



CENTRAL SQUARE
FOUNDATION

Improving Teacher Uptake of Effective FLN Instruction

MIDLINE REPORT: PHONE SURVEY

JUNE 2024

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Acronyms and glossary

NIPUN	National Initiative for Proficiency in Reading with Understanding and Numeracy
FLN	Foundational Literacy and Numeracy
ARP	Academic Resource Person
BEO	Block Education Officer
IDI	In-depth Interview
TG	Teacher Guide
LP	Lesson Plan

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Executive summary

The NIPUN Bharat Mission, launched by the Government of India in 2021, aims to achieve universal foundational literacy and numeracy by 2026-27. Despite providing teachers with the necessary training and materials, adoption rates are low due to challenges such as securing buy-in, maintaining motivation, and dealing with frequent program changes. The Centre for Social and Behaviour Change and the Central Square Foundation conducted a six-month study in Uttar Pradesh to identify barriers and develop behaviour change interventions to address these issues.

Two interventions were designed: a WhatsApp Chatbot delivering simplified lesson plan summaries and micro practice videos on key pedagogical practices shared on WhatsApp groups of teachers. Midline phone surveys, conducted five months post-launch, gathered feedback from 203 teachers with varying levels of engagement. Results showed that teachers with high engagement had positive perceptions, finding the Chatbot useful for pre-class preparation and the micro practice videos beneficial for enhancing classroom instruction and student engagement. Among teachers with low engagement, common reasons for limited or no participation included a shortage of time and low WhatsApp/phone usage.

Common suggestions for improving the chatbot included adding more content from the Teacher Guide, such as stories, poems, homework, and activities. Teachers also recommended sharing videos of activities that can be conducted in classrooms. Other interesting but less common suggestions included sharing lesson plans for multi-grade teaching, providing PDFs of lesson plans, and being able to address teacher queries. Common suggestions for improving the WhatsApp groups included providing videos with various activities, making the group more interactive, and offering more targeted videos for remedial teaching, supporting weaker students, or teaching in multi-grade or large-sized classes.



SECTION 01:
INTRODUCTION

Context

The NIPUN Bharat Mission, launched by the Government of India in 2021, aims to create an enabling environment to ensure universal foundational literacy and numeracy by 2026-27. The goal is for every child to acquire the necessary reading, writing, and numeracy competencies by the end of grade 3 and no later than grade 5¹.

Under the NIPUN Mission, teachers have been provided with the requisite training and teaching and learning material needed to implement the curriculum outlined in the Mission. However, teacher adoption still remains low². Challenges include securing buy-in, maintaining motivation, and dealing with frequent program changes, which can overwhelm teachers. Reasons for low uptake include lack of motivation, difficulty converting intent into action, and other behavioural biases. Thus, a behavioural approach is crucial to investigate the problem and design solutions to improve teacher adoption and foundational learning outcomes.

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:

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

To understand the barriers to adopting effective practices for teachers and teacher coaches, the project team conducted an exploratory and qualitative diagnostic research study in three districts of Uttar Pradesh: Sitapur, Hardoi, and Barabanki. This three-month diagnostic study was conducted in two phases. Phase 1 focused on understanding the mindsets, beliefs, social support systems, and other key behavioural drivers for teachers and ARPs. Phase 2 delved into actual classroom practices, perceptions of materials and tools provided under the FLN program, and insights from other stakeholders, such as school leaders, Block Education Officers, and civil society organisations. Data was collected through various methods, including in-depth interviews (IDIs), classroom observations, stakeholder consultations, and user perception surveys. The findings were triangulated and

analysed to identify a long list of behavioural and systemic barriers affecting adopting effective pedagogical practices.

The figure below summarises a thematic representation of identified barriers. Outlined boxes with darker shades in each theme denote behavioural barriers, whereas the lighter shades denote systemic barriers.

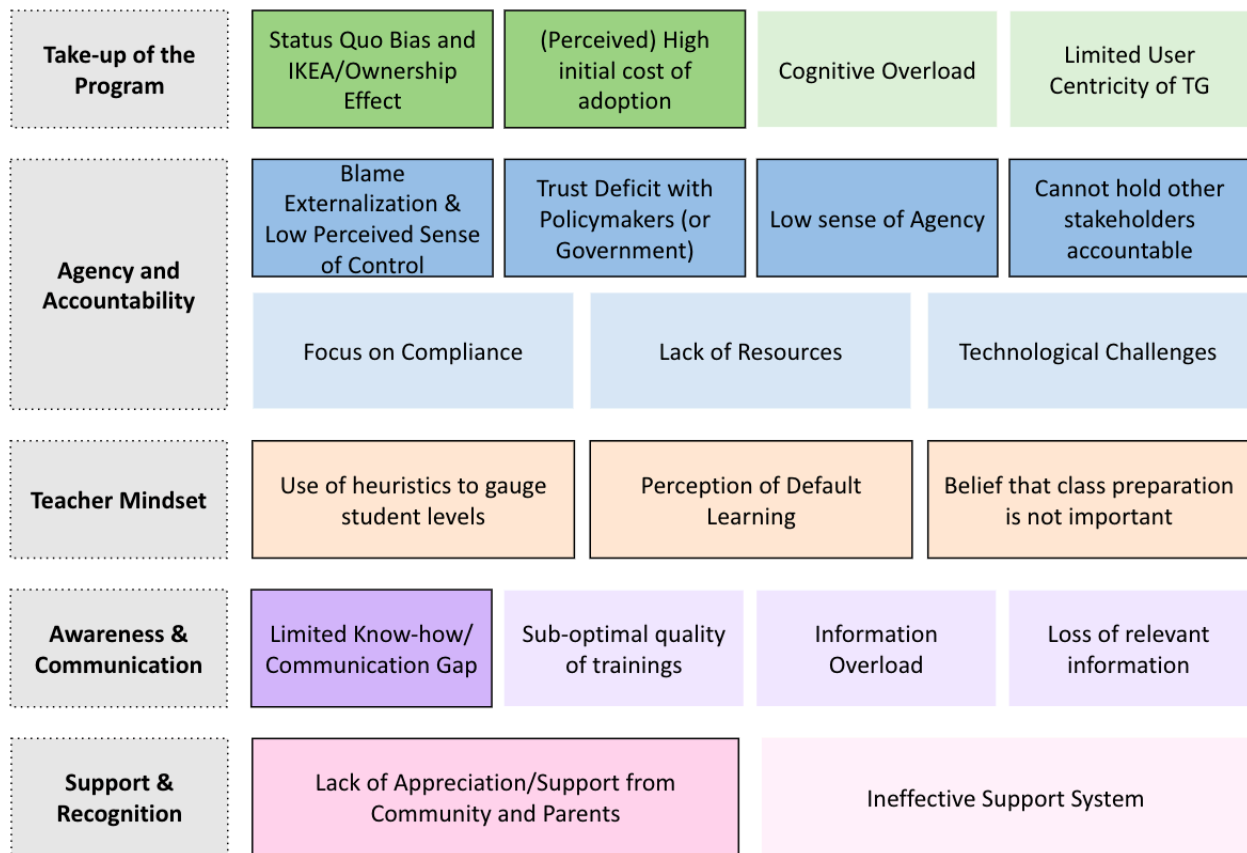


FIGURE 1: THEMATIC REPRESENTATION OF IDENTIFIED BEHAVIORAL AND SYSTEMIC BARRIERS

To transition from barriers to interventions, we prioritised the identified barriers, considering the project's scope and constraints. After prioritisation, the team finalised two intervention ideas.

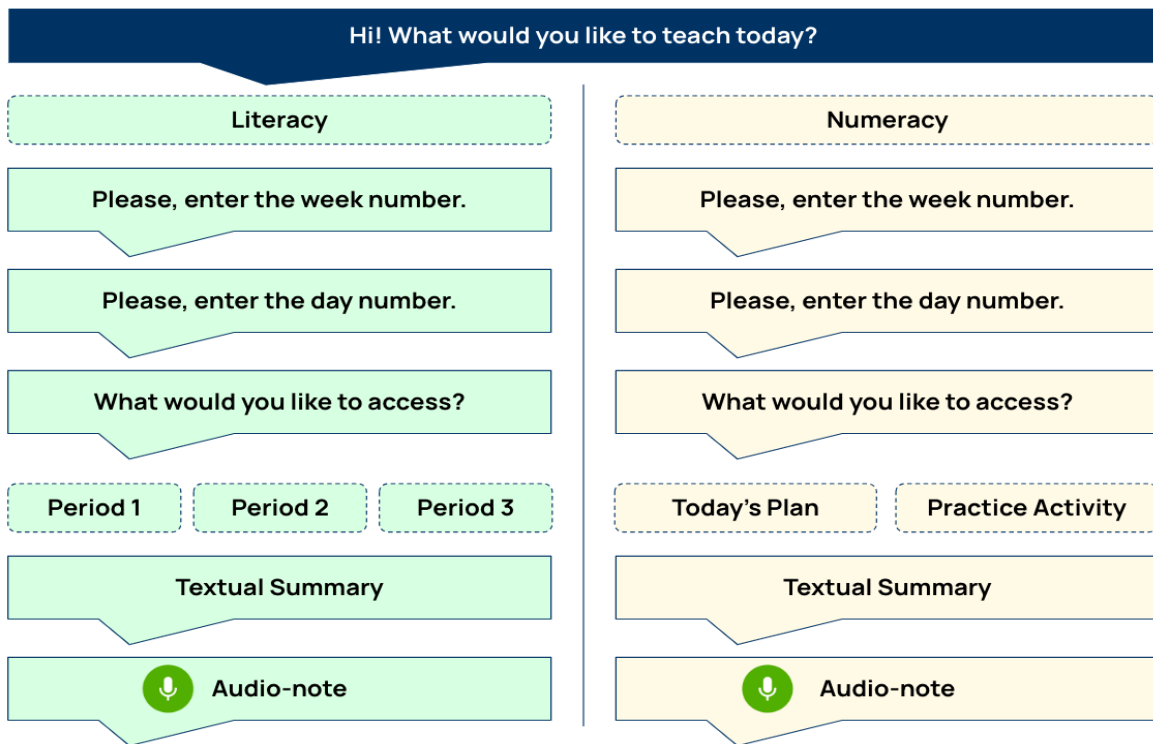
ARM 1: CHATBOT

The first treatment arm aimed to boost the adoption of Teacher Guides (TGs) by providing teachers with simplified summaries of daily lesson plans via bite-sized texts or audio notes through a WhatsApp Chatbot. With just a few clicks and simple entries, teachers could quickly access the content of daily lesson plans for literacy and numeracy.

By increasing access and familiarity through simplified information and building acceptance and motivation through reminders and rewards, this intervention aimed to reduce resistance to TG adoption and gradually foster habit formation for using TGs in planning and teaching.

Figure 2 provides an overview of the chatbot's flow.

FIGURE 2: OVERVIEW OF CHATBOT FLOW



ARM 2: MICROPRACTICE VIDEOS

The second treatment arm aimed to increase the adoption of key pedagogical practices. This intervention centred around bite-sized videos on pedagogical practices derived from the target behaviours. All teachers assigned to this treatment arm were added to WhatsApp groups.

- To ensure that the pedagogical practice videos were easy to consume for teachers, each practice was broken down into three learning objectives, where each objective represents one micro-practice.
- For each micro-practice video, an **ARP testimonial video** was shared (in the following week) with the users. The video was a one-minute testimonial that showed an experienced teacher sharing their experience implementing a particular micro-practice.
- Different types of reminders were sent to the teachers to encourage engagement with the content shared.
 - **Infographic** - An infographic was shared after each micro-practice video. The infographic summarised the information given in the video regarding the practice.
 - **Whatsapp Poll** - Basic check-for-understanding was done through Whatsapp polls for each video. Given the public nature of the answers on a WhatsApp poll, the information from the poll was used to gauge and build engagement more than knowledge regarding a practice.
 - **Social Proof Message** - Messages with engagement numbers were shared to encourage the inactive users to participate in leveraging norms.
 - **User Demonstration Request** - Users were encouraged to share videos of themselves using a given micro-practice in their classroom. This leveraged peer effects to boost engagement.
 - **Trailer** - A 10 to 20-second clip from the upcoming video was shared to create anticipation for the video amongst the users.
- A rewards and recognition system was implemented to encourage users to engage with the content shared. Regular interactions from the users were acknowledged and recognised by the group moderators.

Each micro-practice video had a two-week deployment cycle with different components from the treatment.



SECTION 02: **METHODS**

Midline Overview

Midline phone surveys were conducted five months after launching our interventions in the two districts of Sitapur and Hardoi. The aim was to gather user feedback from a subsample of teachers on the usability and experience of our interventions. The survey tool included questions on the usefulness, perception, and suggestions for the products. The broad objectives of the midline phone surveys were:

- Understand the usefulness and likeability of the interventions and their components.
- Assess the uptake level from teacher self-reports (in the case of micro-practice video arm)
- Identify reasons for low or no uptake.
- Gather suggestions for improvement.

SAMPLE SIZE AND DESCRIPTION

We sampled 240 teachers (with a 25% buffer), allocating 120 per arm. We collected data from 220 teachers but successfully completed 203 calls (~16% of the baseline sample). Our goal was to understand teachers' experiences actively engaging with the interventions and the barriers faced by those with limited or no engagement. Thus, we did not sample control group teachers. To achieve this, we conducted purposive sampling by selecting teachers with high and low engagement levels in both arms. The selection criteria are summarised below:

TABLE 1: SAMPLING CRITERIA AND SAMPLE SIZE

Arm	DESCRIPTION		GROUP CODE	TARGET SAMPLE SIZE (excluding buffer)	SAMPLE SIZE COVERED	HARDOI	SITAPUR
Chatbot	Bottom 60 based on number of days chatbot accessed in December	No Engagement Group	11	30	19	8	11

		Low Engagement Group	12	30	37	12	25
	Top users based on engagement in December (i.e. number of days chatbot accessed in December)	High Engagement Group	13	60	62	29	33
Micro-Practice Video	Not responded to WA Polls even once (till Dec)	Low Engagement Group	21	60	49	18	31
	Top users based on poll responsiveness (till Dec)	High Engagement Group	22	60	53	21	32
Total				240	220	88	132

TOOL AND METHODOLOGY

Enumerators surveyed the phone and simultaneously typed the answers into survey CTO (installed on a second device). The calls were recorded for quality purposes. The duration of the survey was around 15 minutes. All the questions were close-ended, with an 'other' option to capture responses different from the provided list. The options were not read out to the teachers to avoid bias.

TABLE 2: OVERVIEW OF THE SURVEY TOOL

AREA OF INQUIRY	CHATBOT	MICROPRACTICE VIDEOS
REASONS FOR LOW/NO ADOPTION	Why don't you use the Chatbot more often?	Why haven't you watched any of the videos?
UPTAKE (OF INTERVENTION & COMPONENTS)	Have you listened to the audio recording of Lesson Plans (LP)?	Have you tried the practices shown in the videos? Have you seen ARP testimonial

THEREIN)

videos?

USEFULNESS

To what extent has intervention been useful in making your job easier as a teacher? (3-point scale - very useful, somewhat useful, not useful at all)

How do you think the information you get on chatbot is useful to you as a teacher?

Do you see any change in your teaching due to implementing practices shown in the videos?

**LIKE/DISLIKE/
SUGGESTIONS**

What do you like/dislike about the intervention? How can it be improved?

* The survey tool can be found [here](#)

For the chatbot arm, we had exact information on each teacher's actual engagement, so different questionnaires were administered for each group of Arm 1 teachers:

- Teachers from No Engagement Group (11) were asked only about their reasons for no engagement.
- Teachers from Low Engagement Group (12) were asked about their reasons for low engagement, feedback on usability and suggestions for improvement.
- Teachers from High Engagement (13) were asked questions about the time of use, usefulness of the bot, likeability, and suggestions for improvement.

In the Micro-Practice videos (MPV) arm, the Low (21) and High (22) Engagement Groups were asked the same questions: whether they watched the videos, their usefulness, likeability, and suggestions for improvement. This was because there was no definitive way to know if the teachers had actually watched the videos; the WA poll served only as a proxy for the level of engagement, based on which we grouped the teachers into low and high engagement categories. The chi-square test was used to estimate the differences between groups.



SECTION 03: RESULTS

Treatment Check

A total of five teachers from both the treatment arms reported that they did not receive our intervention. Specifically, three teachers from chatbot no engagement group (out of 16) mentioned that they do not have access to the bot. This could possibly be due to network issues leading to non-delivery of messages to teachers. Among the MPV recipients, only two teachers (out of 102) responded "No" when asked if they had been added to any WhatsApp group, and one teacher mentioned that they had left the group.

CHATBOT RESULTS

Uptake Of Intervention

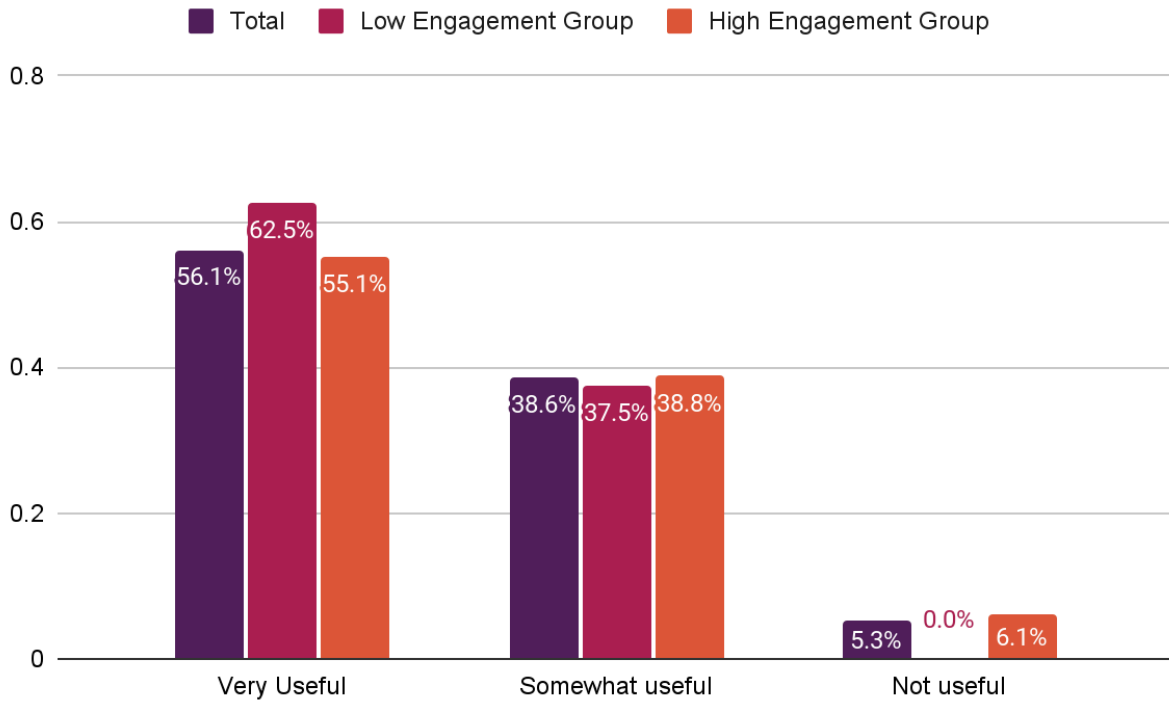
Time of usage

We only asked the high engagement users their preferred usage time. Most (79%) of these users (n = 62) reported using the Chatbot in the morning before class. The use of chatbots during the class was also reported by 39% of top users.

Uptake of audio-recording

Overall, 64% (out of 90) reported listening to the audio recording. Within the high engagement group, the majority (79%) reported listening to the audio recording, whereas only 28% of participants in the low engagement group reported listening to the audio. The difference in responses between the two groups is statistically significant ($p < 0.001$). Furthermore, nearly 95% of the teachers who had listened to audio recordings on the Chatbot found it useful, 56% found it very useful, and 39% found it somewhat useful. (Figure 3).

FIGURE 3: USEFULNESS OF AUDIO RECORDING



Reason For No/Low Adoption

Amongst inactive users to whom this question was asked, i.e. no engagement group teachers (n = 16), 'do not have time' and 'transferred to a different grade' or 'low mobile/WhatsApp usage' were commonly reported reasons for not using the bot. In the low engagement group (n = 32), 34% of teachers cited "already have too many resources" as the reason for their limited use of the bot, followed by "do not have time" (28%) and "do not teach Grade 3" (22%).

User Perception Of The Interventions

Amongst the top users to whom the question was asked, i.e. high engagement group (n=62), 58% of the teachers found the chatbot very useful, and 34% of teachers found the chatbot somewhat useful in making their job easier (Figure 4).

FIGURE 4: USEFULNESS OF THE CHATBOT

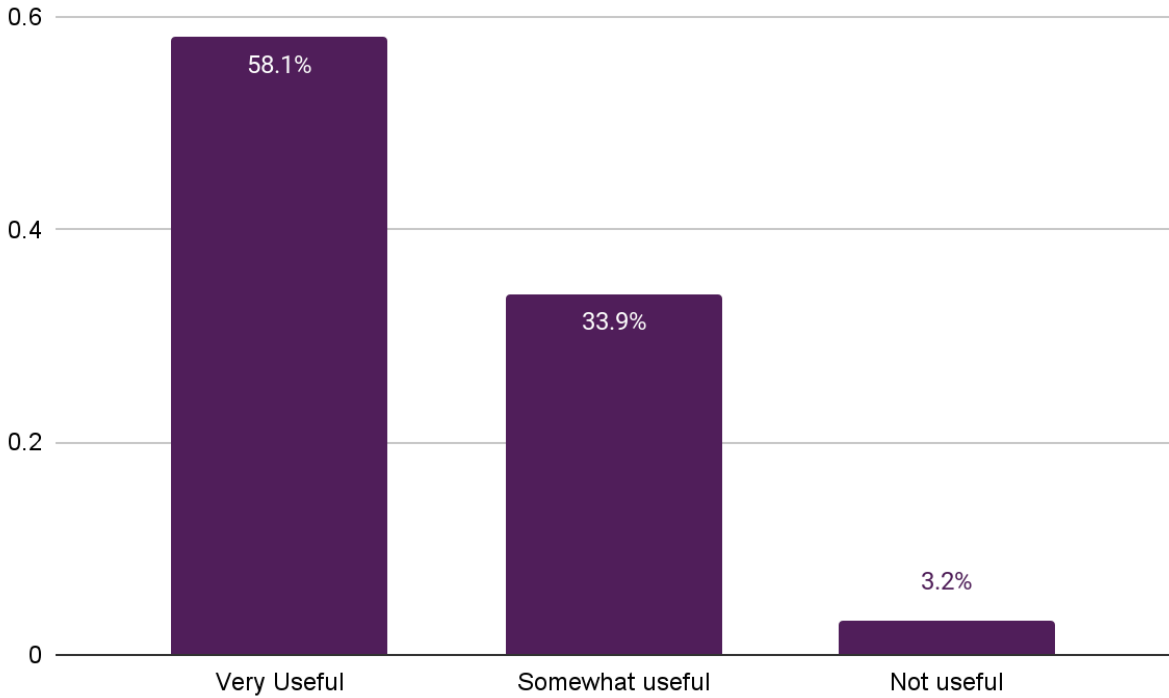
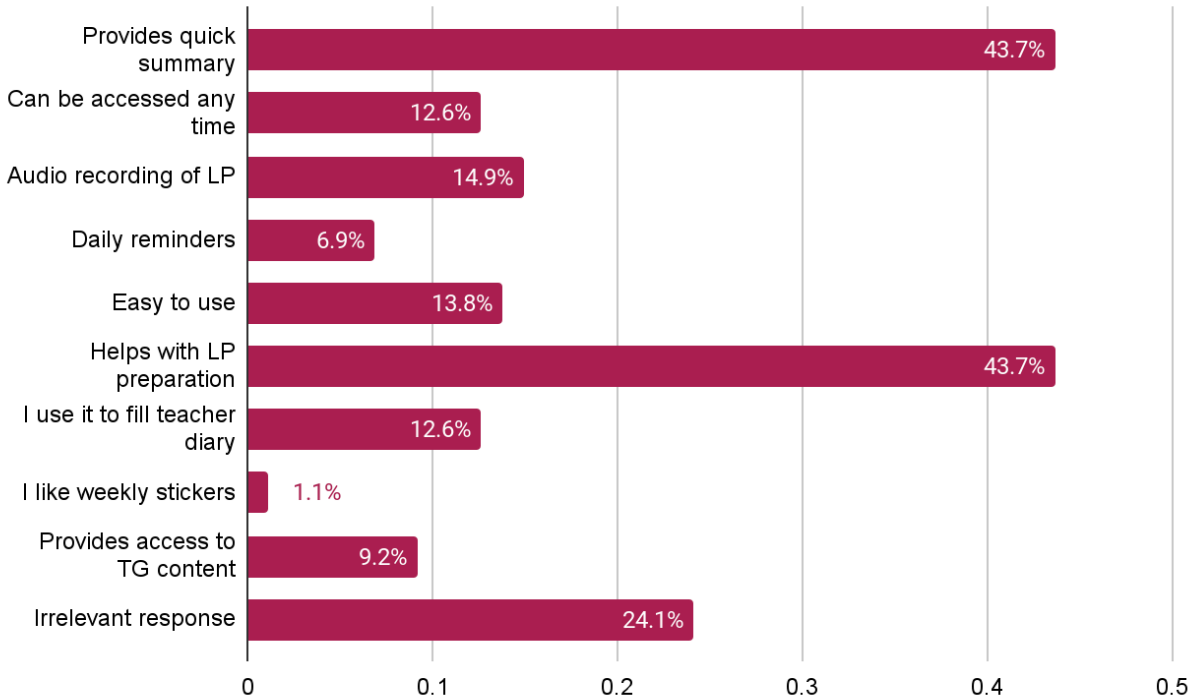


Figure 5 shows teachers' responses to the question, "What features do you like about the Chatbot?" The most liked part features reported were providing a quick summary (44%) and helping with lesson plan preparation (44%). Some teachers (13-14%) also appreciated the audio recording feature, the fact that the bot can be accessed anytime, its ease of use, and how it helps them fill out their teacher diary.

FIGURE 5: FEATURES LIKED- CHATBOT



Most teachers selected "Do not dislike anything" when asked about features they disliked. In Arm 1, this was followed by a dislike for the **incorrect schedule or timing of the chatbot**, such as messages being sent on holidays or before school starts.

Suggestions For Improvement

Approximately 30% of the teachers stated that adding more content from the Teacher Guide, such as stories, poems, homework, and activities, would improve the chatbot. This recommendation for improvement varied across groups: 6.25% for no engagement group, 21.8% low engagement group, and 33.8% for high engagement group. The second most common suggestion (28%) was to share videos of activities that can be conducted in classrooms: low engagement group (25%) and high engagement group (32.2%). Other interesting but less common suggestions included sharing lesson plans for multi-grade teaching, providing PDFs of lesson plans, and being able to address teacher queries (a helpline of sorts).

Some other unique suggestions for Chatbot are listed in the table below (Table 3).

TABLE 3: SOME UNIQUE SUGGESTIONS

TEACHER SUGGESTIONS

CHATBOT	Adding a pause option to the chatbot to prevent interruptions (such as morning prompts or reminders) during training or other duties
	The chatbot should also be able to understand text entries and messages and address doubts effectively.
	Develop an app with chatbot integration; avoid reliance on WhatsApp.

MICRO-PRACTICE VIDEOS

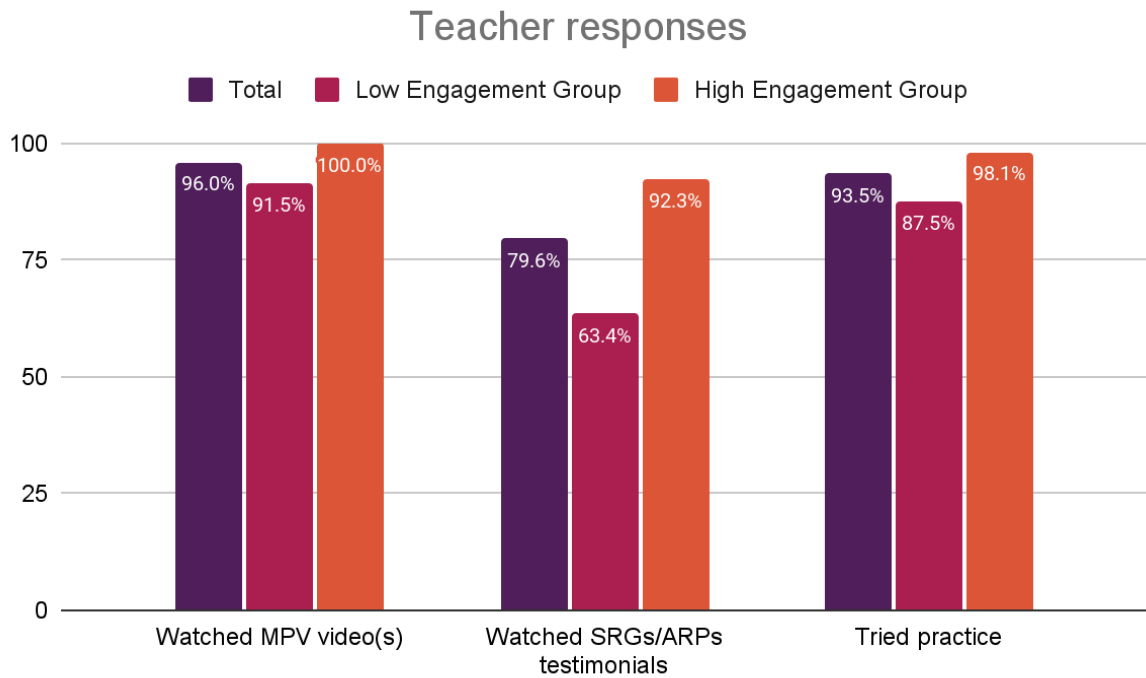
Uptake Of Intervention

Except for four teachers, all reported watching the MPV videos. The four teachers who did not watch the videos belonged to the low engagement group.

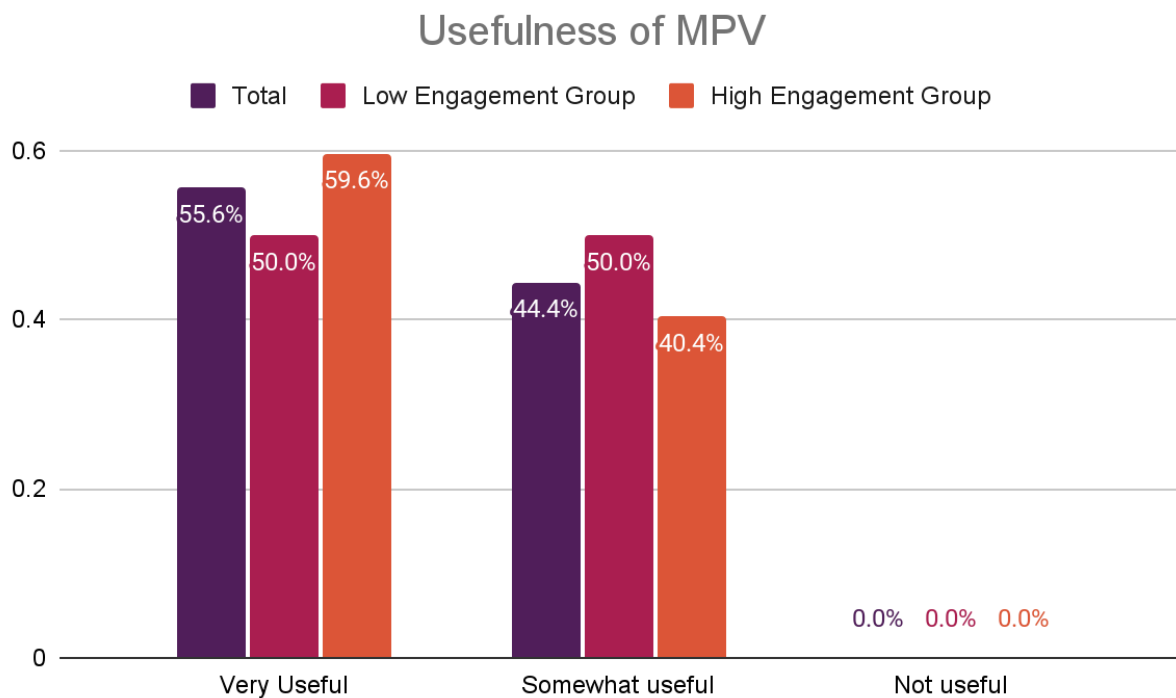
Additionally, most teachers (approximately 80%) reported watching the SRG/ARP testimonial videos shared in the MPV groups every 15 days. All teachers, except for five (all from low engagement group), reported implementing the practices shown in the videos in their classes. The response rates are summarised in Figure 6A. For all these indicators, the differences in responses between low and high engagement groups are statistically significant at the 5% level ($p < 0.05$). All teachers who reported watching the videos found them useful, with 56% finding them very useful and 44% finding them somewhat useful (Figure 6B). In this case, the differences in responses between the two groups were not statistically significant at either the 5% or 10% levels.

FIGURE 6: TEACHER RESPONSE ON UPTAKE OF MICRO PRACTICE VIDEOS

A)

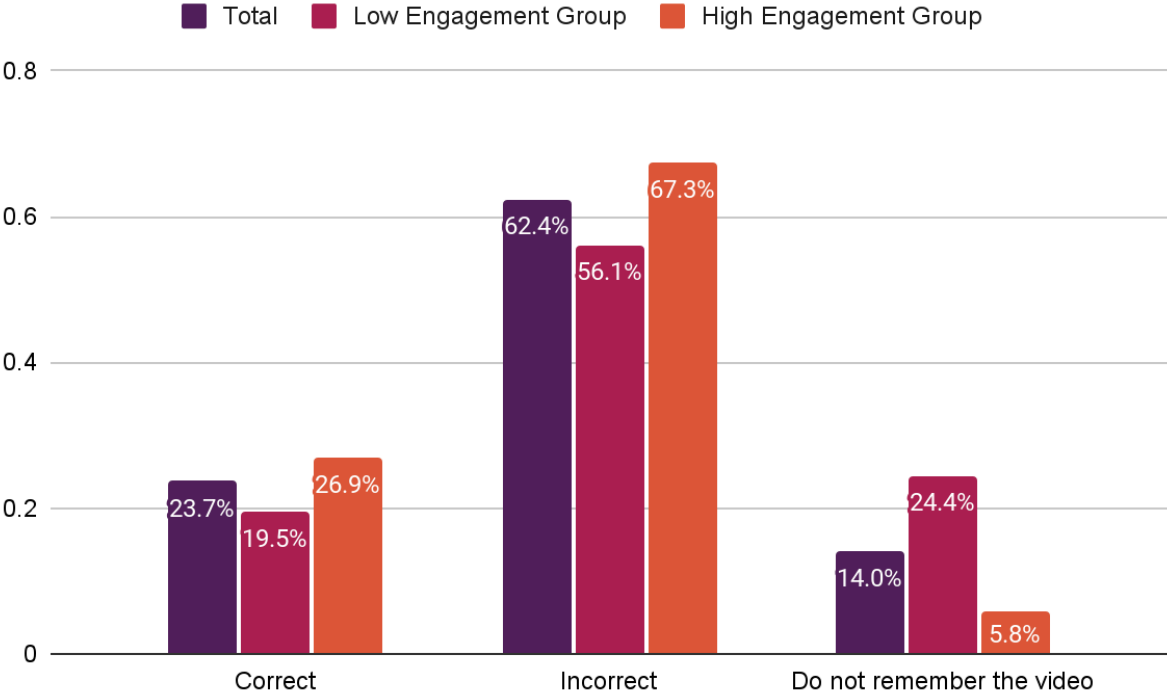


B)



As a proxy for gauging if teachers actually watched the videos, we asked them about the technique shown in Video 4. Nearly 24% of the teachers accurately recalled the practice. A higher proportion of teachers (27%) in the high engagement group accurately recalled the practice than those in the low engagement group (20%). 24% of teachers in the low engagement group reported not remembering watching the video, compared to only 6% in the high engagement group (Figure 7). The difference in responses between the two groups is statistically significant at the 5% level ($p < 0.05$).

FIGURE 7: RECALL OF TEACHER PRACTICE SHOWN IN VIDEO 4



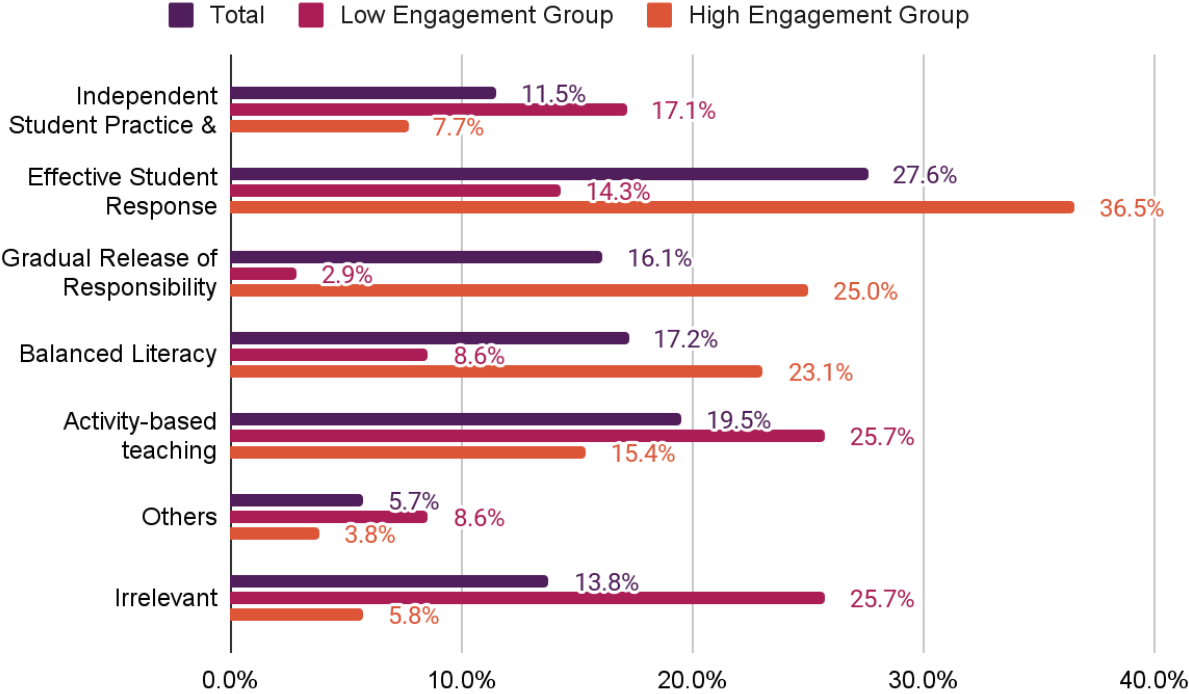
Practice implemented

Taking student responses more effectively, either individually via cold calling or collectively, was the most common practice teachers reported implementing in

their classrooms (Figure 8). These practices were also shown in the first few videos that were shared with teachers on the WhatsApp groups. Other practices teachers reported included activity-based teaching, Gradual Release of Responsibility (GRR), and Balanced Literacy. Within Balanced Literacy, most teachers reported using decoding strategies.

An important observation is that most teachers with high engagement clearly specified the practices they implemented, with effective student response being the most common, followed by GRR and balanced literacy. In contrast, more than half of the teachers from the low engagement group either mentioned implementing general activities, gave irrelevant responses or said they did not remember. Specifically, only 43% of teachers in the low engagement group explicitly mentioned a specific practice, compared to 92% of teachers in the high engagement group.

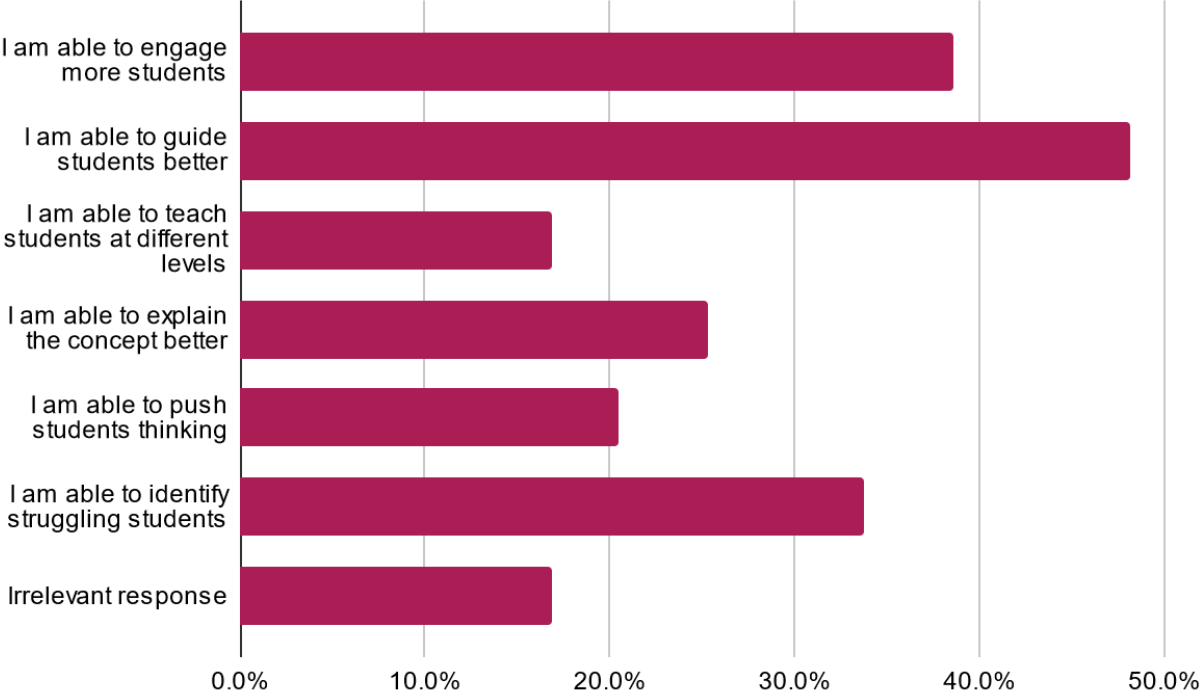
FIGURE 8: PRACTICES IMPLEMENTED IN CLASSROOM



All teachers who reported implementing the practice (n = 86), except for three, noted that their teaching became more effective or observed a positive change due

to implementing the practice. The reported changes due to implementing micro-practices included being better able to guide students (48%), engage students (39%) and identify struggling students (34%) (Figure 9).

FIGURE 9: CHANGES OBSERVED IN TEACHING AS A RESULT OF IMPLEMENTING THE PRACTICES FROM THE VIDEOS



We also asked teachers who reported implementing practices whether they made any changes to their instructions while implementing these practices.

- 30% of teachers reported giving more attention to weaker students while implementing these practices.
- 12% of teachers reported using colloquial language.
- 18% of teachers shared different strategies they incorporated into their teaching to improve engagement, such as employing different strategies for cold-calling.

- The remaining 40% of responses were vague, such as 'they do not remember'.

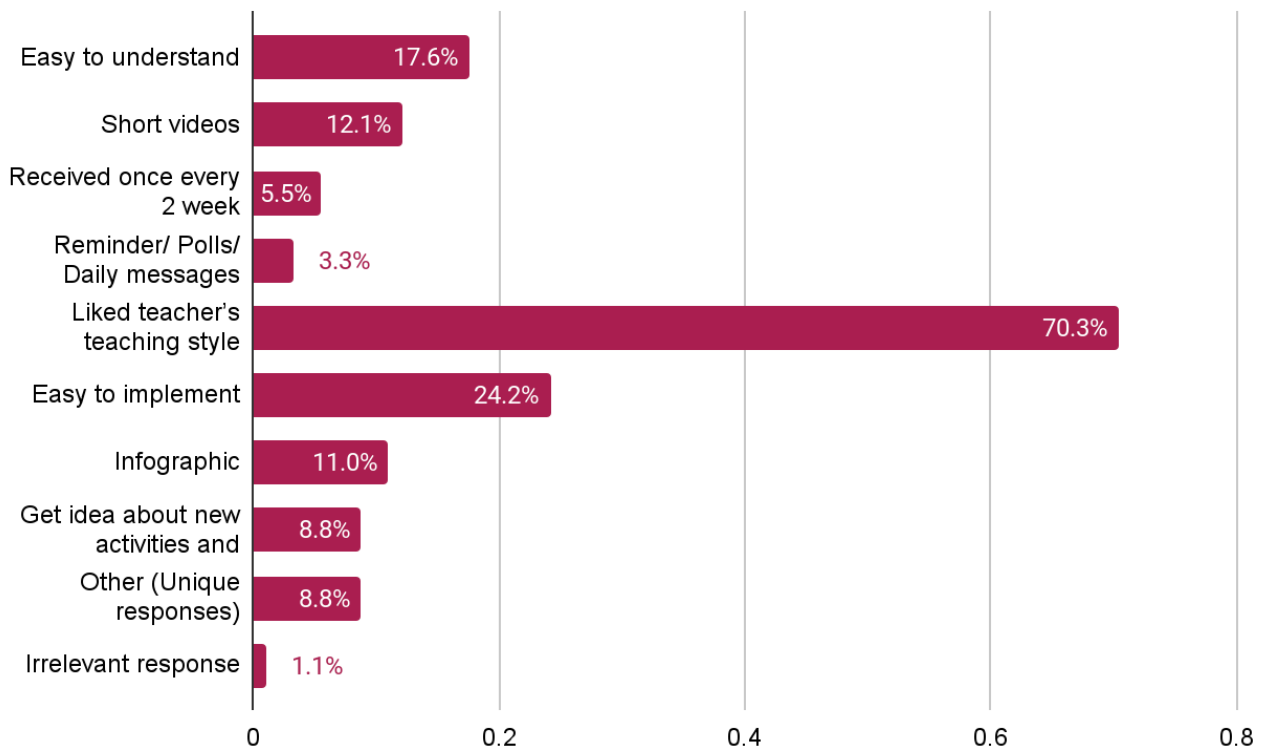
Reason For No/Low Adoption

Among the teachers who did not watch the video (n = 4), three reported a shortage of time as the reason. Three of the five teachers who reported not trying any of the practices said they plan to try them soon. Two also cited a shortage of time, and one mentioned limited phone usage as a reason for not trying the practices.

User Perception Of The Interventions

For Arm 2, the most liked features were the teaching style of the teacher in the video (71%) and the fact that the videos were easy to understand or implement (42%) (figure 10).

FIGURE 10: FEATURES LIKED- MPV



Most teachers selected "Do not dislike anything" when asked about features they disliked. In Arm 2, some teachers found the videos **difficult to implement in their**

setting or perceived them as too idealistic or not very contextual.

Suggestions For Improvement

Twenty-four percent of teachers suggested incorporating more videos featuring diverse activities. Specifically, the low engagement group supported this suggestion at 18.6%, while the high engagement group showed stronger support at 28.8%. Additionally, there was a notable recommendation for increased teacher interaction to discuss implementation challenges, with 21% of all teachers supporting this idea. Low engagement group had slightly higher support at 23.2%, compared to 19.2% from high engagement group. Lastly, 13% of teachers expressed interest in videos tailored for multi-grade teaching or large class sizes. Low engagement group contributed 6.9% to this suggestion, while high engagement group showed greater enthusiasm at 17.3%.

Some other unique suggestions for Micropractice videos are listed in the table below (Table 4).

TABLE 4: SOME UNIQUE SUGGESTIONS FOR MPV

TEACHER SUGGESTIONS

TEACHER SUGGESTIONS	
MICROPRACTICE VIDEOS	<p>Increase teacher interactions in the group:</p> <ul style="list-style-type: none">• More questions related to the video should be asked in the groups• Teacher feedback on the videos should be taken in the group <p>Student's parents should also be added to the group.</p>



SECTION 04: DISCUSSION

The analysis of our Midline phone surveys reveals several key insights into the engagement levels and teachers' perceptions of the usefulness of our interventions: the Chatbot and Micro-Practice Videos.

In the case of MPV, most teachers reported watching videos and implementing practice from the videos in their classrooms. Most of them also reported positive changes in their teaching, such as a better ability to guide and engage students and identify struggling students. We used teachers' responsiveness to WhatsApp polls as a proxy for their engagement level. We observed that teachers with higher poll responsiveness also reported higher engagement in terms of watching videos, recalling video content, and implementing practices shown in the videos, compared to teachers with lower poll engagement. In terms of likeability, teachers appreciated the teaching style and found the videos easy to understand. However, a few teachers felt the videos did not fully represent actual classrooms. This point was also reflected in teachers' suggestions, who recommended videos on remedial teaching, multi-grade or large-sized classrooms or teaching weaker students.

Most of the active chatbot users reported listening to the audio recording. They also found the chatbot useful for getting quick summaries of lesson plans and using those for pre-class preparation. Most of them reported using the bot in the morning before the class. However, a few teachers reported that they did not like the incorrect scheduling of the messages, such as messages being sent on holidays or during the wrong school hours. Regarding suggestions, teachers recommended integrating more content from the Teacher Guide into the chatbot, such as stories, poems and homework and asked for classroom activity videos.

The above findings suggest that teachers integrating these tools (MPV or chatbot) into their teaching practices perceived tangible benefits in terms of enhancing classroom preparation, providing better guidance to students, and making the class more engaging. We also learned that teachers appreciate these interventions' simplicity and ease of use. Additionally, from inactive users, we identified that paucity of time and limited access or usage of WhatsApp/phone are major barriers. The feedback and suggestions provided for improvement are valuable for

understanding these interventions' limitations and identifying what teachers want. From the perspective of intervention design and implementation, these are useful learnings.

While the small sample size and purposive nature of sampling make it difficult to develop an overall view, it is still helpful in understanding the engagement patterns. The endline data, which will be collected in two months with the entire sample of teachers, will provide a clearer understanding of the impact of our interventions on improving practices and other behavioural outcomes.

SECTION 05: **BIBLIOGRAPHY**

1. [Press Information Bureau, NIPUN Bharat](#)
2. Central Square Foundation, Systemic Drivers of Foundational Learning Outcomes, 2021

AUTHORS AND CONTRIBUTORS

The authors of this report are Sneha Shashidhara, Sonal Garg, and Akanksha Sharma from the Centre for Social and Behaviour Change (CSBC). This work was done in partnership with the Central Square Foundation (CSF), and we thank Kanika Tomar, Tanaya Ramani, Sidrah Naiyer, Suva Prasana Prusty, and Vibha Kumari—for their invaluable support and collaboration throughout the research process.

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