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FOUNDATION



ASHOKA
UNIVERSITY



Centre for
Social and
Behaviour
Change

USING BEHAVIOURAL INSIGHTS TO INCREASE PARENTAL ENGAGEMENT ON FLN

*A study by the Centre for Social and
Behaviour Change and Central
Square Foundation*



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1. EXECUTIVE SUMMARY

Solving the foundational learning (FLN) crisis in India requires bottom-up change, through the involvement of multiple stakeholders including teachers, administrators, parents and communities. Several states have taken the initiative to tackle the crisis through launching foundational learning programs, but limited attempts have been made to involve parents in supporting the success of these initiatives.

Research has shown that parental involvement in children's learning can positively affect their child's academic performance and social-emotional development¹. Children spend 80% of their time at home and thus the involvement of parents and communities can provide extended academic support to school systems. However, parental involvement in children's learning tends to be low because parents lack clarity on the role they can play and feel under confident to support given their own low literacy levels. This is exacerbated by their limited awareness of what skills children require in early grades along with low access to tools to support their child's learning.

Central Square Foundation and the Centre for Social and Behaviour Change at Ashoka University collaborated to develop behavioural interventions to support an increase in parental engagement in their child's FLN education. The interventions were designed using behavioural principles to:

- Provide parents clarity on the role they can play in their child's FLN journey
- Reduce cognitive load of engaging with children through simple tools
- Increase parents' confidence to engage with such activities

Parents were encouraged to play the role of a coach for their child, they were provided information on the importance of FLN for their child's future, skills their children were expected to acquire at an early age, along with simple activities they could use to engage with their children. Parents were shown videos in schools to orient them on their role and build their confidence, and the core interventions were delivered through two modes- 1) tech-based through WhatsApp groups 2) offline through parent workbooks.

The interventions were evaluated through a two-month randomised controlled trial with 1017 parents in Uttar Pradesh to test their effectiveness in improving parent engagement on FLN. The results of the analysis indicate that both the interventions increased parents' value of FLN engagement. In this report we provide details of the diagnostic research to identify behavioural barriers impacting parent engagement, interventions designed to address these barriers, intervention deployment channels, research findings from the field trial and conclude with scaling pathways for adoption of these interventions in other contexts.

¹Qiuyun Lin (2003), 'Parental Involvement and Early Literacy', Harvard Family Research Project

2. STUDY BACKGROUND

India can achieve the goal of universal foundational literacy and numeracy in primary schools by 2025 as set out in the National Education Policy only if multiple stakeholders work together and play a role in delivering this mandate. While parents and communities are external to school systems, they have an integral role in supporting schools with academic achievement by ensuring regular student attendance and monitoring and supporting their child's learning progress. Studies show that parental involvement in education improves academic and social-emotional outcomes for their children².

CSF and CSBC collaborated to develop and empirically test behaviour change interventions for parents to increase engagement on FLN. The project was implemented in Bahraich and Chitrakoot districts in the state of Uttar Pradesh between 2021-2022.

2.1 PROJECT PARTNERS

The project was designed and implemented with the support of the below partners in addition to the two core organisations:



[Imperium Edutech](#) and [Commonplace](#) helped us develop intervention content and [Maitra Market Research](#) supported us with intervention deployment and data collection.

²Qiuyun Lin (2003), 'Parental Involvement and Early Literacy', Harvard Family Research Project

2.2 PROJECT TIMELINES

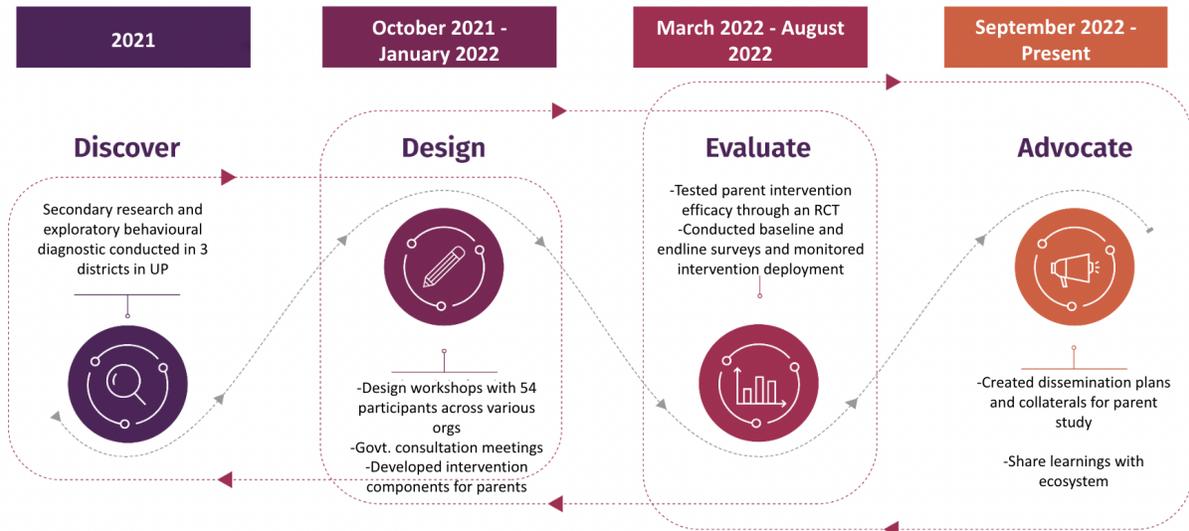


Figure 1: Project Timelines

3. DIAGNOSTIC FINDINGS

We conducted an exploratory research study to identify the behavioural enablers and barriers impacting achievement of FLN outcomes among key stakeholders. In-depth interviews were conducted with Teachers, Academic Resource Persons (ARPs)³ and Parents of children in primary schools in Bahraich, Chitrakoot and Balrampur districts of Uttar Pradesh⁴. A total of 8 interviews were covered with each target group. The diagnostic findings revealed motivational and capacity barriers faced by parents as outlined below.

3.1 MOTIVATIONAL BARRIERS



Figure 2: Behavioural Barriers to FLN - Motivational

³ ARPs are expected to play the role of academic mentors for teachers, there are 5 ARP posts in each block in UP

⁴ The interviews were conducted remotely through phone conversations in early 2021 as schools were closed due to the Covid-19 pandemic.

3.2 INTENT-ACTION GAPS

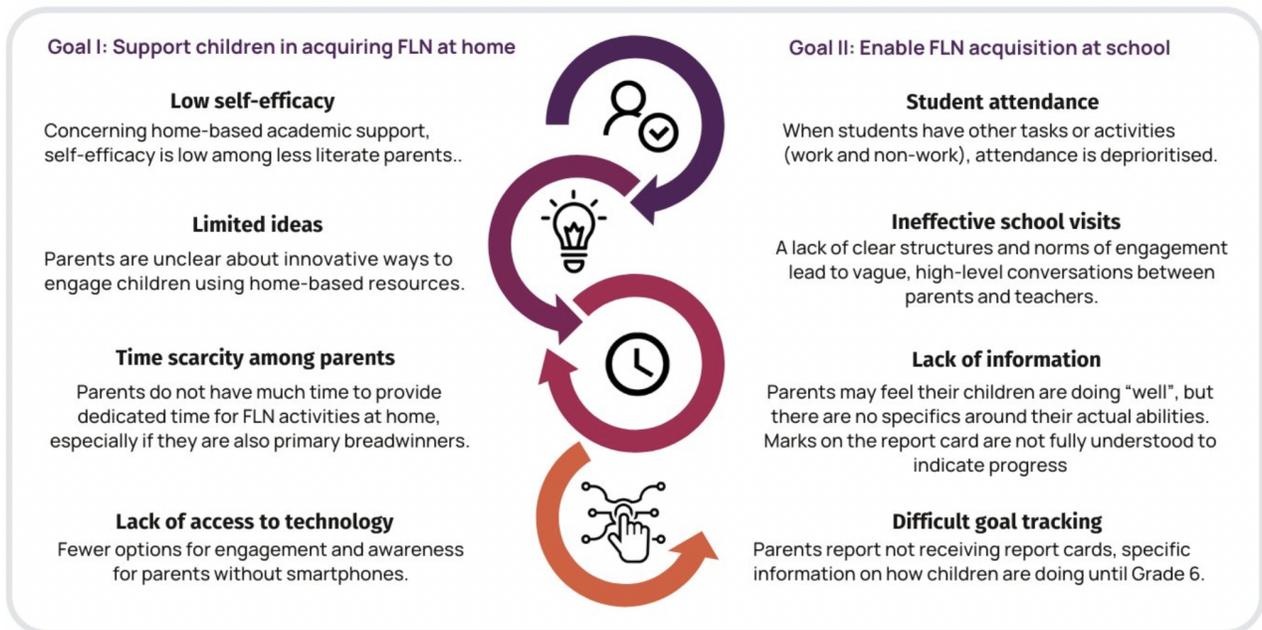


Figure 3: Behavioural Barriers to FLN - Intent-Action Gaps

3.3 ACCESS AND SYSTEM BARRIERS

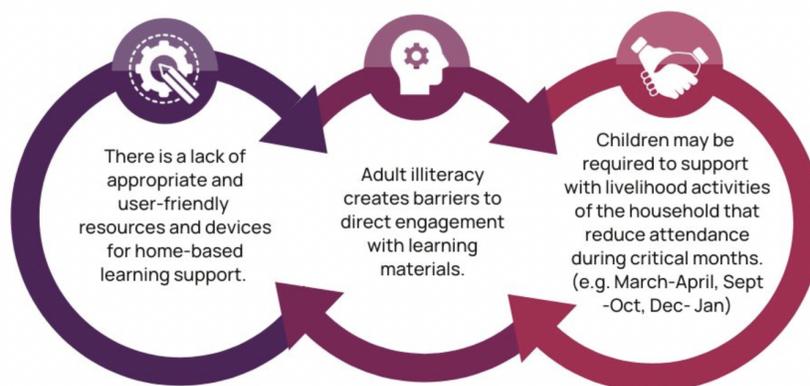


Figure 4: Behavioural Barriers to FLN - Access and System Barriers

3.4 BEHAVIOURAL FACILITATORS

- Parents believed in the value of education, specifically tangible advantages of reading bank passbooks and ability to take up jobs that require literacy (e.g. shopkeeper)
- Parents felt that school quality has improved and post covid their interactions with teachers have increased
- Covid helped activate some parents to be more involved with supporting learning at home

4. INTERVENTION DESIGN

To address the barriers identified through the diagnostic exercise, we focused on the following behavioural principles in our interventions:

- **Providing clarity on the role parents can play**

The diagnostic revealed that parents were unclear of the role they can play in their child's FLN journey and felt overwhelmed when asked to contribute to it. The interventions were designed to highlight the role parents can play as good 'coaches'. Being a coach, unlike teaching, does not require strong technical skills which the parents may lack. The primary role of the coach is to motivate, assess and build consistency. Parents were expected to become good coaches by engaging with their child's education, assessing their child's progress, motivating them to learn and arranging support for them in appropriate ways.

- **Making the task easy for parents**

Parents found engaging with their children a complex and time-consuming task. The interventions were designed to make the task of engaging on FLN easy for parents by providing them simple tools/resources and thereby reducing their cognitive load. They were also provided easy to use heuristics to assess and monitor their child's progress on FLN skills.

- **Generating confidence and improving self-efficacy among parents**

Parents from weak economic backgrounds with low literacy levels had limited self-efficacy to engage with their children on FLN. Motivational messages designed using behavioural principles were combined with easy-to-use tools to engage in FLN activities to build parents' confidence to support their child.

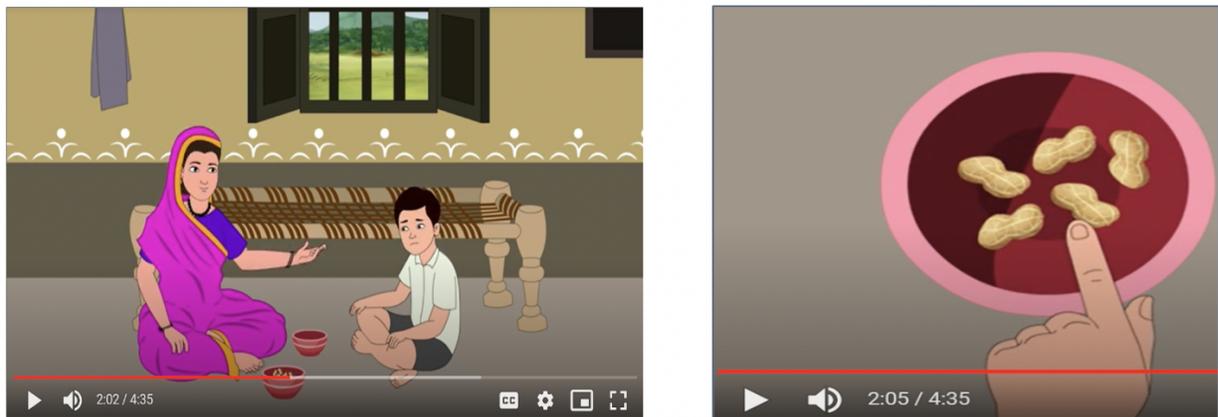
4.1 ONBOARDING VIDEOS

To orient parents on the role they can play a set of 4 animated videos were developed in collaboration with [Imperium Edutech](#) that provided information about:

- The importance of foundational learning
- Learning goals for children in class 1-3
- Parent's role in their child's FLN progress as coaches
- Examples of activities they can use to monitor their child's progress on FLN

The videos use relatable characters – Mr and Mrs Kumar who are parents to young children and have low literacy levels because they did not complete their schooling - to provide information to

the parents through an engaging narrative. The characters serve as role models as they were from a similar background as parents in our context and through the series the audience views them facing similar obstacles (e.g. low confidence to engage) and successfully overcoming them. The characters demonstrate how consistent engagement by parents conducting simple and fun activities with their children for 15-20 minutes every day can help support learning at home. The videos also depict how acquiring FLN skills in early years help children in higher grades, support them with real life situations (e.g. reading bank passbook or checking change received at a store) and set them up for future success as adults.



Principle Addressed

- Goal Demonstration
- Framing the role as that of an assessor/coach
- Outlining role with clarity
- Generating confidence among parents through a relatable narrator

Figure 5: Onboarding videos highlighted the role parents can play as ‘coaches’

4.2 WHATSAPP INTERVENTIONS

We developed videos with instructions on conducting simple FLN based activities that parents could do with their children during their daily routine using household items. A total of 40 bite sized videos with progressively increasing difficulty levels were developed or adapted from existing content from Rocket Learning. 5 videos were shared across each week for a period of two months on WhatsApp groups with parents. Solution videos or pictures were also shared with parents so that they had access to the correct answers to the questions included in the videos. The aim of the videos was to make it easy for parents to engage with their children, provide them simple ways to assess progress on FLN and build their confidence. The activities were aligned to competencies being covered in schools as per the state’s academic plan.

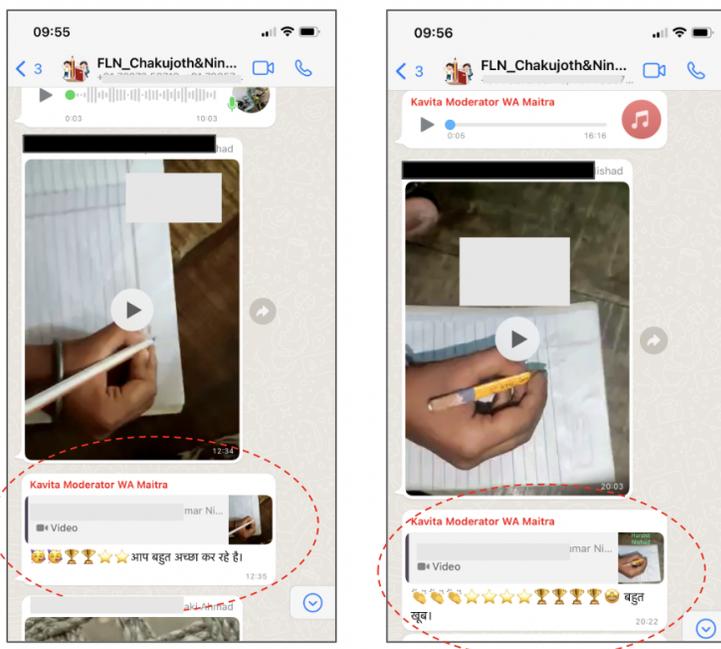


Principle Addressed

- Making it easy
- Reducing cognitive load
- Generating confidence among parents

Figure 6: Bite-sized videos demonstrating FLN activities were shared on parent WhatsApp groups

Parents were encouraged to share videos or photos of them doing intervention activities with their children in order to use social/peer effects to increase engagement. They also received motivational messages and reminders to complete activities and fill a progress tracker twice a week. The motivational messages were normative messages to help build confidence, social norms, commitment and clarify the role of parents as coaches. Reminders were shared as text message and voice note over the groups to ensure that all parents could access them.



Principle Addressed

- Social/peer effects to encourage engagement
- Providing motivation through feedback

Figure 7: Parents shared photos/videos of them doing activities with children

At the end of every week, report cards were shared with the group to track the number of activities parents had completed with their children for that week. The report cards served a dual purpose- they allowed parents to track progress and also helped motivate their peers to increase their engagement.

प्रगति पत्र

Week School Name

नाम	सोमवार	मंगलवार	बुधवार	गुरुवार	शुक्रवार
Ram					
Afzal		★	★		
Anuj	★	★	★	★	★
Sanchita	★			★	★
Bunty				★	★
Vishal	★				

Figure 8: Report card sample

4.3 PARENT WORKBOOK

Parents without access to smartphones were given a workbook comprising 40 DIY-style FLN activities that they could do with their children to engage them and assess their FLN skills. The activities were presented as a series of instructions that parents could follow to engage with their child on topics related to FLN. The workbook had primarily visual elements and illustrations with a toll-free number that low-literate parents could use to listen to audio instructions by entering the page number. A subset of parents also received daily IVRS calls with pre-recorded activity explanations and motivational reminders. The workbook was designed in collaboration with [Commonplace](#) and all the workbook content was aligned to the state developed textbooks and teaching-learning material.

टोल फ्री नंबर: इस खेल को सुनने के लिए 18002030580 पर कॉल करें

खेल 03 बड़े छोटे में अंतर पहचानो

(i) दसोंई से कोई दो फल या सब्जी लायें
(ii) अपने बच्चे को यह फल या सब्जी दिखाएं
(iii) उससे बड़ी सब्जी या फल पहचानने को कहें

निष्कर्ष: नोट बच्चे ने _____ बड़े फल/सब्जी सही से पहचाने।

अगर वो सही जवाब दे, तो उसे उस सब्जी/फल का पहला अक्षर लिखने को कहें।

Principle Addressed

- Making it easy
- Reducing cognitive load
- Generating confidence among parents

Toll-free number that parents with low literacy can use to call and listen to the activity

Assessment line to reinforce the 'assessors' role of parents

If the main activity is easy for a child, parents were given ideas to increase the level of difficulty for the task

Figure 9: Parents without WhatsApp were given workbooks with easy FLN activities to do with their child at home

The workbook also had various behavioural design principles such as commitment devices, progress trackers and motivational messages to build confidence. At the beginning of every week, parents were asked to write down how many hours they would spend on FLN activities with their children. At the end of every week, the workbook had a progress and attendance tracker.

खेल मूल्यांकन

खेल	खेल 01	खेल 02	खेल 03	खेल 04	खेल 05
दिनांक					
खेल	खेल 06	खेल 07	खेल 08	खेल 09	खेल 10
दिनांक					
खेल	खेल 11	खेल 12	खेल 13	खेल 14	खेल 15
दिनांक					
खेल	खेल 16	खेल 17	खेल 18	खेल 19	खेल 20
दिनांक					

सप्ताह 01

मैं सरल भाषा और गणित ज्ञान खेलों में इस हफ्ते _____ घंटे लगाऊंगा/लगाऊंगी।

Figure 10: Activity Tracker and Commitment Device

दिनांक : _____

सप्ताह 01 : लक्ष्य प्राप्ति

पिछले हफ्ते बच्चे की स्कूल में हाज़िरी : _____

पिछले हफ्ते कितने गृहकार्य दिए गए : _____

पिछले हफ्ते कितने गृहकार्य पूरे किये : _____

पिछले हफ्ते पुस्तिका के खेलों और गृहकार्य में दिया गया समय : _____

परीक्षा विषय व परिणाम : _____

यह खेल आपको आपके बच्चे के शिक्षा स्तर को पहचानने में मदद कर सकते हैं।
यह खेल खेलें और अपने बच्चे की प्रगति का पता लगाए। ऐसे ही आगे बढ़ते रहे।



13

Figure 11: Weekly tracker for parents to simplify tracking the child’s engagement in school and FLN activities with motivational reminders to build their confidence

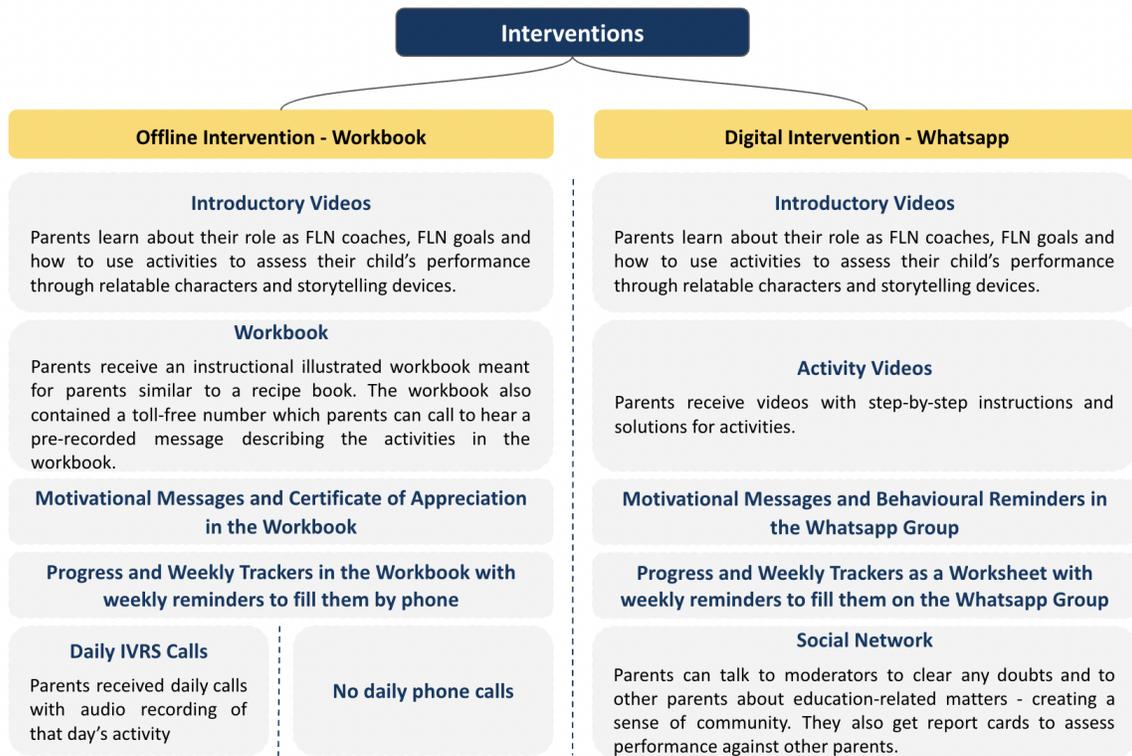


Figure 12: Intervention Summary

5. INTERVENTION DEPLOYMENT

The interventions were deployed over a period of 8 weeks through the following channels:

1. Introductory/Onboarding Videos

The onboarding videos were shown to parents in treatment schools by enumerators and CSBC/CSF team members after a baseline survey had been conducted with the parents. Parents were shown the videos in batches of 3-6 using laptops. These videos were shown to parents who received both types of interventions – i.e., WhatsApp and workbook.



Figure 13: Video Demonstration Session (Photo credits: Neel Karnik)

2. Workbook Intervention

After screening the introductory videos, parents without WhatsApp were assigned to the Workbook group and given one copy each to take home with them. ARPs gave parents a walk through on what the workbook was, its purpose and how parents could use it to engage with their children. The session also included demonstrating the use of the toll-free helpline number listed in the book if parents faced difficulty in reading text in the book and required audio support. They were also shown how to use the progress trackers in the workbook. Prior to the delivery of the intervention, the project team had conducted training for ARPs to familiarise them with the workbook and how to demonstrate its use to parents.



Figure 14: Workbook demonstration session (Photo credits: Neel Karnik)

In some cases, if ARPs were not available, the demonstration was conducted by field staff hired and trained or members of the CSF-CSBC team.

3. WhatsApp Intervention

Parents with access to WhatsApp were added to WhatsApp groups of their school and shown how to use the videos and other content shared on the group. The demonstrations were conducted by field enumerators hired and trained by CSF and CSBC. Parents were encouraged to watch the videos to learn simple activities they could do with their kids for 5-10 minutes every day, and post a video or photo of them doing the activity with their children in the WhatsApp group. Moderators also explained the tracker sheet to the parents, which they could use to keep track of their child's attendance and progress and also record the outcome of the activities they do with their children. The groups were moderated by a team of enumerators hired and trained to share intervention content on a daily basis, answer any questions posted by parents and encourage them to participate. The moderators also sent motivational and reminder messages every week and recorded parent engagement data for monitoring purposes.

6. MONITORING AND EVALUATION

A randomised controlled trial was conducted to evaluate the effect of the intervention on parental engagement in their children's FLN education. Parents of students from class 1-3 in government schools from Bahraich and Chitrakoot districts of Uttar Pradesh were eligible to participate in the study. Schools in each block were randomly assigned to control or treatment groups and parents were assigned to workbook or WhatsApp treatment groups based on their access to smartphones. The recruitment criteria, experiment flow and results are explained in detail in the following sections.

6.1 SAMPLE RECRUITMENT

The districts were selected from among other Aspirational Districts in UP based on their range of performance in language and maths assessments⁵ and the willingness of district administration to participate in FLN initiatives. Three blocks per district were chosen in consultation with the district education administration and Piramal Foundation. All primary schools from these blocks were asked to share data on grade-wise enrollment and number of parents with WhatsApp access. The final list of 3 blocks were selected (Mau in Chitrakoot, Huzurpur and Fakharpur in Bahraich) based on the below criteria:

- Operational feasibility for data collection
- Enrollment
- Smartphone availability

Based on the data submitted by schools from these blocks, a subset of 20 schools with enrollment closest to the median total enrollment in the block were selected. With inputs from the district administration on accessibility, 15 schools per block were finalized for the study and were randomly assigned to treatment or control groups. All parents of children in class 1-3 from these schools were invited for the baseline survey by teachers. A total of 30 parents per school were finally enrolled in the study on a first come first serve basis after taking their consent. Upon reaching the desired target of 30 parents per school, recruitment was closed. Only one parent per child was allowed to participate. For endline surveys, the same 30 parents were invited by teachers and enumerators. Parents were given a stationery kit at baseline and endline as a token for participating in the surveys.

⁵ ASER 2018 and NAS 2017 information was used

6.2 SAMPLE DETAILS

Survey	Total Sample	Whatsapp	Workbook	Control
Baseline	1340	250	612	478
Endline	1017	200	466	351

6.3 SAMPLE CHARACTERISTICS



Female
71.88%



Median Age
32 years



Average household size
6.97



% Hindu - 84.17%
% General - 16.03%



% completed 8th
standard or higher -
81%



% employed - 45.62%



% with household income below Rs. 10,000 per month
74.43%

6.4 EXPERIMENT FLOW

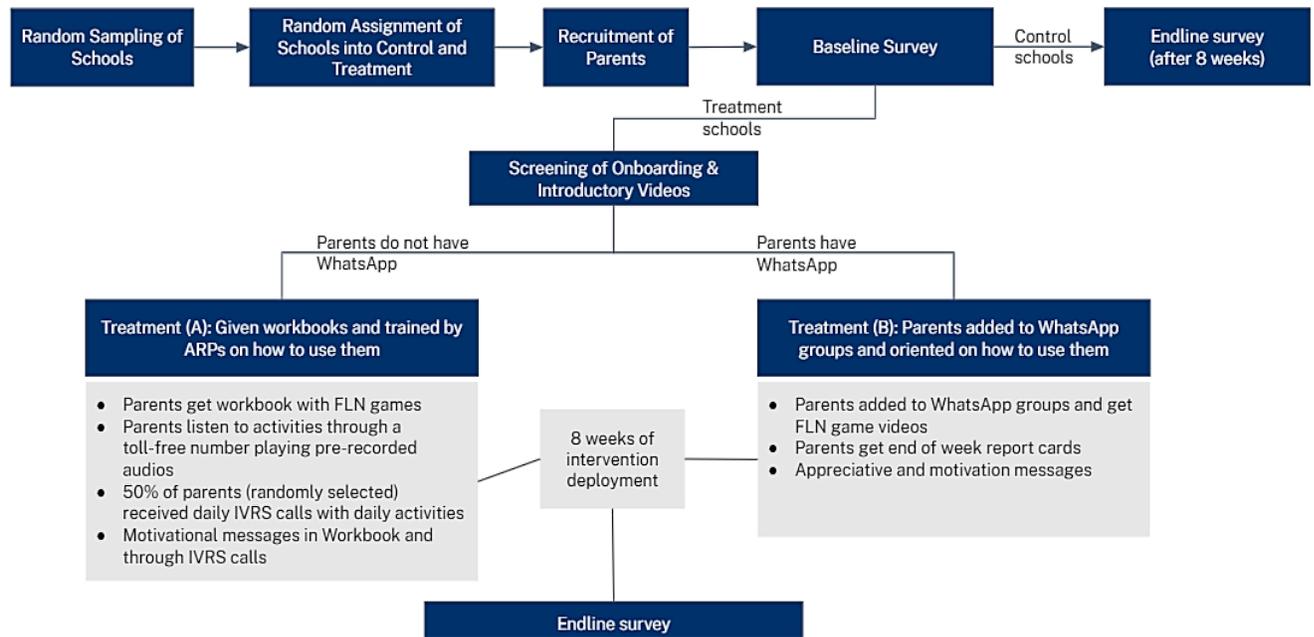


Figure 15: Experiment Flow

6.5 INTERVENTION MONITORING

Different types of data were collected and tracked to understand if parents in treatment groups were engaging with the interventions. The data tracked was mainly-

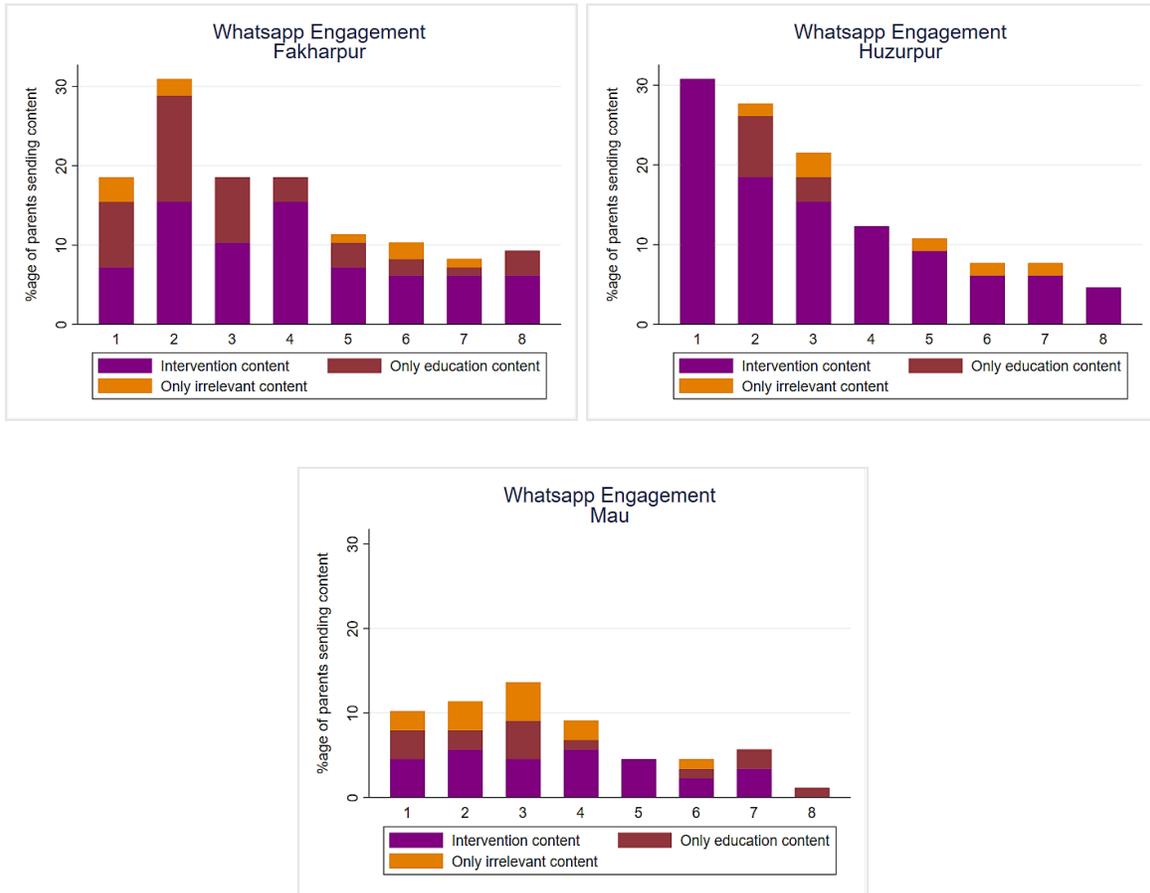
- Engagement with WhatsApp intervention content
- Calls made to toll-free helpline
- Engagement on IVRS calls

6.5.1 Engagement with WhatsApp intervention content

Overall, about 23.41% of parents shared intervention related content at least once on WhatsApp groups set up for each school. Trends observed on WhatsApp group engagement were as follows:

- In Fakharpur, parent engagement peaked in week 2 at 31% with about half of the parents sharing intervention related content.

- Parent engagement was highest in Huzurpur block with nearly 31% of parents sharing intervention related content on the WhatsApp group in week 1 and a high proportion of parents sharing intervention content throughout.
- Engagement rate in Mau was comparatively lower with only 5% of parents sharing intervention related content when engagement peaked at 15% in week 3.



Graph 1: WhatsApp Engagement across the three blocks

While this data provides a sense of how many parents were actively participating in the WhatsApp group, it is an imperfect measure of overall engagement with the intervention – some parents may have done these activities with their children but were unable or unwilling to share photos or videos on the WhatsApp groups as proof of their engagement.

6.5.2 Engagement with workbook through toll-free number and IVRS

A toll-free number was set up with the help of Exotel (a cloud telephone service) with pre-recorded messages for each page that parents could listen to if they needed help to navigate the workbook. The data on engagement with the helpline is outlined below:

Table 1: Data on engagement with the helpline number

Indicator	Total
Number of parents assigned to Workbook group at Baseline	612
Number of Calls Made (excluding baseline times)	1213
Number of Unique Phone Numbers that called (excluding baseline times)	142
Number of Unique Identified Participants	98 (20 Chitrakoot, 78 Bahraich)
Average duration of the calls made by parents (excluding baseline days)	31.5 seconds

Of the 612 parents assigned to the workbook group, 50% of parents were assigned to an IVRS group. Daily IVRS calls were set up with audio recordings of that day's activity - this helped us understand if the effort of calling the toll-free number could act as a barrier for parents to easily engage with their children on FLN. Each number was called a maximum of 3 times or until the call was picked up, whichever came first. This was set up with the help of the same cloud telephony company (Exotel) that set up the toll-free number. The table below shows the number of calls that were connected and completed. Connect refers to the calls that were picked up by parents while complete refers to the calls in which parents listened to the entire recording. Approximately one-third of calls that connected were heard fully by participants.

Table 2: Data on IVRS Calls

Indicator	Total
Number of Calls Made	22895 ⁶
Number of Call Connected	6192
Number of Calls Heard Completely	2519

⁶ The number of calls made is much higher than connected as each phone number was called three times if the call was not picked up.

6.6 EVALUATION DESIGN

The primary outcome of interest was the impact of the interventions on parental engagement on FLN. This was measured through four primary outcome variables:

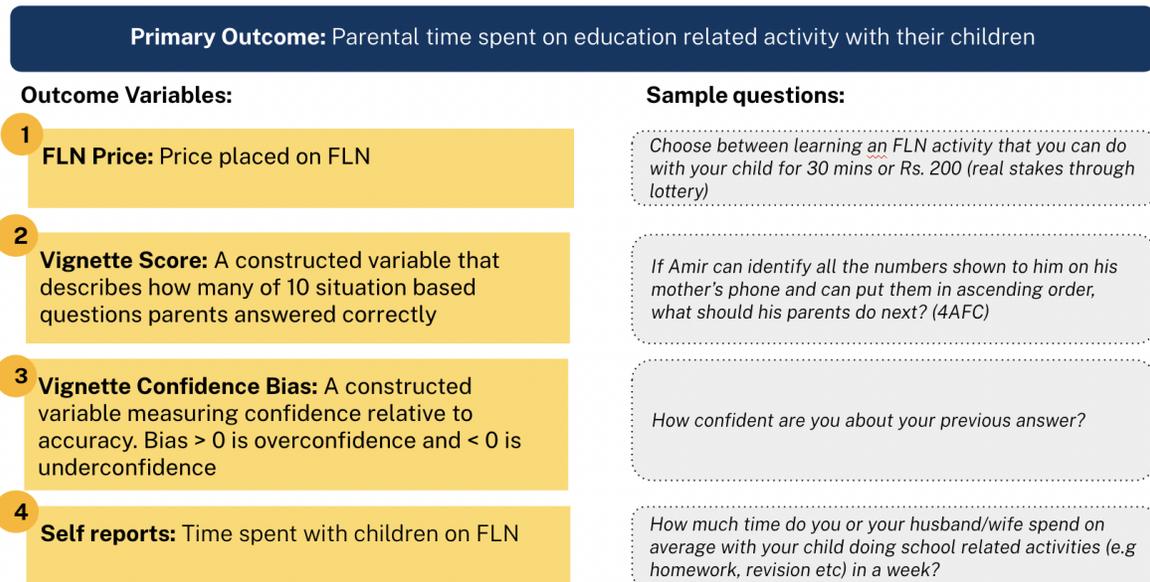


Figure 16: Primary Outcomes

We also measured the impact of our interventions on secondary outcomes such as parental knowledge and importance given to FLN. This was measured through 3 secondary outcome variables:

Secondary Outcomes: (i) Parental knowledge (ii) Salience of FLN

Secondary Outcome Variables:

- 1 **Total Knowledge Scores:** Number of questions on knowledge of FLN answered correctly out of 4 questions
- 2 **Knowledge Rankings:** Question about sequence of learning skills, question asked in endline only
- 3 **Importance Ratings:** Importance rating (on a scale of 1 to 5) of contribution of FLN, parents and teachers to child's future life; and how much they intend to contribute to their child's education

Sample questions:

Rahul is a student in Grade 1. Rahul could read a short text on cars. Which of the following skills should Rahul have in order to be able to answer simple questions about the story orally?

What order do children learn these skills? Think about what comes first: Write short words, Write letters, Recognise letters, Write full sentences

On a scale from 1 to 5, how important do you think parental involvement in the child's education is for a child's success in the future?

Figure 17: Secondary Outcomes

We conducted empirical tests to determine whether the control and treatment groups differed on observable variables such as demographics and test for differential attrition among the groups at endline. As the groups did not differ significantly from each other, we estimated the treatment effects on outcomes using variants of the following equation:

$$y_i = \beta T_s + \gamma_1 y_i^B + \gamma_2 X_i + \delta_b + \varepsilon_s$$

Where,

- y_i is the relevant outcome for participant i
- T_s is an indicator variable capturing whether the participant is assigned to the relevant treatment or control. The randomisation was conducted at the school level. Participants with access to WhatsApp in treatment schools formed the WhatsApp treatment group and those in control schools formed the WhatsApp control group; Workbook treatment and control group were formed correspondingly with participants without access to WhatsApp.
- β is the coefficient of interest - it captures the effect of the treatment on the outcome
- y_i^B is the outcome for participant i at baseline

- X_i are the demographic controls – Age and gender of the participant and child, education and employment of participant and spouse, household income and size, religion, caste, indicators for respondent are primary guardian and has their own mobile at baseline
- δ_b are the block fixed effects
- ε_s are the standard errors, clustered at the school level

6.7 EVALUATION RESULTS

Our analysis of the evaluation data revealed that both the workbook and WhatsApp intervention had a positive impact on parent engagement outcomes.

Table 3: Summary of results for WhatsApp Intervention

Whatsapp Group		Regression Specification	Coefficient	Treatment mean (Control mean)
Primary Outcomes	FLN Price	OLS	2.606	Rs. 191.80 (Rs. 186.50)
	Vignette Score - Accuracy	Logit	1.16	30.55% (27.2%)
	Vignette Confidence - Bias	OLS	-0.047	0.50 (0.55)
	Self-reported Time Spent	Ordinal Logit	1.586	3-5 hours/ week (3-5 hours/ week)

Table 4: Summary of results for Workbook Intervention

Workbook Group		Regression Specification	Coefficient	Treatment mean (Control mean)
Primary Outcomes	FLN Price	OLS	13.69	Rs. 192.61 (Rs. 180.69)
	Vignette Score - Accuracy	Logit	1.065	28.29% (26.97%)
	Vignette Confidence - Bias	OLS	-0.005	0.51 (0.52)
	Self-reported Time Spent	Ordinal Logit	1.119	3-5 hours/ week (3-5 hours/ week)

6.8 DISCUSSION

Our primary outcome was the parental engagement with their children on FLN, which we measured in several different ways. Firstly, we asked participants how much time they spent with their children on FLN-related engagement. This self-reported measure is likely to suffer from social desirability bias - as participants were aware that the study is about FLN, they may exaggerate the time that they spent with children on FLN activities. This is indicated by the mean response for both treatment and control groups being the highest option.

To tackle this, we designed two other measures for parental engagement, FLN price and vignette Scores. We asked the participants about their willingness to pay for 30-minute of instruction on FLN activities that they can do with their children. The choice was implemented for a randomly selected subset of participants, incentivising the parents to reveal their true preferences. For this measure, we see an increase in the willingness to pay by Rs. 13.69 for the participants in the workbook treatment.

We also designed a set of 10 story style questions which described the child's FLN skills in context of day-to-day life and asked the respondents for the ideal next steps by the parents. Each of the possible options corresponded to a reasonable action by the parents, but with different levels of engagement on FLN instruction. Thus, there was no obvious socially-desirable answer, instead the questions tested whether the parents answered with a course of action that took the opportunity to inculcate FLN engagement in daily activities. The mean vignette score was 30.55% for parents in the WhatsApp intervention group and 27.20% for parents in the control group. Being in the WhatsApp group increased the odds of narrative vignette accuracy by 1.16 times, significant at 10% level.

We also used the vignette questions to measure the effect of the intervention on parents' confidence regarding their role in FLN instruction. We asked the parents how confident they were that their answer was correct i.e., the option that they chose as next steps ought to be the most appropriate for all the vignette questions at baseline and endline. A variable was constructed to measure the confidence of parents vis-a-vis the accuracy of their answers. The confidence bias measure is thus the difference between average confidence over the vignette questions minus average accuracy. A negative value on this variable denotes under confidence and overconfidence is denoted by a positive value. At baseline, we see that parents are overconfident. There is a significant decrease in the overconfidence for the WhatsApp group at endline. Note that this effect could be driven by the increasing accuracy in the vignette questions.

Several secondary outcomes assessing the FLN knowledge of parents, the importance they place on education, FLN, and different factors contributing to FLN engagement were also collected during the surveys. However, we observed no significant results for either workbook or

WhatsApp interventions with one exception. For the WhatsApp group, parents were significantly more likely to identify the correct order in which numeracy skills should be learnt as compared to those in the control group. These outcomes were included to explore possible mechanisms through which the intervention might have worked - for example, by making the parents more knowledgeable or raising the perceived value of FLN. It is worth noting that the importance ratings suffered from the social desirability bias like other self-reported outcomes as discussed above. We do not observe a change in the knowledge score of parents (except for the ranking of numeracy skills by WhatsApp group) suggesting that the interventions might be affecting the behaviour through other mechanisms.

From the above results, we conclude that both the interventions were successful in increasing parental engagement in FLN through the value that parents placed on FLN engagement (for workbook group) and willingness to choose actions involving higher FLN engagement (for WhatsApp group).

7. RECOMMENDATIONS FOR SCALE

Through our study we found that both providing the parents with the designed workbook or adding them to a WhatsApp group on which activities are shared regularly can positively affect parent engagement on FLN. While implementing the interventions in other geographies, the intervention content will need to be contextualised by considering the following:

- Learning outcome framework used by the state and the goals children are expected to achieve in grades 1-3
- Alignment of FLN activities given to parents with the competencies being covered in schools based on the state academic calendar (e.g., if the child is learning addition in week 8 in school, activity videos shared with parents are based on addition during that time period)
- The stories, poems and other material used in the videos or workbook would need to be replaced with similar content from the state’s teaching learning material
- The competencies selected and activities designed for parents should be easy for them to incorporate in their daily routine at home with their children (e.g., asking children to count chappatis made for dinner)
- Incorporating local language and dialect into the onboarding and activity videos, voice notes and the pre-recorded messages on the toll-free number

The implementation pathways listed below can be considered to operationalize a parent engagement model at scale. However, these pathways for delivery have not been tested in our study and will need to be adapted to suit specific contexts.

Table 5: Implementation Pathways

Implementation Pathways	Description	Current use of similar pathways
Parent- Teacher Meetings	Parent teacher meetings (PTMs) held in schools could be used to orient parents on their role, demonstrate the use of tools to simplify engagement (e.g parent workbook) and follow up on progress made	Bihar conducted a statewide mega PTM in 2022 to discuss students progress and parents were invited through home visits and IVRS calls
Gram Panchayat events	With the support of the Panchayati Raj Department (PRI), Gram Panchayats can organise community events on FLN. The Gram Pradhan/Panchayat secretary or	The PRI department in Karnataka in partnership with Akshara Foundation conducts maths contests for children in

	other community members can orient parents on their role, and provide tools to support with engagement	the presence of parents and Gram Panchayat members
Volunteer led models	Local youth volunteers from the same village can be trained to onboard parents, orient them on their role in FLN, demonstrate the use of tools and provide follow up support.	Tamil Nadu conducted an after school remedial program “ Illan Thedi Kalvi ” through locally hired community based volunteers. A similar approach could be used to strengthen parent engagement.
Technology led	Technology platforms (e.g whatsapp) offer scalable ways to implement parent engagement interventions where information on role clarity and tools to engage can be shared in the form of videos.	Rocket learning partners with school systems to provide parents access to bite sized video based content to increase their involvement. Teachers add parents on whatsapp groups and motivate them to stay engaged. RL’s whatsapp bot sends out content to parents.

8. CONCLUSION

Behavioural barriers inhibit parental involvement in their child's learning. Our study shows that parental engagement can improve by providing parents clarity on the role they can play, reducing cognitive load of engagement by giving them simple tools and using motivational reminders to build confidence.

We find that both the workbook and WhatsApp interventions positively affected parents. Giving parents workbooks with simple activities that they could do with their children increased their willingness to pay for learning how to effectively engage with their children by Rs. 13.69. Parents who received activity videos and reminders over WhatsApp groups increased the odds of their narrative vignette accuracy increase by 1.16 times more than control and showed a decrease in the confidence bias.

Based on the learnings from our study, we recommend that tools such as workbooks or videos containing simple instructional activities be shared with parents, along with motivational messages, reminders, and commitment devices etc. Existing structures such as parent teacher meetings, Gram Panchayat events, volunteer or technology-based models can be leveraged to involve parents more meaningfully in their children's FLN achievement.

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