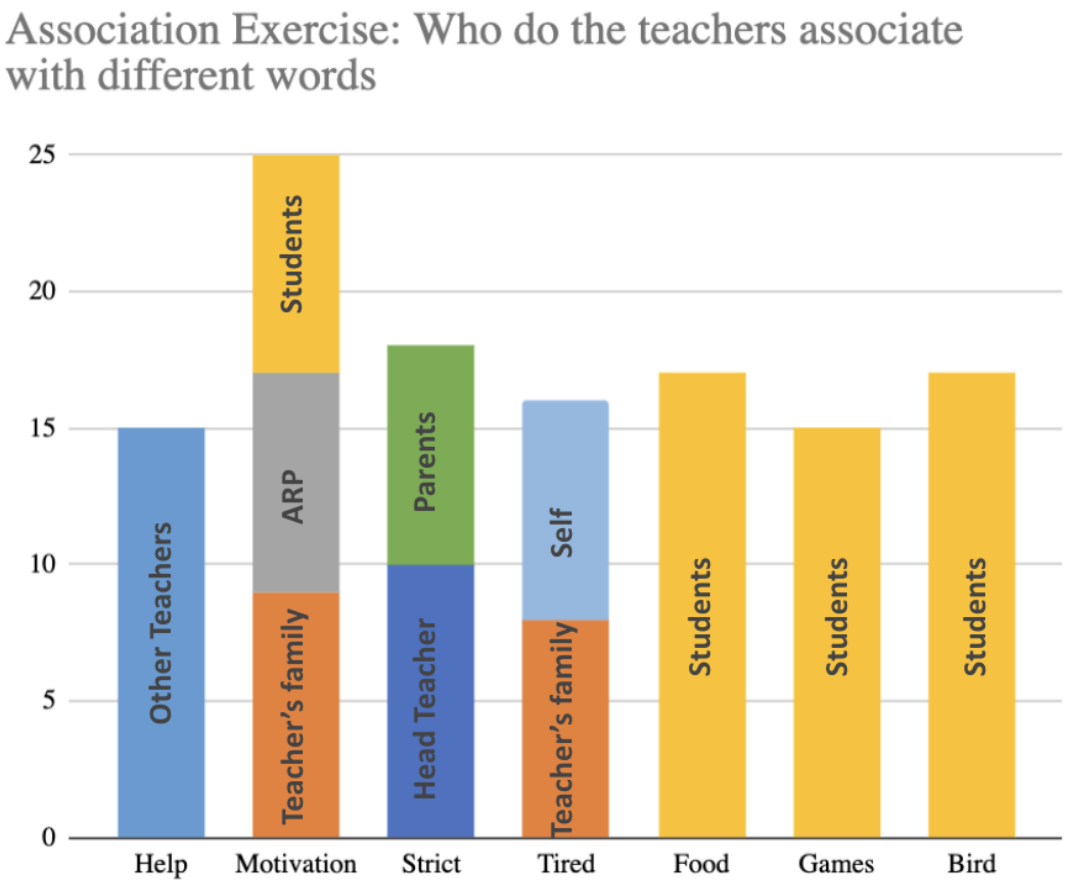
FIGURE 12: AVERAGED RESULTS OF SOCIAL MAPPING EXERCISE



Association Exercise

In this exercise, the teachers were given a set of cards depicting different stakeholders, and were asked to choose one card corresponding to the words that enumerators read out. The aim of this exercise was to understand teachers' views of the different stakeholders. The words consisted of a mix of emotions, nouns and adjectives.[16] The most chosen answer(s) for each word are given figure 13.

FIGURE 13: STACKED BAR CHART SHOWING RESULTS OF ASSOCIATION EXERCISE[17]

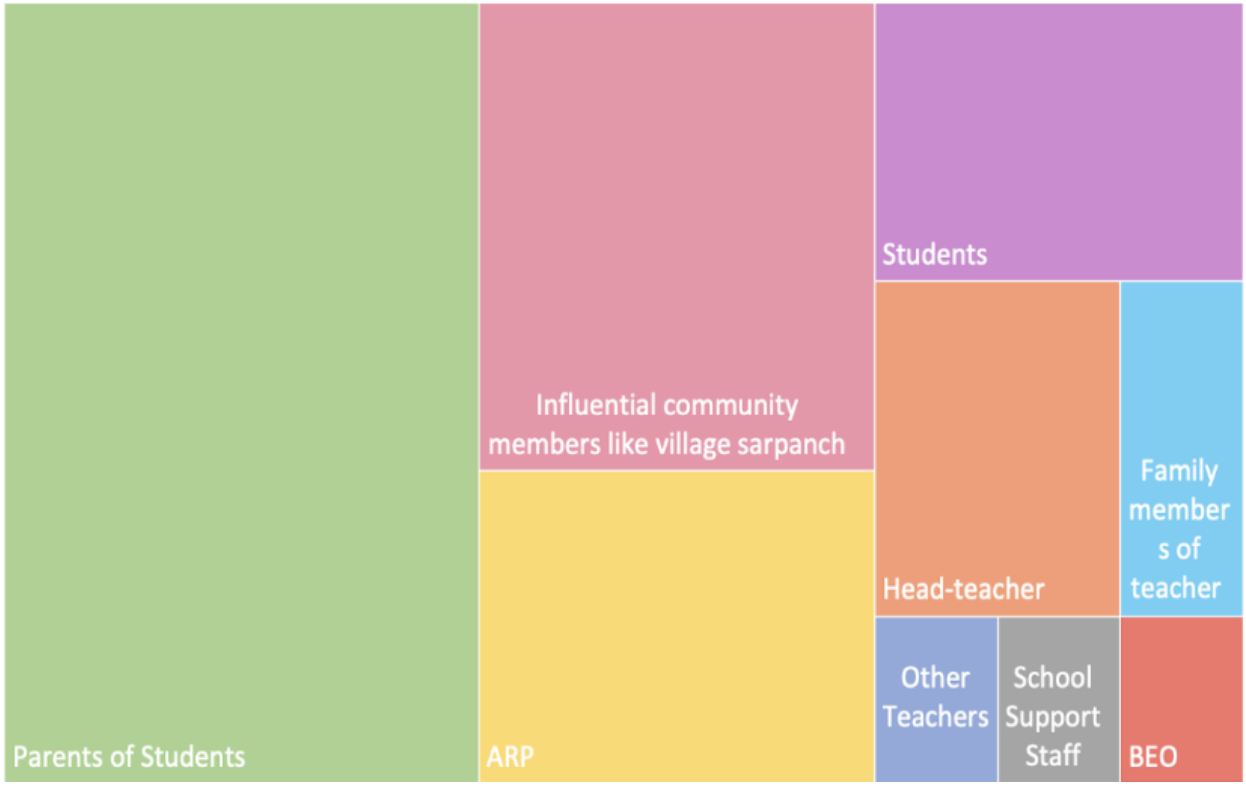


[16] Words like Bird, which were outside of the obvious education context, were also included to get teachers to think of word associations and prevent them from giving socially desirable answers.
[17] Here Parents refer to students' parents.

Appreciation As Motivation

Teachers were also asked whose appreciation would motivate them the most. The following figure represents their responses, with the size of the boxes proportional to the frequency with which the particular option was chosen:

FIGURE 14: VISUALISATION DEPICTING WHOSE APPRECIATION MOTIVATES TEACHERS MOST



Access To Technology

To understand the feasibility of digital based interventions, data was collected to capture their access to technology and usage of digital platforms by teachers.

TABLE 3: SUMMARISED DATA FOR ACCESS TO TECHNOLOGY AND USAGE OF DIGITAL PLATFORMS

TECHNOLOGY	RESPONSES
HAVE A SMARTPHONE	100% said yes
COMFORT IN USING SMARTPHONE	83.33% are comfortable

ACCESS TO INTERNET AT SCHOOL	33.33% have internet access
	53.33% have access but limited connectivity
	13.34% don't have any access
PART OF SCHOOL GROUPS ON WHATSAPP	100% said yes
CREATE A GROUP TO PROVIDE TEACHERS INFORMATION ABOUT FLN AND FOR TEACHERS DISCUSSION	85.8% said it will be useful
	9.5% said it will be somewhat useful
	4.5% said it won't be useful
CREATE A CHATBOT FOR CLASS PREPARATION AND PLANNING	55% said it will be useful
	35% said it will be somewhat useful
	10% said it won't be useful

ARP INTERVIEW- INSIGHTS

ARP Job Overview

Roles and Responsibilities

An Academic Resource Person (ARP) is a subject expert selected from amongst the teachers through an elaborate process with the purpose of mentoring other

teachers of grades 1 to 8. Five ARPs, one per subject, are allocated to each block; all ARPs are responsible for all teachers (an average of 450) in the block with no explicit ARP to teacher mapping. ARPs are key to the teacher mentoring process with clearly outlined roles and responsibilities, as under the NIPUN program. They are as follows:

1. ARPs are mandated to visit 2 schools everyday, amounting to 30 unique school visits per month, and conduct 2 classroom observations for 2 different teachers.
2. Based on the classroom observation, they are expected to provide feedback to teachers and support in case of any difficulties faced by the teachers. Feedback includes 3-4 key takeaways and suggestions for actions to be undertaken to improve teaching practices, along with classroom/video demonstrations.
3. ARP are also required to conduct a spot assessment of 5 randomly selected students in each observed classroom.
4. They check for compliance by teachers to academic and administrative initiatives and gather feedback from parents.
5. Overall feedback post a school visit is given to the headteacher based on things that are going well, areas of improvement, and key takeaways or action points.
6. They have to participate in 1-2 Shikshak Sankul meetings every month, which are mapped to each ARP, and aggregate feedback or best practices to be shared with teachers and discuss agenda items of the monthly Shikshak Sankul YouTube Live.
7. All ARPs have been asked to adopt 10 schools each and ensure that these schools meet the NIPUN program targets and have received training on how to make work plans for this purpose. On average there are 4.5 teachers per school in Uttar Pradesh, for the 10 adopted schools that would translate into 45 teachers per ARP.

Use of Apps

The ARPs use the Supportive Supervision (Gunvatta) app, which opens only when the ARP reaches the school with the geo-tagging of schools already collected. Through this app, they collect information such as enrollment, absenteeism, male-female ratio etc. They also record observations pertaining to classroom practices such as use of TLM, teacher practices, and level of student engagement. They use the NIPUN Lakshya app to record data from the spot assessments they conduct as part of their visit.

ARPs receive a monthly allowance of Rs. 2500 for their travel. There are typically 4-5 ARPs in a block, which means that each school in the block is visited at least once a month by an ARP but different ARPs make successive visits to a school as schools are not mapped to individual ARPs.

Recruitment Process

The recruitment process to become an ARP includes an application, a written examination, a teaching demonstration, and an interview. They are awarded blocks based on their merit and choice. ARPs were hired in 2019 for a 3 year tenure, and the new hiring process is underway.

ARP INTERACTIONS

As part of the diagnostic activities, the project team conducted focus group discussions and in-depth interviews with ARPs, and also shadowed[18] them during their school visits. The key insights and takeaways from these interactions are:

1. **Resource constraints -** Most ARPs mention that the travel allowance accorded to them is insufficient. Additionally, not a lot of them wanted to apply for the job again due to lack of their own vehicle, too much fieldwork, insufficient travel allowance, and liking the job of a teacher better.

2. **Following of mentoring protocols -**

    a. **ARP-Teacher Relationship** - Given that ARPs are mapped to a block and not a set of schools, different ARPs make successive visits to a school every month but a particular ARP is able to visit the same school only twice a year. This weakens the teacher-ARP relationship and inhibits the formation of a teacher-mentor relationship. Additionally, visits by different ARPs also affect continuity of feedback.

    b. **Nature of feedback** - Relevance of feedback given by ARPs to teachers is low since feedback is generic and geared towards new activities to be adopted; it is not personalised or linked to teacher-specific problems. The feedback is idea-oriented and not solution oriented - for instance, an ARP suggested that a teacher might label objects in the classroom to develop print awareness in students, the feedback was idea-oriented but did not relate to how the teacher taught in the class observed or the problems articulated by the teacher. Owing to lack of relationship-building and feedback personalisation, ARPs are generally an afterthought for teachers in terms of support, especially for pedagogical problems. The ARPs also mentioned writing feedback in the ARP diaries for other ARPs to refer to in subsequent visits - however, this was not observed by the project team on the field.

[18] Note: We only carried out 2 ARP shadowing exercises as part of our diagnostic activities.

c. **Spot assessments** - Some ARPs mentioned that they ask teachers to send the good students for the spot assessment because they believe that a teacher's performance should be evaluated based on good/regular students. During the ARP shadowing, we observed the ARP prompting the student in reading, which was recorded as the student reading on the NIPUN app.

3. **Perception of ARPs' roles and responsibilities -**

a. The ARP job requires significant fieldwork and only those that are curious and open to new experiences seem to be more satisfied by the job. Some ARPs also reported applying for the position as they saw it as a promotion. However, there is a lack of sense of progression in the job, and what is next for the ARPs is unclear. Many ARPs mentioned reverting to teaching post their tenure.

b. A majority of the job for the ARPs seems to be about relaying administrative or training information to teachers from bureaucracy (BEOs/ BSAs) and other process-related information based on what teachers have to do. With regards to academic/pedagogical support, it was observed that the ARPs conduct more of a compliance check rather than checking how the lesson plan is followed - they ask teachers which day/week of the TG is being followed and then look at the teacher diary. However, several ARPs mention that their role is that of supportive supervision and not monitoring.

CLASSROOM OBSERVATION ANALYSIS

As part of the diagnostic activities conducted across the two phases, the project team carried out classroom observations across schools in the selected districts in Uttar Pradesh. The objectives of this exercise were:

1. To triangulate actual teacher practices in the classroom with reported practices in the in-depth interviews and focus group discussions carried out with teachers, and

2. To understand the pedagogical practices they use/do not use from the teacher guides, the rationale behind their choices, and the contexts in which they make these decisions.

For this purpose, the project team observed a total of 40 classrooms, with an average class size of 34 students. The average student attendance on day of observation was 55% with 47% of classes observed being multigrade.[19]

[19] Some classes were multigrade only for the day of observation due to teacher absence. Teachers were sent on board exam invigilation duty.

The key observations and insights from the classroom observation activity are detailed below.

TABLE 4: INSIGHTS FROM THE CLASSROOM OBSERVATIONS

BUCKET	IDEAL BEHAVIOUR	OBSERVATION
CLASSROOM CULTURE	The teacher acknowledges and encourages all students to interact and participate in class.(absence of bias; positive reinforcement; teacher circulation in the class, teacher radar; cold calling)	Teachers try to be encouraging of struggling students (circulation, feedback) but teacher engagement during instruction is biased towards higher performing students.
	The teacher is able to manage student behaviour using effective practices. (positive reinforcement, reiterating rules/norms)	Teachers struggle with classroom management especially in multigrade classrooms irrespective of class size. *This potentially affects instructional time use, the proportion of time that students are 'on task' goes down and it also leads to components of the lesson plan being stretched out.*
TEACHING LEARNING PROCESSES	The teacher explains the core concept(s) of the content clearly and correctly	Introduction of new concepts was practised well one-third of the time (relatively high compared to other practices).
	The teacher connects new concepts to students' prior knowledge or contextualises them to their surroundings. (eg. when teaching shapes, the teacher should make connections to when the	Teachers are able to contextualise new concepts in this manner.
	There are opportunities for students to practice - first under guidance with	A majority of teachers practise GRR (77%).

	feedback, and then independently - in the lesson.	
	There are opportunities for students to practise in the following sequence, first a teacher models out the activity, then under guidance with feedback students perform, and then students do independently - in the lesson.	More than half of them do not practise it in the right order, or with unclear transitions (57%). This likely leads to teachers not being able to address misconceptions and limited support provided to struggling learners.
TEACHING LEARNING PROCESSES	• Most of class time should be utilised in student-centric activities (eg. classroom discussions, storytelling, games, projects, remedial teaching, group work, student worksheets/independent practice etc) • Teacher-led activities (eg. read alouds, demonstration, think aloud, instructions) should facilitate learning of students and not be the predominant approach • Classroom management should be interwoven in student-led activities and not take up explicit time (e.g positive reinforcement, disciplining, motivating) • Rote Learning should be avoided altogether (eg. copying from blackboard, asking kids to repeat or write multiple times)	• Instructional time is not used effectively - components of a lesson are stretched out. • When teachers engage with individual students, the rest of the class is not engaged effectively. • A substantial amount of instructional time is spent on rote learning (37%), with 27%, 25%, and 10% instructional time spent on teacher-led learning, student-centred learning, and classroom management, respectively. • In some instances, rote learning was employed by teachers to keep students engaged while they attended to other non-teaching tasks.

	Teacher uses TLM as required in the lesson, such as: 1. Teacher guide 2. Student workbook 3. Textbook 4. Story Books/picture books 5. Manipulatives 6. Others if required	• There is widespread use of TLM (93%), even when excluding textbooks (83%). • TGs were used in 40% of the classrooms observed. • Teachers said/wrote of being on a certain week/day as per TG but the lesson plan was not followed. • Adherence to TG was higher in numeracy than literacy - generally 'I do' and 'You Do' were followed. • Student workbooks were used in more than half the classrooms. • Workbook use was found to be inconsistent when checked for previous worksheets filled. *This could be due to unavailability of enough workbooks, non-alignment with textbooks, and parental expectation of filled notebooks.*
STUDENT ENGAGEMENT	The teacher notices (is able to gauge) which students need extra support (are struggling learners). (e.g. the teacher is circulating through the class during independent practice)	Teachers are able to identify struggling learners with some evidence of grouping; *this underscores that teachers realise homogenous* instruction is not feasible.
	The teacher undertakes differentiated instruction.	Teachers do not undertake differential instruction, *suggesting*

	(e.g. the class is divided into groups based on different levels and taught accordingly)	*limited teacher capacity (i.e pedagogical skills).*
FEEDBACK/ ASSESSMENT	The teacher asks 3-4 specific and targeted questions throughout the lesson to gauge student understanding, identify misunderstandings and adjust instruction.	Check-for-Understanding questions (CFUs) are widely practised but responded with chorus answers limiting teachers' ability to gauge breakdowns and address misconceptions.
	The student workbooks have evidence of regular teacher checks and feedback. (eg. errors highlighted, correct steps modelled, positive remarks provided.) The teacher conducts regular assessment (formative)- eg. weekly tracker in the TG, workbooks are filled	Teacher feedback showed variation - with some teachers not correcting student work, others doing it superficially, and some giving feedback. There was limited evidence on regular assessments (formative) - not practised in 46% of the classroom observed. *Given the duration of the observation period, this suggests limited practice.*[20]
LITERACY	All children have access to reading material during and outside of literacy specific lessons.	Majority of classes have access to reading material (67%).
	The teacher provides at least one or a combination of reading opportunities in class. (read-alouds, guided/shared/paired/independent reading)	There is a high incidence of teachers providing at least one reading opportunity to the class (78%).

[20] There might also be an observation bias as teachers believe that observers want to see active instruction and hence they may have taught something only because an observer was present, instead of doing an assessment.

	The teacher facilitates rich meaningful discussions around texts. (e.g. asks questions that require inference or linking text to one's own life, asks students for evidence for their responses from the text, discusses word-meanings and conducts oral/written extension activities that foster meaning-making).	Teachers struggle with facilitating meaningful discussion around texts with 31% not doing it at all and 72% facilitating ineffectively.
	The teacher addresses 2-3 different literacy domains during the class. (e.g. oral language, decoding/reading, comprehension and writing)	While a high percentage of teachers addressed different domains (89%), practice was largely observed to be ineffective (72%). (For instance, certain aspects of decoding[21] are not followed - traditional methods adopted.)
NUMERACY	Teacher uses concrete manipulatives and/or pictorial models to build conceptual clarity. (e.g. abacus, base ten blocks, stones etc) The teacher provides clear and correct explanations of mathematical concepts.	There is substantial use of manipulatives (56%) for explaining concepts. Introduction of new concepts is done effectively with 80% teachers practising it well.
	The teacher demonstrates (through think alouds,modelling,explicit instruction,etc) the steps to solve a problem.	While teachers demonstrate steps, it is found to be ineffective in half the classes.

USER PERCEPTION OF TEACHER GUIDES

User Perception Survey (UPS) was conducted with primary school teachers of grade 1-3 during the second phase of the diagnostic research. As part of this exercise, the project team conducted a total of 12 interviews in Sitapur and Hardoi districts of Uttar Pradesh. The objectives of this survey were:

[21] The ability to pronounce written words by applying prior understanding of letter-sound relationships and letter patterns.

1. To understand teachers' level of acceptability and perception on relevance, usefulness and effectiveness of Teacher Guides as a tool for preparing and delivering lessons.
2. To assess the ease of access, status of adoption and comfort level of using TGs.
3. To identify challenges of using TGs for effective teaching (from a user perspective).

Some of the important findings and observations from the survey are specified below.

1. **Time Spent with TGs:** Many teachers had received soft copies earlier but started using TG only after receiving the printed copies suggesting that teachers prefer hard copies of TGs over soft copies.
2. **Likeable Aspects of TG:** Pre-planned lessons and activities therein were stated to be most likeable aspects of TGs. Contextualisation of learning activities and emphasis on oral language development in TG was also perceived to be beneficial by few teachers.
3. **Status of Adoption:** While most teachers reported using TGs daily or at least 2-3 times a week, limited familiarity observed during the survey seemed to contradict this claim in a few cases.
4. **Familiarity and Useability of TG:** As part of the UPS, teachers were asked to demonstrate lesson plans using TG and emulate the classroom implementation of the lesson plan. The idea behind this exercise was to observe how teachers utilise the 10-15 mins planning time that was given to them to prepare for the lesson, how easily they are able to navigate through the guide, how comfortable they are with following instructions, and how much of the instructions they are able to follow. Observations from this component of the UPS are detailed in the table below.

TABLE 5: INSIGHTS FROM THE USER PERCEPTION SURVEY

PRACTICE	OBSERVATIONS
10-15 MINUTES PLANNING	• Teachers who were not familiar with TGs spent longer time on finding the lesson plan or navigating through the guide.

	• All the teachers used the planning time to read through the plan (in less than 5 mins). None of the teachers took notes or asked for more time to prepare. • Most teachers claimed preparing for the lesson in advance as a preferred strategy for day-to-day teaching. However, for many, preparing constitutes going through the lesson plan 10-15 minutes before the class starts because finding time to prepare after the class is difficult as it is mostly used for completing non-teaching/administrative tasks.
FOLLOWING INSTRUCTIONS IN TG FOR DEMONSTRATION	• Teachers implemented activities from TG in the beginning (with some amount of modification) but would resort to their own methods/default mode of teaching gradually suggesting that teachers treat TG as a repository of activities instead of referring to it for implementing structured pedagogy. • On an average, 45% of the plan was skipped during demonstrations. • Teachers usually preferred to opt for more teacher-centred activities. • Teachers were observed to not pay much heed to following instructions in TG - plausibly because they find them too detailed.
PRACTISING GRADUAL RELEASE OF RESPONSIBILITY (I DO- WE DO- YOU DO)	• Only 1 teacher was observed to practise GRR completely. • Rest either practised partially or did not practise at all.[22] • In a few cases where GRR could be observed, teachers mostly skipped 'we-do' parts of the lesson plan that usually involved group work.
ASKING CHECK FOR UNDERSTANDING (CFU) QUESTIONS	• Most teachers asked their own CFUs, those which came naturally and with flow, instead of the ones provided in TG. In some cases these questions were engaging and intended towards gauging the level of understanding. However, in a few cases, CFUs were more around repeating what the teacher has just said.

[22] In many cases teachers only demonstrated the first period ('I do') part of the lesson plan, hence the GRR component could not be observed properly.

5. **Effectiveness/Usefulness of TG to achieve certain goals:** Teachers' views on aspects of TG they find effective and useful in meeting certain goals are summarised below.

TABLE 6: SUMMARISATION OF TEACHERS' VIEWS ON EFFECTIVENESS/USEFULNESS OF TG

GOAL	COMPONENT OF TG TEACHERS FIND USEFUL
PROVIDING BETTER EXPLANATION OF CONCEPTS	• Instructions provided in TG • Oral language Section
ENHANCING STUDENT ENGAGEMENT	• Activities • Stories • CFUs • Maintaining a friendly environment in the class (not related to TG)
MEETING NEEDS OF ALL STUDENTS (INCLUSIVE LEARNING)	- Incorporation of a designated day for remediation every week in TG - Some teachers considered TGs not comprehensive enough to meet the needs of students at different learning levels
ENABLING CONTINUOUS EVALUATION	- Student Workbook - NIPUN Talika[23] (not related to TG) - Instructions at the end of every lesson plan - Weekly Tracker

6. **Assessment and Remediation :** Awareness and understanding of the weekly tracker (WT) feature of TG was limited. Most teachers rely on tools such as NIPUN Talika, workbooks, registers or heuristics for gauging the level of their students. Most teachers felt things would not change much for them if the weekly tracker feature of TG were to be removed.

7. **Linking Effective Instructional Practice to Learning Outcomes:** Almost all the teachers (who were asked) said they would recommend TG in a district

[23] NIPUN Talika is a register teachers use to keep record of which student has achieved which learning goal on which date.

with low learning levels. However, most of them recommended it from the perspective of making teaching easier for teachers rather than viewing it as a medium for improving learning outcomes through implementation of structured pedagogy.

8. **Challenges of using TG:** Teachers find teaching alphabet in a non-sequential[24] manner challenging. Some teachers felt that teaching/learning time allocated for achieving some learning objectives in TGs weren't calibrated appropriately. Teachers also said that content in TG does not cater to the needs of students at different levels, and implementing TG in a multi-grade setting is difficult. Many teachers find TGs bulky, with too many details and instructions.

9. **Suggestions and Feedback for Improving TG:** Teachers suggested improving the print quality of TG, and compressing the instructions therein to make it more consumable. Some teachers recommended better time allocation of lesson plans to provide more time to teach advanced concepts. Another suggestion was around providing weekly lesson plans instead of daily lesson plans, and reducing the frequency of formative assessments from weekly to fortnightly to allow for more flexibility. Some teachers also suggested that TGs be replaced by textbooks and activities be shared separately on phone.

SCHOOL LEADER INTERVIEW

While teachers hold academic responsibilities, the administrative work falls to the school leader. In Uttar Pradesh, due to staffing shortages, it is common for a teacher to be given the additional role of teacher in-charge to act as a school leader, fulfilling both academic and administrative responsibilities. We interviewed 10 school leaders to understand their relationship with teachers, the social context in which teachers function, and program implementation at the school level.

We found that school leaders (SLs) believe the school staff to be supportive and cooperative, but the local community (considered an integral part of school culture), not as supportive. According to SLs, they share a pleasant relationship with teachers and provide feedback on teaching and non-teaching activities. Teachers, in turn, usually seek their support on student absenteeism and performance, communication with parents, and other resource related issues. SLs also mention that it is difficult for them to meet with the teachers due to limited resources and bandwidth, and they usually congregate at lunch time or once a week.

[24] Literacy Teacher Guide follows a balanced literacy approach.

SLs identify student absenteeism and inadequate number of teachers as key challenges to achieving NIPUN goals. They are optimistic about achieving FLN goals, but only for students who attend classes regularly. SLs also report that students who are NIPUN (i.e. students who have achieved NIPUN goals) do not qualify as such on the NIPUN Lakshya app, mainly due to technical glitches and level inappropriateness of questions. While SLs corroborate that ARP presence is consistent, the perceived utility of ARP visits varies. While some school leaders found the supervision and feedback from the ARP helpful, others found it to be just another compliance check. SLs believe that the teacher guides are too dense and not aligned with the textbooks. They also reiterate the importance of providing agency to the teachers and believe that teacher guides should be used for guidance and not treated as essential to achieving NIPUN goals.

They propose group programs for teacher recognition and appreciation by parents and government officials for increasing teacher motivation, as well as creating a metric of success for government primary schools (e.g. 10th grade board exams).

BLOCK EDUCATION OFFICER INTERVIEWS

Block education officers (BEOs) state that they have various touchpoints with teachers - daily school visits, monthly meetings with school leaders, Shikshak Sankul meetings. They report that instructions shared by them are well-received by teachers, and that they employ appreciation and positive reinforcement as a means to motivate teachers. BEOs rely on ARPs for academic supervision - for progress and quality checks of the NIPUN program at the school level - while BEO visits focus more on administrative compliance with tangibles such as seating, resource/materials availability etc. However, they are not aware of what ARPs are trained on, which potentially hampers their ability to supervise or support the ARPs.

They are aware of NIPUN goals and reiterate, as the SLs also mentioned, that students who are NIPUN (i.e. students who have achieved NIPUN goals) do not qualify as such on the NIPUN Lakshya app, mainly due to technical glitches and level inappropriateness of questions. They also reiterate student absenteeism as a key challenge towards achieving NIPUN goals, and one BEO mentioned a student appreciation and attendance campaign being run in their block to improve NIPUN outcomes.

STAKEHOLDER CONSULTATIONS

Stakeholder consultations were carried out with 6 representatives from four civil society organisations (CSOs) with substantial experience of working with teachers in the given context - Samagra, Language and Learning Foundation, Vikramshila, and Piramal Foundation. The key takeaways from these interviews are articulated below.

Key challenges affecting program uptake as identified by CSOs are -

1. Training and material delivery is delayed and there are frequent changes to the program and material due to continuous iterations.
2. The cascade model used in teacher training leads to transmission loss and dilution of quality of content delivery.
3. Conflicting demands placed on teachers' time lead to teacher absence and shortages.
4. Student absenteeism is identified as a challenge by CSOs as well.
5. Teachers tend to preserve guides and learning materials because they believe they would not receive new copies.
6. TGs have limited user-centricity.
7. Teachers focus on compliance rather than adoption.
8. Teachers operate with a trust deficit with regards to the system, and believe change to be impossible.
9. Resistance to assessments, especially in older teachers - assessments are only valued when they are conducted to keep informed of student learnings for self, as opposed to when they are conducted for the state department which are seen as high stakes and lead to inflation of results.
10. BEOs are often bogged down with operational and administrative issues and do not engage in academic discussions with teachers.
11. ARPs or SRG (comprising DIET faculty) visits are often viewed by teachers as inspections or audits rather than supportive supervision.
12. Feedback given by ARPs tends to address processes to be followed and sometimes teachers seek illicit support from ARPs such as for marking them present during long periods of absenteeism.

SECTION 05:

CONCLUSION

Conclusion

The UP FLN program, in its current form, is well-defined to provide the requisite support to teachers in terms of building capacity, providing material such as the Teacher Guides, and mentoring. However, our findings suggest that teachers face a host of challenges which affect their ability and motivation to accept and adopt the program in its entirety. They are expected to deliver results in improving learning outcomes, while also performing a multitude of non-teaching activities. This often leaves teachers overwhelmed, leading to the problem of cognitive overload or time poverty, and adoption of parts of the program that do not require much change or effort. Certain mindset barriers such as undervaluation of new methods and assessment informed instruction, limited technical know-how of new concepts, or feeling unsupported create further impediment to adoption. These barriers coupled with other factors which are outside the control of teachers such as prevalence of high student absenteeism, low parental engagement, shortage of teaching staff, and teaching in multigrade classrooms, make the adherence even more difficult.

Adapting aspects of the program so as to be cognizant of the cognitive threshold of teachers, and delivering them to teachers in a fashion that reduces the complexity of certain elements, such as simplifying instructions for teachers, can perhaps increase acceptance and adoption. Increasing the effectiveness of existing communication channels to focus on conveying the right information, and developing effective appreciation and recognition mechanisms can also catalyse the shift towards better practices.

We aim to use the above findings and insights from the diagnostic analysis to design and test effective behavioural solutions to a list of barriers prioritised to ensure greater adherence to our chosen target behaviours. The results from the evaluation would further help generate insights around effectiveness, impact and scalability of the designed interventions.

SECTION 06:

AUTHORS AND CONTRIBUTORS

Authors and Contributors

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SECTION 06:

APPENDIX

Appendix

District Statistics

District statistics for the two selected districts, Sitapur and Hardoi, in Uttar Pradesh are given below.

TABLE 7: DEMOGRAPHIC STATISTICS

INDICATOR	UTTAR PRADESH	HARDOI	SITAPUR
EDUCATION (LITERACY RATE FOR PERSONS 7 YEARS AND ABOVE, 2011)	67%	64.57%	61%
POPULATION (2011)	19,98,12,000	40,92,845	44,84,000
# OF BLOCKS	-	19	19
PERCENTAGE OF URBAN POPULATION TO TOTAL POPULATION (2011)	22.27%	13.24%	11.84%
# OF FEMALES PER 1000 MALES (2011)	912	868	888
DISTRICT-WISE SC POPULATION TO TOTAL (2011)	20.7%	31.14%	32.26%
DISTRICT-WISE ST POPULATION TO TOTAL (2011)	0.57%	0.01%	0.04%
PER CAPITA INCOME (PER CAPITA NET DOMESTIC PRODUCT AT CURRENT PRICES) (2016-2017)	51,014	32,912	38,169
PER CAPITA ELECTRICITY CONSUMPTION (kwh, 2018-2019)	391	144	120.31

STUDENT ENROLMENT RATIO FOR JUNIOR BASIC (PRIMARY) SCHOOLS (2019)	72%	84%	83%
STUDENT ENROLMENT RATIO (AGE 6-14) (ASER 2022)	59.6%	67.5%	62.7%
% CHILDREN IN STD III TO V WHO CAN READ STD II LEVEL TEXT (ASER 2018)	40.60%	25%	41.20%

TABLE 8: INFRASTRUCTURAL FACILITIES AVAILABLE IN PRIMARY SCHOOLS[25]

INDICATOR	UTTAR PRADESH	HARDOI	SITAPUR
TOTAL NO. OF SCHOOLS	87202	2421	2366
WITH SEPARATE ROOM FOR HEADMASTER (AS % OF TOTAL)	82.94	82.20	82.88
WITH FUNCTIONAL ELECTRICITY (AS % OF TOTAL)	80.43	90.91	68.64
WITH PLAYGROUND (AS % OF TOTAL)	70.45	72.95	79.97
WITH LIBRARY/ READING CORNER/ BOOK BANK (AS % OF TOTAL)	96.72	98.31	99.24
WITH FURNITURE (AS % OF TOTAL)	26.36	28.09	11.03
WITH FUNCTIONAL BOY'S TOILET (AS % OF TOTAL)	94.70	98.06	89.10

[25] All figures based on data for primary schools (grade 1-5), taken from the UDISE+ Dashboard for 2021-22.

WITH FUNCTIONAL GIRL'S TOILET (AS % OF TOTAL)	95.81	98.39	90.19
WITH FUNCTIONAL DRINKING WATER (AS % OF TOTAL)	97.15	99.92	95.52
WITH INTERNET (AS % OF TOTAL)	7.82	4.25	4.56
WITH COMPUTER AVAILABLE (AS % OF TOTAL)	2.34	15.16	3.51

TABLE 9: TEACHER DATA FOR PRIMARY SCHOOLS[26]

INDICATOR	UTTAR PRADESH	HARDOI	SITAPUR
TOTAL NO. OF SCHOOL	87202	2421	2366
TOTAL NO. OF TEACHERS	346683	14273	16169
AVG. NO. OF TEACHERS PER SCHOOL	3.98	5.89	6.83
TEACHER- PUPIL RATIO	1:28	1:31	1:29

TABLE 10: FLN PERFORMANCE (IN PERCENTAGE)- NAS DATA[27]

SUBJECT	NATIONAL	UTTAR PRADESH	HARDOI	SITAPUR
LANGUAGE (GRADE 3)	62	58	51	52
MATHEMATICS (GRADE 3)	57	54	43	47

[26] All figures based on data for primary schools (grade 1-5), taken from the UDISE+ Dashboard for 2021-22.
[27] All figures taken from NAS data for 2021.

LANGUAGE (GRADE 5)	55	52	48	53
MATHEMATICS (GRADE 5)	44	41	38	43

TABLE 11: FLN PERFORMANCE - ASER Data[28]

INDICATOR		HARDOI	SITAPUR
% Children (Aged 6-14) Enrolled in Govt. Schools		67.5	62.7
Std. III-V: Learning Levels	% Children Who Can Read Std II Level Text	23.9	27.6
	% Children Who Can Do At Least Subtraction	29.3	26.4

[28] All figures taken from ASER data for 2022.

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