CENTRAL SQUARE FOUNDATION

Lessons from the Project on

Understanding EdTech Usage at Home Using Dedicated Devices

Part II of Report

Learnings from Interventions Deployed to Encourage Use of EdTech on Dedicated Devices

August 2022 - May 2023

Table of Contents

Acknowledgement

We express our profound appreciation to those instrumental in launching this project and compiling the report. Their invaluable support and time were indispensable to this endeavour.

We express our deepest gratitude to our strategic funder, ACT Grants, for their pivotal involvement and generous support throughout the project and to our learning solution partners, BYJU's and Educational Initiatives, for providing the learning software, technical assistance, and in-app data which played a pivotal role in facilitating the seamless implementation, research, and iterative enhancements of our project.

With profound thanks, we acknowledge our crucial implementation partner, Sshrishti Trust, whose dedication and collaborative efforts have been instrumental in project setup, beneficiary training, and meticulous on-ground support for the implementation of this project.

We also acknowledge the indispensable support and counsel from our advisors and champions, including Ashish Dhawan, Asyia Kazmi, Benjamin Piper, Shaveta Sharma-Kukreja, and Sri Rajan.

Gratitude is also extended to our colleagues from the EdTech team who graciously dedicated their time and provided valuable suggestions throughout the project and during the compilation of this report.

We hope that the insights gleaned from the report will aid stakeholders looking to invest in device distribution programmes for educational purposes and contribute to the collective knowledge on encouraging EdTech usage at home.

Authors: Prof. Tarun Jain, Gouri Gupta, Atma Dinnie Charles

Executive Summary

Photo credit: Sshrishti Trust. Location: Almora, Uttarakhand.

Context: Device distribution programmes have been a part of policy dialogues and government initiatives far before the pandemic, both in India and globally. Over the past decade, one of the most high-profile education technology initiatives in developing countries has been the One Laptop Per Child (OLPC) programme. While Plan Ceibal in Uruguay was the first programme in the world to provide all primary school students with free laptops in 2009, the largest programme was in Peru where one million OLPC XO laptops were distributed to students. In India, the Aakash project in 2011 paved the way for the introduction of new low-cost educational tablets into the hands of students in a developing country. The Tamil Nadu government's Free Laptop Scheme has already provided over 51.67 lakh laptops to students until 2020 and with the Free Laptop Scheme 2023 restarting in 2023, all students who have passed the 10th or 12th standard examination from a government or aided school can now avail of the benefits of this scheme.

While many of these past programmes focused on hardware distribution, they often did not include a coherent learning directive or focus on designing behavioural nuances that go into EdTech adoption and engagement. The Inter-American Development Bank's evaluation of the Peruvian One Laptop Per Child found that the programme dramatically increased access to computers. However, there was no evidence that the programme led to increased learning in Math or Language. Similarly, the Commonwealth of Learning's extensive research on government-led tablet initiatives in 11 countries also highlighted that there was limited discussion on the pedagogical frameworks used in the learning content provided in these tablets.

Experimental evidence on learning using low-tech in Botswana also claimed that simply providing hardware in classrooms led to little or no improvement in Language and Math skills. It was found that the effectiveness varied considerably depending on the type of software deployed, the reach and pedagogical techniques that the developers used, how the software was used by students, and how teachers interacted with the software in classrooms.

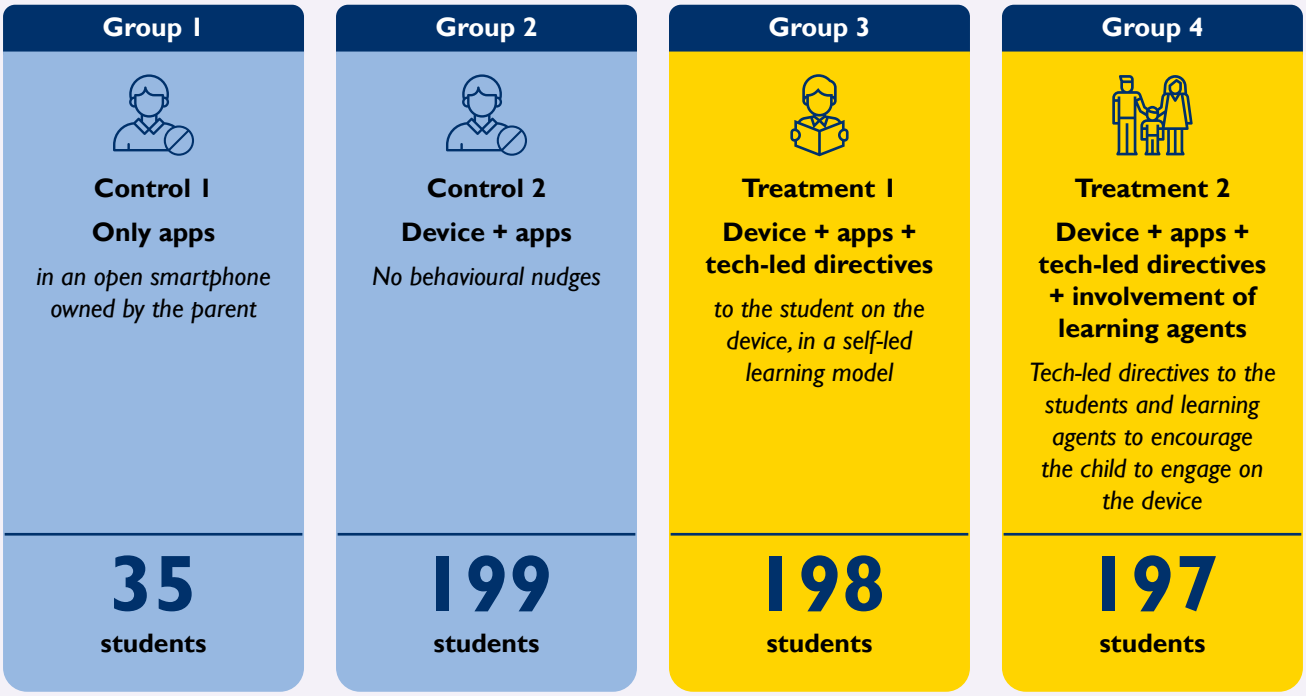
In addition to the type of software, a global meta-analysis of 55 research studies has also documented that there is a positive relationship between parental involvement and students' academic achievement. The review highlights that parental involvement in a student's learning journey shows the highest correlations in parental encouragement, communication between parents and children regarding school, and support for learning, amongst others.

In light of this evidence, there is value in ensuring continued parental engagement, especially in foundational learning. One of the ways in which parental engagement in a child's learning journey can be sustained is through the use of technology. Technology can allow parents to supplement their children's learning outside of school where they can track progress, access additional learning resources, connect with other parents and teachers, and do fun activities with their children.

Research objective: Drawing on these learnings from past device distribution programmes and research studies that highlight the involvement of parents as learning agents, the project *Understanding EdTech Usage at Home Using Dedicated Devices* identified and instituted the various levers **to identify best practices of EdTech-seeking behaviour at home where dedicated devices were made available to children and there were programmatic nudges to encourage EdTech usage**. For this project, devices installed with Mobile Device Management (MDM) software, an internet package, and two learning solutions (BYJU's *Think and Learn* App and Educational Initiatives' *Mindspark* App) were distributed among 600 students (Grade 4 and 8) in 83 government schools in Almora, Uttarakhand, for learning at home.

Design: Under the guidance of Prof. Tarun Jain (Associate Professor in Economics and Ravi J. Mathai Centre for Educational Innovation at the Indian Institute of Management, Ahmedabad), this action research was conducted over 7 months (from November 2022 to May 2023) in four groups.

Total cohort: 629 beneficiaries (594 devices)



594 beneficiaries (across Group 2, Group 3, and Group 4) were given dedicated devices with the pre-installed package of four apps (Learning solutions: *BYJU's* and *Mindspark*; non-learning apps: *Youtube Kids* and *Google Chrome*) along with internet package and MDM software. Whereas Group 1 received access to the learning solutions, BYJU's and Mindspark were installed on their caregiver's smartphone to which they have shared access in a household.

Insights and learnings: There have been several key insights from the project and these have been divided into two parts to contribute to our collective knowledge on setting up device distribution models for educational purposes and deriving insights on the usage of EdTech at home using dedicated devices.

Part 1

includes an implementation playbook that provides learnings relating to procurement, provisioning, distribution and maintenance of devices

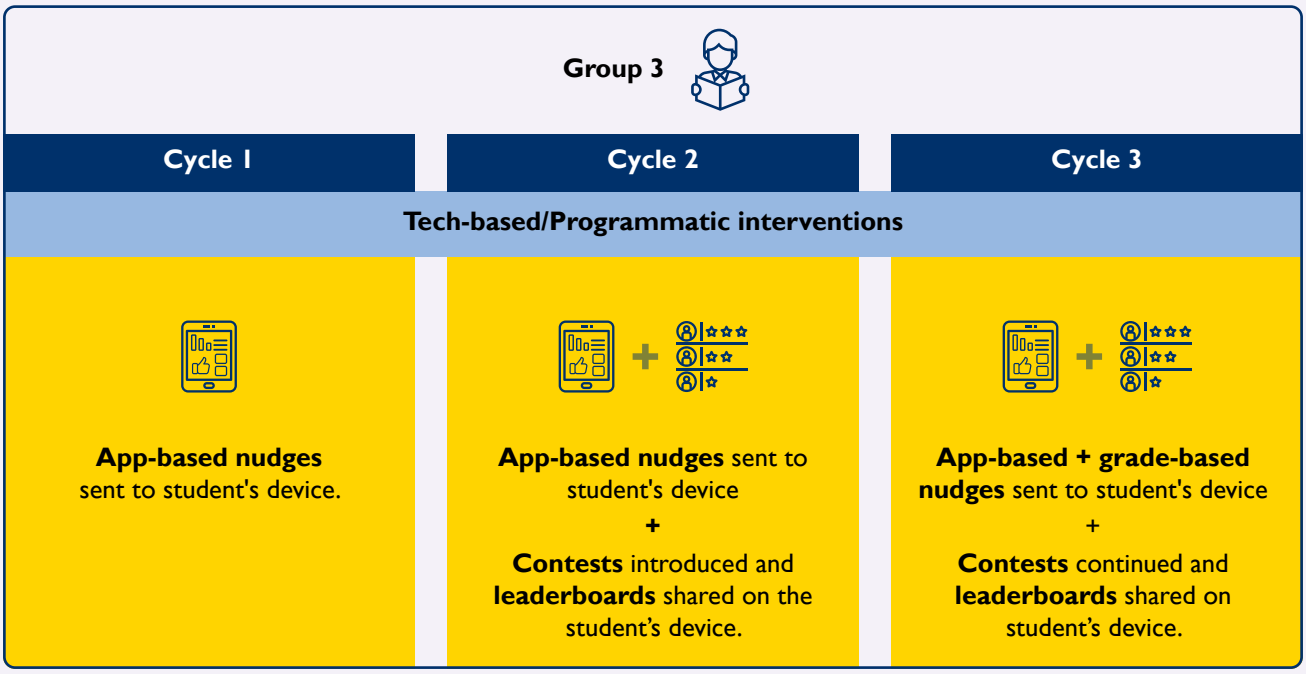
Part 2

includes this report which describes the programme that was deployed to encourage the use of EdTech on dedicated devices

Over 7 months, the project design was optimised through rapid iterations with tech-based and programmatic interventions in treatment groups to encourage the use of and engagement on EdTech solutions. The project implementation was carried out in three iterative cycles (ranging from 6 to 8 weeks), wherein learnings from each cycle were used to design the interventions for the subsequent cycle.

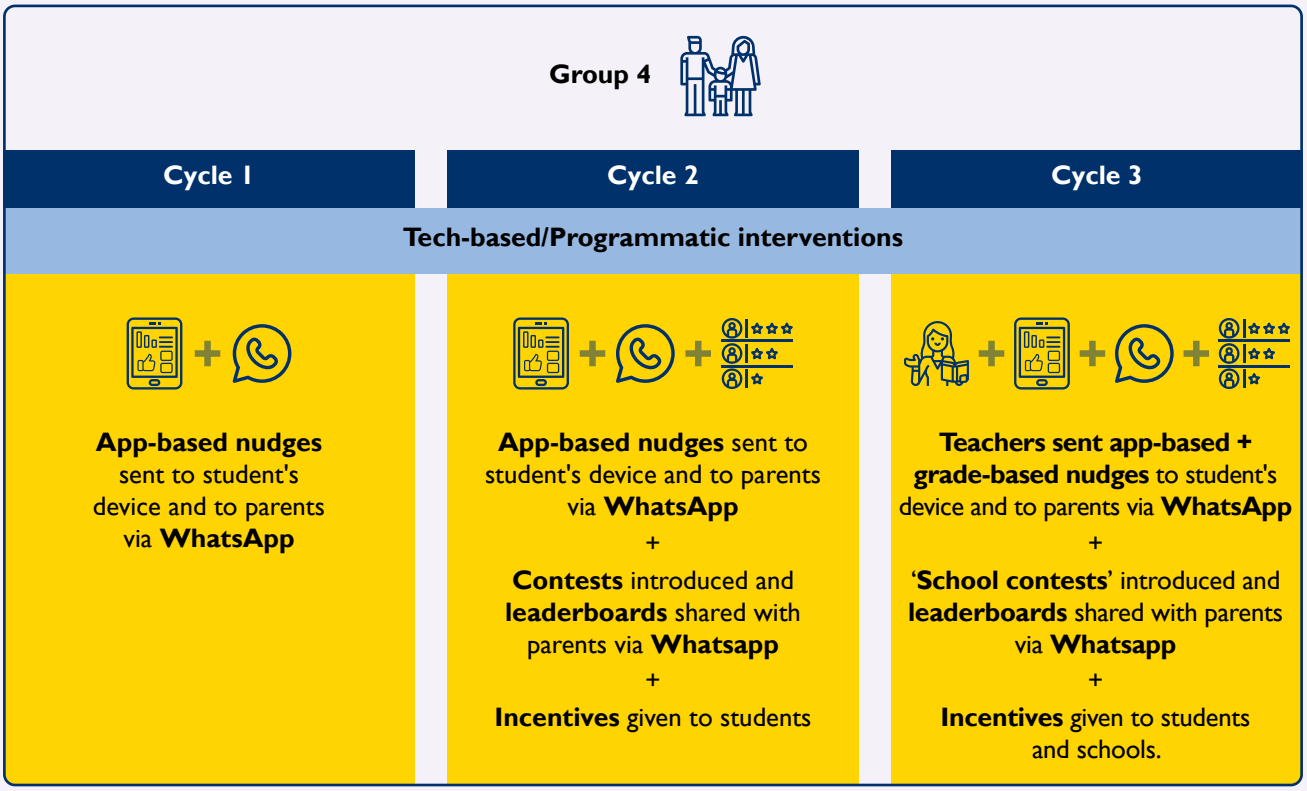
In Groups 2, 3 and 4 where devices were provided, certain on-ground measures were undertaken to ensure device functionality and safety. In these groups, field coordinators from the implementation team (Sshrishti Trust) conducted school visits/home visits to identify devices that were broken or reset to replace or reprovision them to ensure no loss of learning for the students.

In treatment Group 3, the students were nudged directly on their devices via MDM for self-learning on the device and included no involvement of learning agents. In this group, the following interventions were deployed:



- In Cycle 1, app-based nudges were sent to students via MDM
- In Cycle 2, in addition to app-based nudges sent to students via MDM, contests were introduced and leaderboards were shared every two weeks on the student's device
- In Cycle 3, grade-wise groups were created and one grade-aligned activity was sent every week to students via MDM and leaderboards were shared every two weeks on the student's device

In treatment Group 4, the students were nudged directly on their devices via MDM, and parents as learning agents were nudged on their school-wise WhatsApp groups. In this group, the following interventions were deployed:



- In Cycle 1, app-based nudges were sent to students via MDM and to parents via school-wise WhatsApp groups
- In Cycle 2, in addition to app-based nudges sent to students via MDM and to parents via school-wise WhatsApp groups, contests were introduced, leaderboards were shared in parents' WhatsApp groups, and incentives were given at the school to leverage the social effect of peer-learning to encourage app usage
- In Cycle 3, grade-wise groups were created and one grade-aligned activity was sent by teachers to students every week via MDM and to parents via school-wise WhatsApp groups. To leverage teachers and learning agents, 'School contests' were introduced, leaderboards were shared in parents' Whatsapp groups, and incentives were given to both top-performing students and schools

Across all three cycles, data metrics such as active usage on the device and apps, weekly engagement time on learning solutions, and qualitative markers of engagement at home were collected and analysed to diagnose, design and iteratively deploy programmatic and behavioural interventions to stabilise engagement. After rapid iteration based on these quantitative metrics and qualitative markers, there are several interesting insights on device usage and app usage trends, the impact of user characteristics on device usage, and the impact of teachers as learning agents on app engagement which are summarised in the table below and detailed in section 2 of this report.

Chart 1: Key Learnings from the Project on Understanding EdTech Usage at Home Using Dedicated Devices

On average, **approximately 62% of the devices remained active** with on-ground support and tech/programmatic interventions

On an average, about **52% of the students use learning apps every week**

15% of active users of BYJU's and 17% of active users of Mindspark spend 31-60 mins on the learning apps per week and **38% of the active users of BYJU's and 32% of the active users of Mindspark spend 60+ mins on the learning apps per week**

In a dedicated device model, on an average, **students spend a total of 72 mins per week on the two learning apps and 176 mins per week on non-learning apps**

Student engagement time increases over time across the arms receiving nudges (Arm 3 & Arm 4) and **the introduction of teacher nudges result in the largest jump in engagement** (41% in Arm 4 from Cycle 2 to Cycle 3)

In addition to learning apps, some user characteristics have an impact on device usage:

- A female student is expected to be 1.82 weeks more active during the intervention period than a male student
- A student whose father is educated until 10th grade and above is expected to be 1.1 weeks more active during the intervention period than a student whose father is educated below 10th grade
- A student whose mother is educated until 10th grade and above is expected to be 0.98 weeks more active during the intervention period than a student whose mother is educated below 10th grade
- Student living in a family with an annual salary of more than INR 1 lakh is expected to be 2.59 weeks more active during the intervention period than a student living in a family with less than INR 1 lakh annual salary

Detailed in the following sections are the programme model, the iterative research design, and the insights obtained through the technological and programmatic interventions to encourage the usage of EdTech at home.

Chapter 01

Details of Project Design and Research Model

Pre-COVID, only a quarter of the households in India had access to internet connectivity and only one in four children had access to digital devices and internet connectivity. While the availability of smartphones in households has increased from 36% in 2018 to 74.8% in 2022 and 72% of the children have access to smartphones in 2023, only 6% of these children had dedicated access to the smartphone. Access has often been quoted as an impediment to equity with respect to EdTech and hence governments across the world have run device distribution programmes to provide children with access to digital devices.

However, evidence from device distribution programmes suggests that simply providing access to devices does not lead to an improvement in learning outcomes. It is important that such programmes have high quality educational software and well-defined structures in place to encourage students' sustained usage, retention and engagement, which will subsequently lead to an improvement in learning outcomes.

The project on *Understanding EdTech Usage at Home Using Dedicated Devices* was an attempt to create an archetype of a programme where children have dedicated devices loaded with two high-quality learning solutions, a Mobile Device Management (MDM) software and an internet package. Through the intervention, the project aimed **to identify best practices of EdTech-seeking behaviour at home where dedicated devices were made available to children and there were programmatic nudges to encourage EdTech usage.**

1.1 Setting the Context for Tech-based Interventions in Device Distribution Programmes

While the pandemic had a devastating impact on learning outcomes, parents became increasingly central to children's education. The Bharat Survey for EdTech (BaSE) brings forth interesting insights regarding technology-enabled learning across households. While 85% of the surveyed households have access to at least one smartphone, access to enabling infrastructure such as electricity and the internet was found to be nearly universal. The survey showed that 86% of parents in low-income contexts were aware of using technology as a means of facilitating learning which was a significant rise from pre-pandemic levels.

The survey also highlighted a positive correlation between parents' knowledge and ability to use technology and children's consumption patterns of technology for learning purposes. Nearly 63% of school-going children used smartphones for learning when parents were also able to explore technology. Whereas when parents could not use smartphones only 26% of children used them.

J-PAL's evidence review of 126 rigorous studies of technology-based education interventions, focusing on literature from developed countries, found that initiatives that expand access to computers and the internet alone generally do not improve K-12 students' scores but do increase computer usage and improve computer proficiency. However, educational software designed to help students develop particular skills at their own rate of progress has shown enormous promise in improving learning outcomes, particularly in Math. In addition, technology-based nudges that encourage specific, one-time actions—such as text message reminders to complete assignments—can have meaningful impacts on a variety of education-related outcomes, often at low costs.

Other experimental evidence from a large-scale, randomised trial testing of two low-technology interventions—SMS messages and phone calls—with parents in Botswana reveals that parental investments in education can improve their child's learning outcomes even in a low-resource context. The study found high parental engagement in educational activities with their children, high demand and greater self-efficacy to support their child's learning, as well as partial gains in accurate perceptions of their child's learning level.

An Inter-American Development Bank and J-PAL funded Chilean study highlighted the impact of using high-frequency text messaging to reduce parent-school information gaps and improve student outcomes. In the study, weekly SMS messages on student outcomes such as absenteeism, grades and student conduct were sent to parents which resulted in higher Math grades, better school attendance and higher probabilities of grade progression. This was yet another example of the effective use of a technology which can improve parent-school communication, thereby improving the returns to existing school inputs.

In India, the non-profit organisation, Rocket Learning's model, leverages parental engagement to catalyse education in the foundational years. Their government-anchored, EdTech solutions use a system of automated nudges and existing infrastructure within state governments to build children's literacy and numeracy skills through daily parent-led activities on WhatsApp groups. At the end of each week, a video compilation of the groups' responses and badges is shared in the Whatsapp groups to incentivise, sustain and further enhance parental engagement. Another example is Top Parent which is a direct-to-parent EdTech app that has both parent and child-facing content and incentives (such as rewards and points), to encourage parents to support their child's learning and development meaningfully.

Drawing on the learnings from past device distribution programmes and research evidence that underlines the importance of parent engagement in a student's learning journey, the following project design was created to understand EdTech usage at home using dedicated devices and encourage the use of and engagement on EdTech solutions.

1.2 Project Design

For this programme, devices installed with Mobile Device Management (MDM)[1] software, an internet package, and high-quality learning solutions (BYJU's *Think and Learn* Premium App and Educational Initiatives' *Mindspark* App) were distributed to 594 students (Grade 4 and 8) in 83 government schools in Almora, Uttarakhand for learning at home.

Chart 1: Project Design of the Project on Understanding EdTech Usage at Home using Dedicated Devices

Objective	Identify best practices for implementation of a device distribution programme for educational purposes and iterating tech-based nudges to encourage EdTech usage at home with dedicated devices.
Programme	Creation of an **implementation toolkit** which may be used to assist others looking to invest in device distribution programmes for education
Nudge(s)	Identify scalable and easy-to-implement **nudges & incentives** for encouraging engagement on EdTech solutions
Study type	Action research + qualitative insights
Metrics of interest	Active usage, engagement time and qualitative markers of engagement at home

1 MDM software is installed on devices to customise functionality and ensure safety for a fleet of devices from a single unified console. It is used in device distribution programmes to enable real-time monitoring of the devices, retrieve usage data for all the devices, set customised user settings, and check against any misuse on the tablet.

Project Design | Tablets installed with learning solutions and MDM software were distributed to 600 students in 83 government schools in Almora, Uttarakhand for learning at home.

1	**Hardware & MDM software**	Funded by ACT
2	**Beneficiaries**	600 students (Grade 4 & 8) in 83 government schools in Almora, Uttarakhand
3	**Learning solutions**	BYJU'S The Learning App, Ei
4	**Implementation partner**	Sshrishti Trust — Almora district, Uttarakhand
5	**Researcher**	 **Prof. Tarun Jain** Associate Professor of Economics, IIM Ahmedabad (Ph.D., University of Virginia)
6	**Program Management & Evaluation**	CENTRAL SQUARE FOUNDATION

The project involved other mission-aligned organisations, EdTech solution providers, on-ground implementation agencies, and behavioural research partners, including:

- **Hardware/Internet and insurance provision:** ACT For Education funded the 600 devices, insurance and internet provisions
- **Learning software:** Two different types of learning software were provided to students for this project:
  - (i) **BYJU's Think and Learn App:** BYJU's provided premium licences to BYJU's Think and Learn App which is curriculum-aligned, complete with quizzes, games, tests and engaging video lessons with the right engagement hooks. As one of India's most used EdTech apps by 2017, BYJU's saw its average student engagement time on the app increase from 40 minutes per day in 2017 to 71 minutes per day between 2020-22.
  - (ii) **Ei Mindspark:** Educational Initiatives provided licences to its evidence-based PAL tool, Ei Mindspark, which encourages inquiry-based learning with learning level-based questions, grade-level assessments, and videos in Hindi and English. In Delhi, a 2016 J-PAL led RCT evaluated Mindspark centres focused on serving low-income neighbourhoods and found improved performance in both Math and Hindi[2] across multiple grade levels.
- **Research partner:** This action research was carried out under the guidance of Principal Investigator Prof. Tarun Jain, Associate Professor of Economics in the Indian Institute of Management Ahmedabad, with extensive research expertise in Economics, Education, Gender, Health, and Public Policy
- **Implementation partner:** Sshrishti Trust was the implementation partner for identifying/onboarding beneficiaries, device distribution, data collection and on-ground implementation support to deploy interventions

2 Students offered a voucher to attend Mindspark centres scored 0.37 standard deviations higher in Math, improving by over twice as much as students in the comparison group and students who received the voucher also scored 0.23 standard deviations higher in Hindi, improving by 2.4 times as much as students in the comparison group.

Table 1: Composition of the Sshrishti Trust implementation team for this project

Team Member	Number of People	Role
Project Manager	1	The project manager was responsible for leading the team of field coordinators to ensure efficient implementation on the field and impactful utilisation of resources on the project.
Field Coordinators	6	A total of 600 students in 83 government schools across four blocks in Almora were divided between a team of 6 field coordinators. The field coordinators were responsible for the identification and onboarding of beneficiaries, distribution of devices, training of beneficiaries and learning agents, on-ground implementation support to deploy interventions and incentives, providing ongoing troubleshooting support, and data collection whenever needed.
IT Assistant	1	The IT assistant ensured the effective resolution of device/software or app-related issues and the timely redistribution of devices back to the beneficiaries. In addition, the IT assistant was also responsible for the real-time monitoring of devices and tech-based interventions deployment through the MDM console.

The programme commenced on November 2022 after the completion of baseline data collection of beneficiaries and MDM provisioning of devices with the requisite app package and customised settings ensuring optimum usage of apps. In December 2022, the implementation team (Sshrishti Trust) conducted the device distribution, training for parents and students on device usage, and the activation of students on learning solutions in a phased manner.

From December 2022 to May 2023, the project implementation was rolled out in three iterative cycles (6-8 weeks), wherein learnings from each cycle were used for designing the subsequent cycle. The project aimed to uncover best practices for implementation of a device distribution programme for educational purposes and iterate tech-based nudges to encourage EdTech usage at home with dedicated devices.

Chart 2:Timelines of the project on Understanding EdTech Usage at Home Using Dedicated Devices

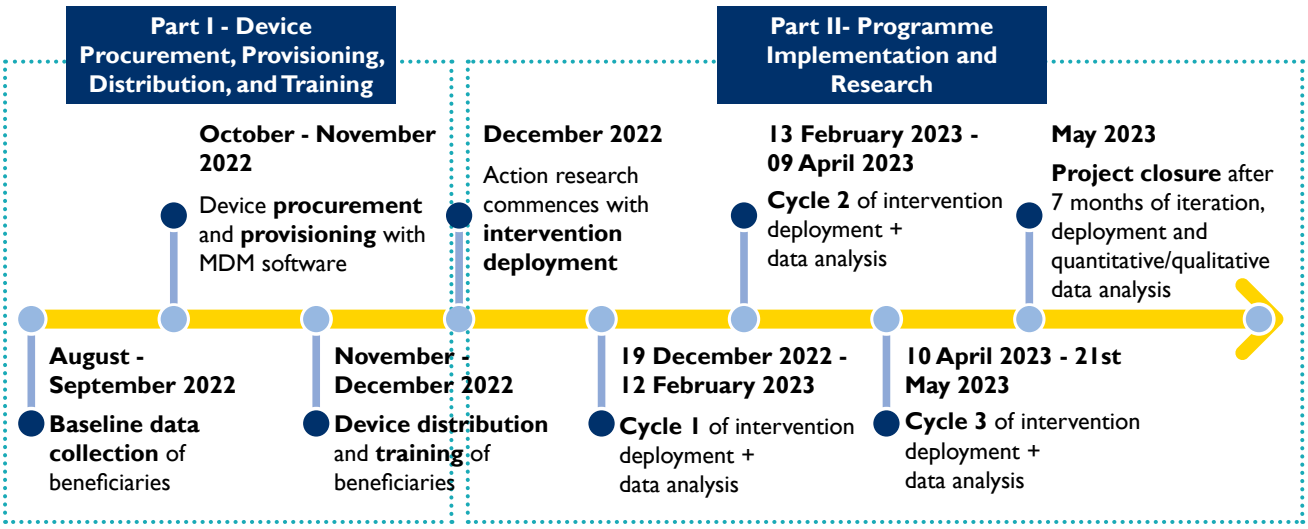
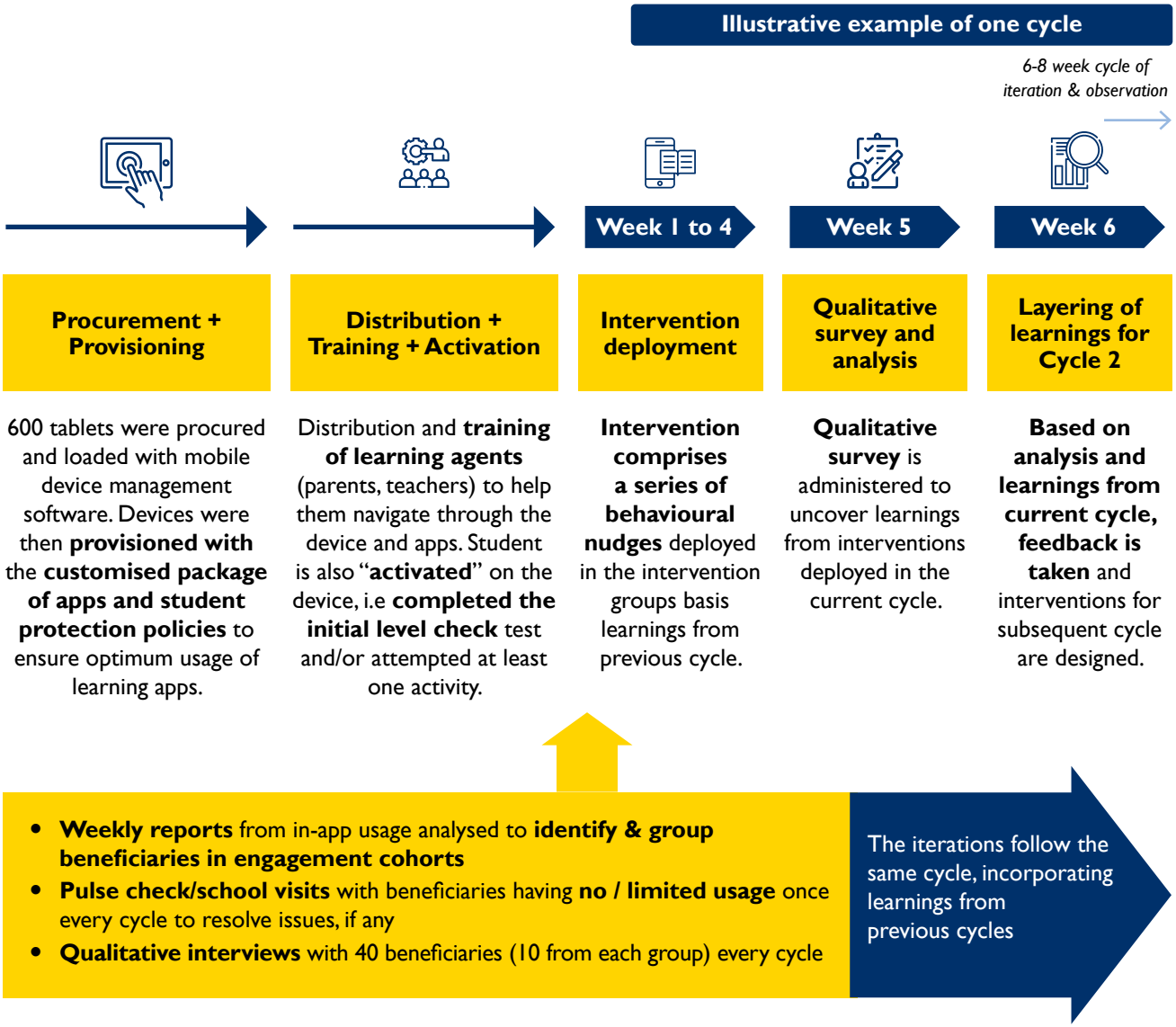


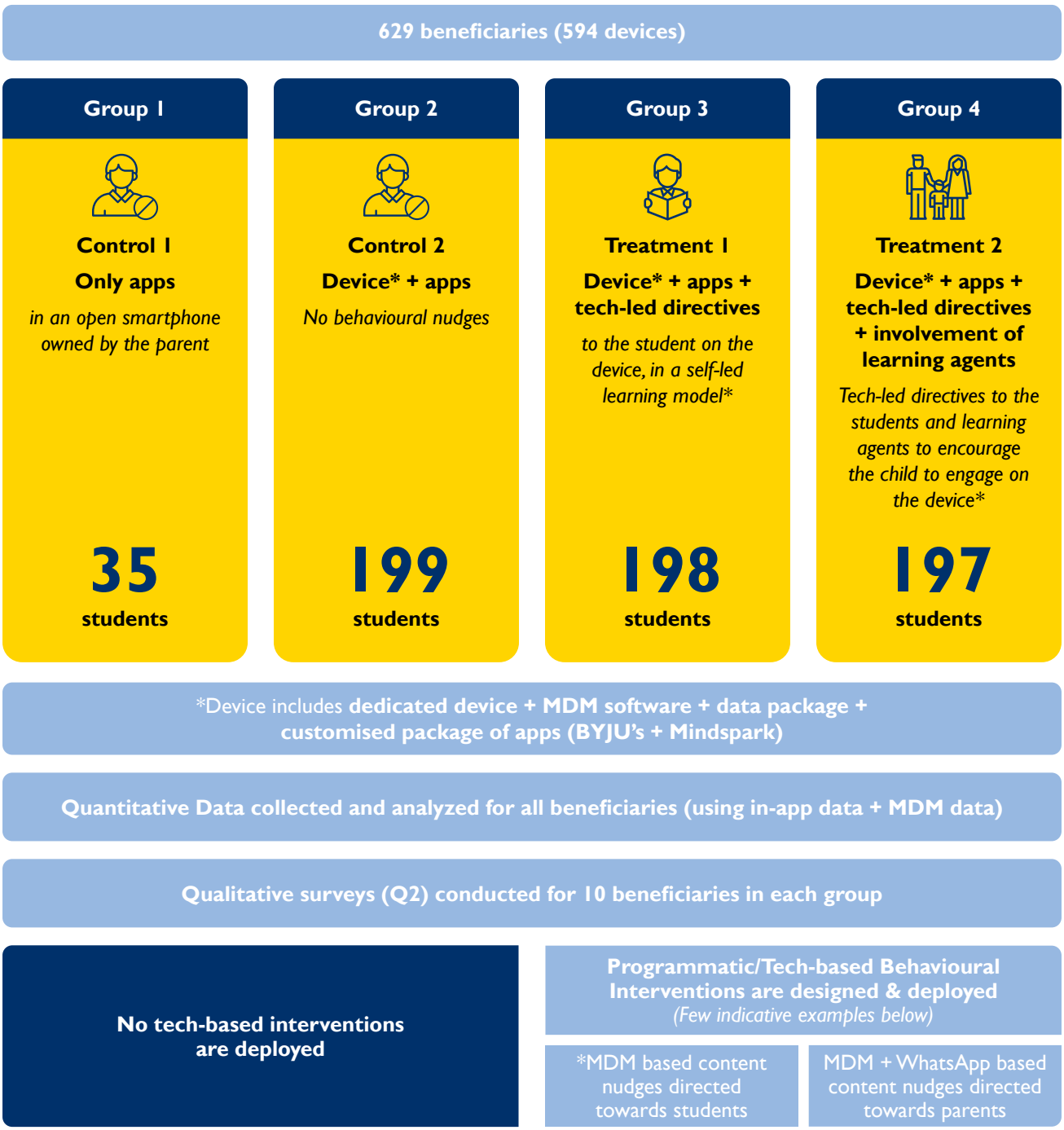
Chart 3:The project implementation was carried out in cycles (6-8 weeks) of intervention deployment, data analysis, and layering of learnings for the subsequent cycle



1.3 Research Model

For this action research, the project design is optimised for rapid iteration with behavioural interventions in treatment groups to identify EdTech-seeking behaviour. The project model consisted of two control groups (Group 1 and Group 2) that did not receive the intervention and two treatment groups (Group 3 and Group 4) that received the intervention. Out of the total cohort of 629 beneficiaries distributed across four groups, 594 beneficiaries (Group 2, Group 3 and Group 4) were given dedicated devices with the pre-installed package of four apps (Learning solutions: BYJU's and Mindspark; non-learning apps: Youtube Kids and Google Chrome) along with internet package and MDM software. Group 1 received access to the learning solutions, BYJU's and Mindspark, on their caregiver's smartphone to which they have shared access in a household.

Chart 4: Research model for 629 beneficiaries divided across treatment and control groups



In addition to providing dedicated devices and a customised package of apps, programmatic and tech-based interventions were deployed directly to students' devices in both treatment groups (Group 3 and Group 4) through the MDM software. In Group 4, tech-based interventions were also deployed to learning agents (parents) through grade-wise WhatsApp groups. Control groups (Group 1 and Group 2) received no programmatic or tech-based interventions.

1.4 On-ground Support

In Group 2, Group 3 and Group 4, where devices were provided, some provisions for on-ground support were provided to ensure smooth device functionality and safety.

Table 2: In Groups 2, 3 and 4, the following on-ground measures were undertaken to ensure device functionality and safety

	Cycle 1	Cycle 2	Cycle 3
	On ground support		
Group 2 + Group 3 + Group 4	**Issue resolution mechanism**: Helpline provided for any hardware/software/app-related concerns. Wherever needed, devices were collected, fixed and returned to the user within 2-3 days. **Activation calls**: Calls were made every two weeks to activate inactive students (< 1 min for a week).	**School visits/ home visits** were conducted to ensure the smooth functioning and safety of devices. Reset devices were reprovisioned and redistributed to the students within 2-3 days.	**School visits/ home visits** were conducted to ensure the smooth functioning and safety of devices. Reset devices were reprovisioned and redistributed to the students within 2-3 days.

Before Cycle 1 commenced, an issue resolution mechanism was instituted which included setting up a helpline run by a field coordinator and IT assistant from the implementation team and the sharing of troubleshooting posters and videos on parents' WhatsApp groups. Parents used the helpline to seek support on any hardware/software/app-related issues and based on the severity of the issue, the field coordinators would either address it remotely over the call, or collect the device for servicing, if needed.

During Cycle 1, the field coordinators from the implementation team also made activation calls every two weeks to ensure all students had completed their initial diagnostic test on the learning solutions to complete activation and proceed to use the learning content on the app. These calls also helped understand and resolve barriers to device adoption for students who were inactive for a week or more.

Since the field coordinators observed early on that a large number of devices were getting reset on the field, they conducted school visits at the beginning of each cycle (every 6-8 weeks) to identify these devices in order to ensure that there was no loss of learning for the students. Wherever they were found to be reset, the devices were collected by field coordinators and reprovisioned with the requisite package of apps by the IT assistant who then redistributed them back to the students within 2-3 days.

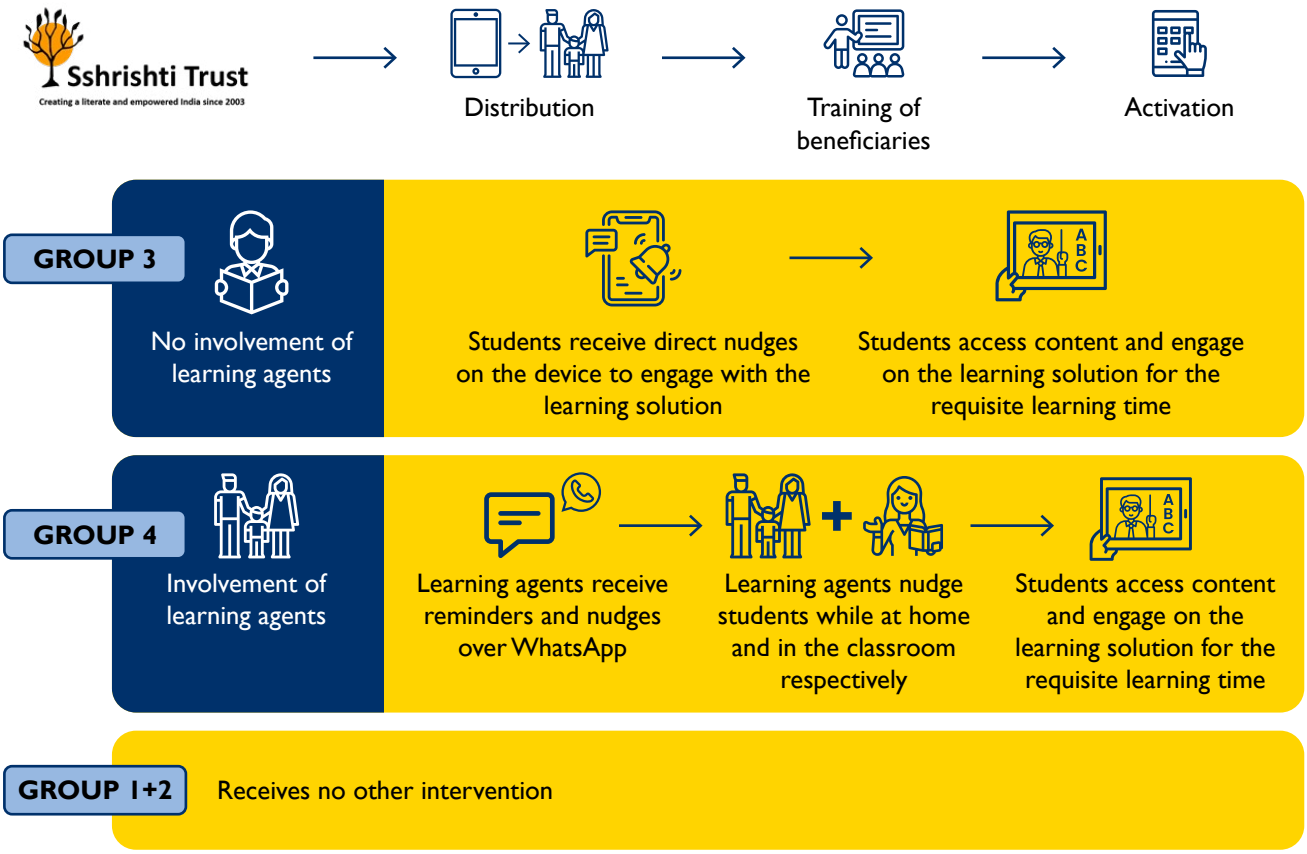
In addition to on-ground support, programmatic/tech-based interventions were deployed across the treatment groups (Group 3 and Group 4) to encourage adoption and sustained engagement on learning apps.

1.5 Programmatic/Tech-based Interventions Across Cycles

This section details the programmatic and tech-based interventions iterated in each cycle and the nudges and incentives deployed across the two treatment groups (Group 3 and Group 4).

- For **Group 3, text nudges were sent to students' devices** directly through the MDM software with no additional involvement of learning agents
- In **Group 4, in addition to text nudges sent to the students' devices** via MDM software, **text and audio-visual nudges were also shared on parents' WhatsApp groups** to leverage their involvement in encouraging students to use learning apps

Chart 5: Deployment of tech-based interventions across Group 3 and Group 4



Given below is a brief overview of the various tech-based and programmatic interventions that were deployed across the treatment groups (Group 3 and Group 4) which are further detailed cycle-wise with examples in Annexure 3.1.

Table 3:The following tech-based/programmatic interventions were deployed across Group 3 and Group 4 via the MDM software and WhatsApp

	Cycle 1	Cycle 2	Cycle 3
	Tech-based/Programmatic Interventions		
Group 3	**App-based nudges** were sent to students via MDM.	**App-based nudges** sent to students via MDM. **Introduction of contests and leaderboards**: Introduced 'Super 5' contest and shared leaderboards (as device wallpaper) every two weeks.	**App-based + grade-based nudges** (one curriculum-aligned activity) sent to students via MDM. **Contests and leaderboards**: Continued 'Super 5' contest and shared leaderboards (as device wallpaper) every two weeks.

	Cycle 1	Cycle 2	Cycle 3
Group 4 	**App-based nudges** were sent to students via MDM and to parents via school-wise WhatsApp groups.	**App-based nudges** were sent to students via MDM and to parents via school-wise WhatsApp groups. **Contests and leaderboards**: Introduced the 'Super 5' contest and shared leaderboards every two weeks in school-wise WhatsApp groups. **Incentives**: At the end of the cycle, all contest winners were felicitated at schools with certificates.	**App-based + grade-based nudges** (one curriculum-aligned activity) sent to students each week via MDM. **Contests and leaderboards**: Introduced 'Super School' contest and unveiled the top 5 students (who completed assigned activity and spent > 60 mins per week on the app) every two weeks in school-wise WhatsApp groups. **Teacher campaign**: As part of the 'Super School' contest, teachers sent nudges (one curriculum-aligned activity on the app) to parents every week via WhatsApp groups. **Incentives**: *For students:* At the end of the campaign, all winners were felicitated at schools with gifts and certificates. *For schools/teachers:* The top 5 schools with the maximum number of winners received books and the names of the schools/teachers were mentioned in newspaper articles.

To gather high-quality and unique insights about what drives EdTech usage at home, data was collected, monitored and analysed using both quantitative and qualitative methods. These included conducting quantitative inquiry through regular tracking of data metrics such as usage on the device and apps and employing qualitative methods through in-depth interviews conducted with students. Data metrics such as active usage on the device and apps, weekly engagement time on learning solutions, and qualitative markers of engagement at home were collected and analysed to diagnose, design and iteratively deploy programmatic and behavioural interventions to stabilise engagement. Quantitative data was collected and analysed weekly for all 629 beneficiaries, and qualitative surveys were conducted with 10 beneficiaries from each group at the end of every cycle.

During the course of the project from December 2022 to May 2023, there have been some key insights that were drawn from both the quantitative and qualitative data gathered from the beneficiaries' usage of devices and apps for learning at home. Annexure 3.2 provides details of the quantitative and qualitative data that was collected from the beneficiaries and how they were monitored and analysed during the project. The following section details key findings drawn from intervention deployments across treatment groups and the three cycles.

Chapter 02

Part II of the Project: Learnings from Interventions Deployed to Encourage Use of EdTech on Dedicated Devices

The following section highlights some of the key findings from the project on *Understanding EdTech Usage at Home Using Dedicated Devices* where children were provided with dedicated devices loaded with two high-quality learning solutions, a Mobile Device Management (MDM) software and an internet package. Tech-based nudges were also deployed to encourage EdTech usage at home.

2.1 Active Usage on Device and Apps

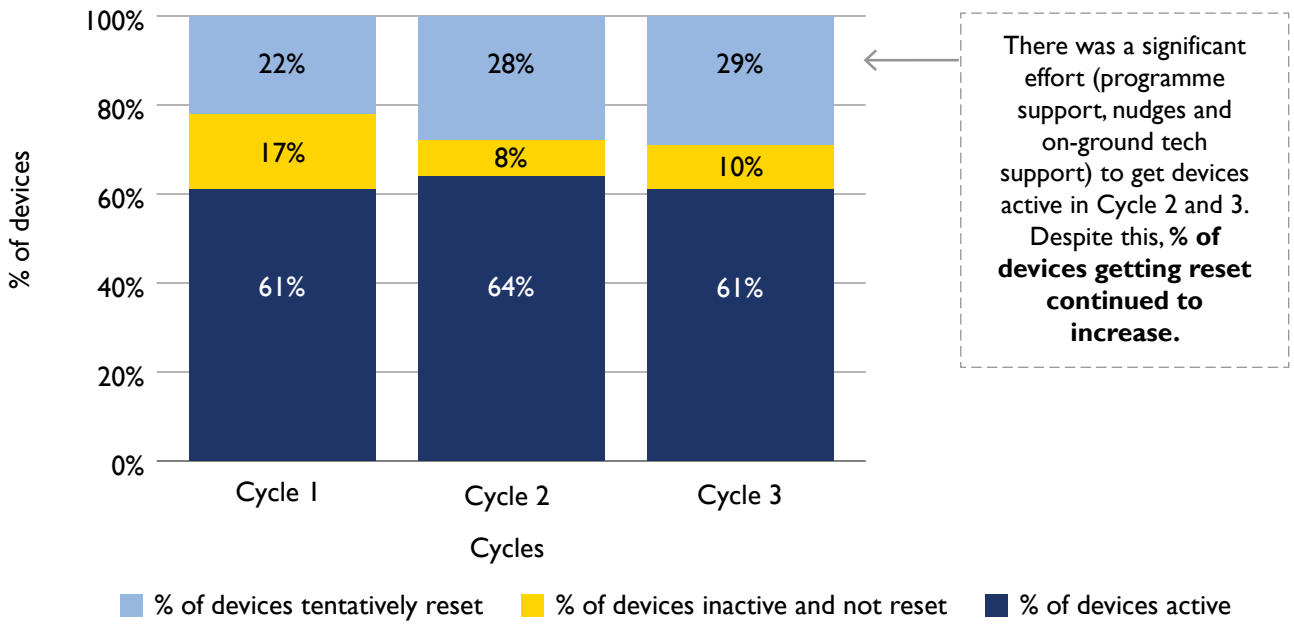
On an average, approximately 62% of the devices remained active with on-ground support and tech/programmatic interventions

Across Group 2, 3 and 4 where devices were distributed, the device usage of beneficiaries was monitored weekly through the device data[1] collected from MDM partners and learning solutions partners. Devices were considered active if the student had spent 1 minute or more on either of the learning solutions or on the device. Devices were considered inactive if the student had spent less than 1 minute on either of the learning solutions or on the device. Devices were considered to be tentatively reset if they had been inactive for 2 consecutive weeks. In this project, if a device is reset, the beneficiaries would lose access to the customised package of apps. These devices would then need to be reprovisioned with the requisite apps during school visits done by the implementation team at the beginning of each cycle.

While 61% of the devices remained active in Cycle 1, this number increased to 64% in Cycle 2 and finally stabilised at 61% in Cycle 3 of the project. Overall, with on-ground support and tech/programmatic interventions, **approximately 62% of the devices remained active** on average during the entire duration of the project.

1 All data monitored starts from week 6 since weeks 1 to 5 included device distribution, activation and training of beneficiaries.

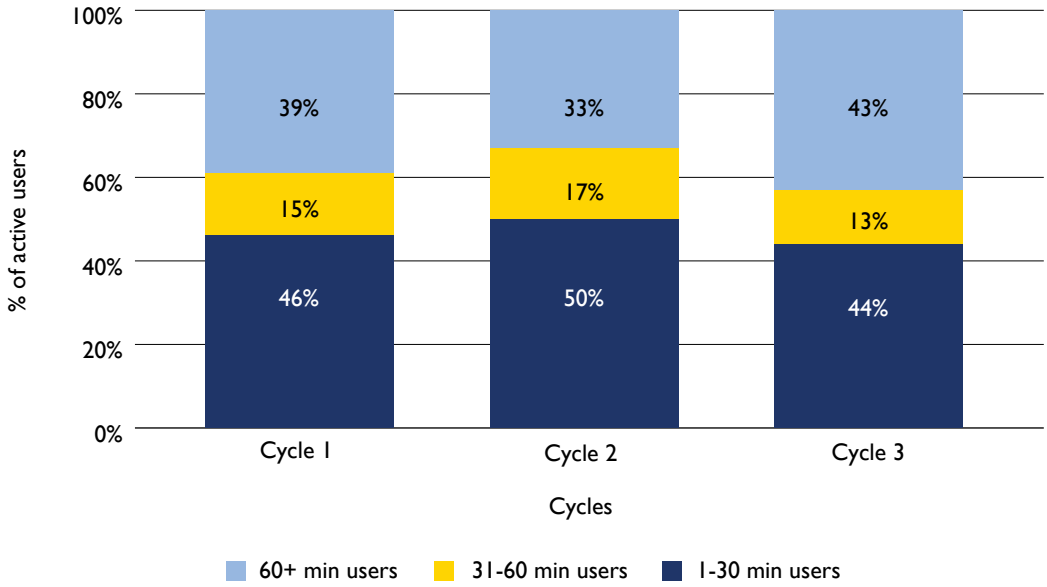
Chart 6: Active/inactive status of devices distributed across groups 2, 3 and 4



15% of active users of BYJU's were spending over 31-60 mins and 38% of the active users of BYJU's were spending more than 60 mins on the learning apps per week

For BYJU's, the usage trends are similar across all usage cohorts (1-30 minutes, 30-60 minutes, 60+ minutes) across Cycle 1, 2 and 3. On an average, 47% of active users spent less than 30 minutes, 15% of active users spent 31-60 minutes, and 38% of active users spent 60+ minutes on the app.

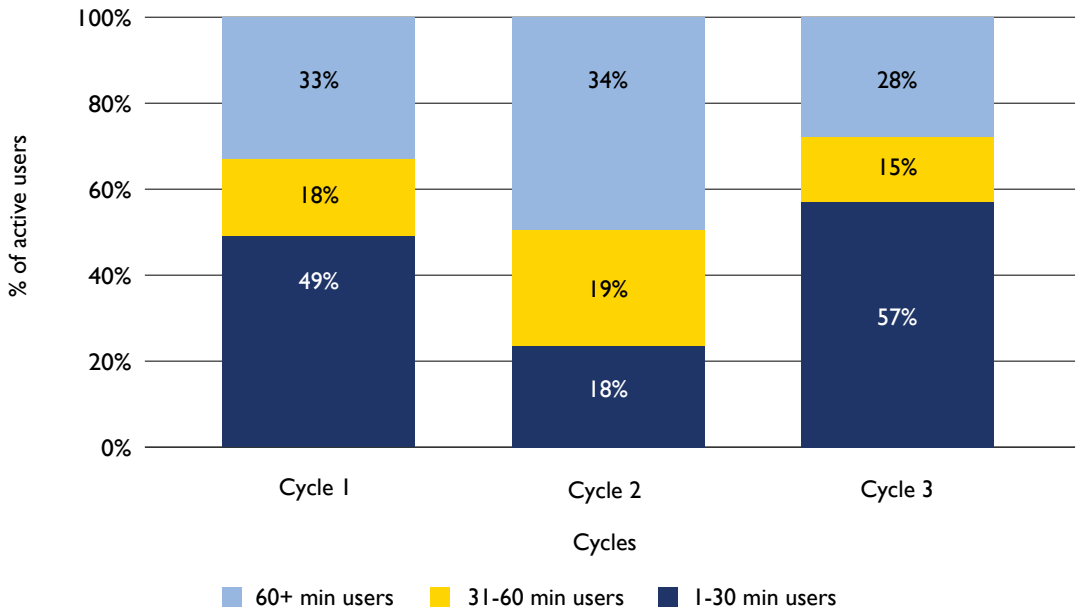
Chart 7: Percentage of BYJU's active users across usage cohorts



17% of active users of Mindspark were spending over 31-60 mins and 32% of the active users of Mindspark were spending more than 60 mins on the learning apps per week

For Mindspark as well, the usage trends are similar across all usage cohorts (1-30 minutes, 30-60 minutes, 60+ minutes) across Cycle 1, 2 and 3. On an average, 51% of active users spent less than 30 mins, 17% of active users spent 31-60 mins, and 32% of active users spent 60+ mins on the app.

Chart 8: Percentage of Mindspark active users across usage cohorts



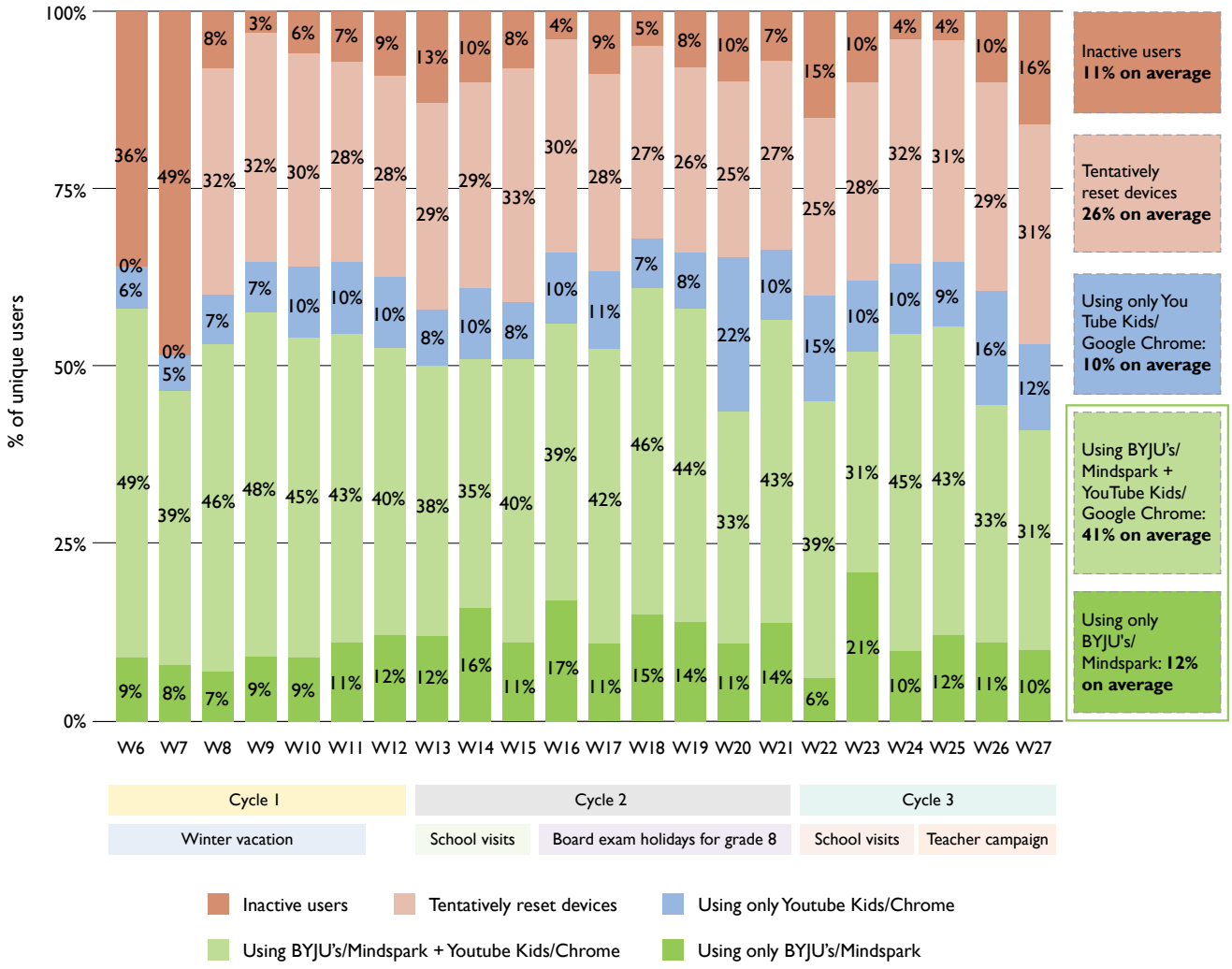
Usage trends were similar in both apps with 15% of active users of BYJU's and 17% of active users of Mindspark spending 31-60 mins on the learning apps per week, and 38% of the active users of BYJU's and 32% of the active users of Mindspark spending 60+ mins on the learning apps per week

2.2 Usage Trends on Learning Apps and Non-learning Apps

In a dedicated device model, about 52% of students used learning apps every week

During the entire duration of the project, about 10% users used only non-learning apps, 41% users used both learning and non-learning apps, and 12% users used only learning apps every week. On an average, in a dedicated device model, about 52% of students used learning apps every week.

Chart 9: Percentage of unique users using only learning apps, learning apps + non-learning apps, and only non-learning apps

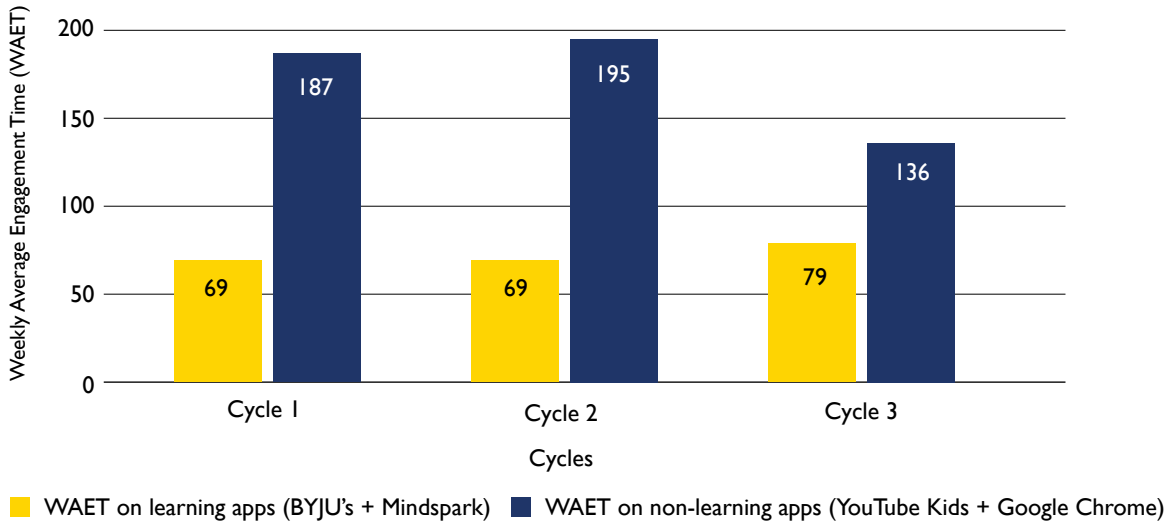


Note: Device were considered tentatively reset if they were consecutively inactive for 2 weeks. Hence % tentatively reset devices was not calculated in Week 6 and 7 as these were the first two weeks of the program.

In a dedicated device model, on average, students spend a total of 72 mins per week on the two learning apps and 176 mins per week on non-learning apps

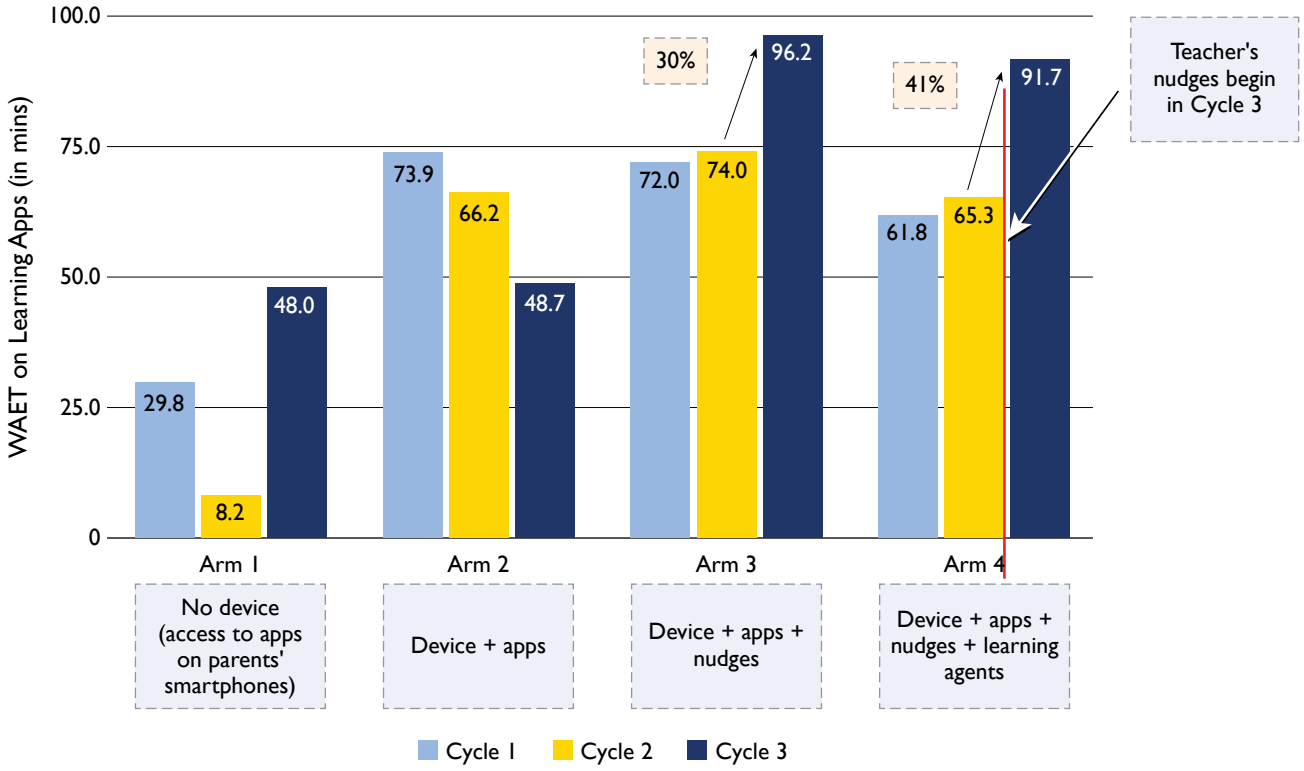
In Cycle 1, students spent an average of 69 minutes per week on learning apps and 187 minutes per week on non-learning apps. In Cycle 2, students spent an average of 69 minutes per week on learning apps and 195 minutes per week on non-learning apps. In Cycle 3, wherein teachers were introduced as learning agents, there was an increased usage of 79 minutes per week on learning apps and 136 minutes per week on non-learning apps. On average, in a dedicated device model, students were seen to spend a total of 72 minutes per week on the two learning apps and 176 minutes per week on non-learning apps.

Chart 10: Weekly Average Engagement Time (WAET) on learning apps vs Weekly Average Engagement Time (WAET) on non-learning apps



2.3 Student Engagement Time on Learning Apps Across Arms

Chart 11: Weekly Average Engagement Time (Cycle-wise) Across Arms



Student engagement time increases over time across the arms receiving nudges (Arm 3 & Arm 4) and the introduction of teacher nudges result in the largest jump in engagement (41% in Arm 4 from Cycle 2 to Cycle 3).

2.4 Impact of User Characteristics on Device Usage

Device usage was predominantly influenced by gender and annual salary. Other factors, such as parents' education, type of house and distance from school, also exerted additional influence

In this project, the engagement on the learning apps (BYJU's and Mindspark) show a similar pattern. Hence, this analysis aims to identify the factors, other than app features, that contribute to usage on the devices.

The analysis[2] included data from 594 students who have been using the customised package of apps on dedicated devices. For this exercise, we considered several factors, including gender, parents' education level, type of housing, distance from school, and household income. Our findings provide valuable insights that can guide our strategies for increasing student engagement.

Table 4: Impact of different user characteristics on device usage

Variable	Coefficient	P-value	Significance	Interpretation
Gender	1.82	0.001	99%	Female student is expected to be **1.82 weeks more** active during the intervention period than a male student
Father's education level	1.1	0.094	90%	Student whose father is educated until 10th standard and above is expected to be **1.1 weeks more** active during the intervention period than a student whose father is educated below 10th standard.
Mother's education level	0.98	0.088	90%	Student whose mother is educated until 10th standard and above is expected to be **0.98 weeks more** active during the intervention period than a student whose mother is educated below 10th standard.
House type	1.27	0.041	95%	Student who lives in a pucca house is expected to be **1.27 weeks more** active during the intervention period than a student who lives in a semi-pucca or kutcha house.
Distance from school	-1.57	0.064	90%	Student who lives far (>2km) is expected to be **1.57 weeks less** active during the intervention period than a student who lives near (2km or less).
Annual Salary	2.59	0.026	95%	Student in a family with annual salary > 1 lakh is expected to be **2.59 weeks more active** during the intervention period than a student in a family with <1 lakh annual salary.

2 A linear regression analysis was conducted using quantitative data of 594 students who were given dedicated devices. "No. of weeks active" column was used as the dependent variable to identify factors influencing the length of active student participation. The independent variables included were aimed at understanding how these factors correlate with the length of active student participation.

Table 5: Details of variables and encoding used in the regression analysis

Variable	Encoding
Gender	0 = Male, 1 = Female
Father's Education	0 = None or school dropout, 1 = 10th grade and above
Mother's Education	0 = None or school dropout, 1 = 10th grade and above
Type of House	0 = Kutcha/Semi Pucca, 1 = Pucca
Distance from School	0 = Far (More than 2 kms), 1 = Near (0-2 kms)
Annual Salary	0 = < 1 lakh, 1 = ≥ 1 lakh

The regression analysis of the impact of user characteristics on device usage has found that:

- A female student is expected to be 1.82 weeks more active during the intervention period than a male student
- A student whose father is educated until 10th grade and above is expected to be 1.1 weeks more active during the intervention period than a student whose father is educated below 10th grade
- A student whose mother is educated until 10th grade and above is expected to be 0.98 weeks more active during the intervention period than a student whose mother is educated below 10th grade
- Student living in a family with an annual salary of more than INR 1 lakh is expected to be 2.59 weeks more active during the intervention period than a student living in a family with less than INR 1 lakh annual salary

Chapter 03

Annexure

3.1 Types of Interventions

Creation and Deployment of Interventions

For this project, the tech-based interventions (nudges) were created by a team consisting of a nudge design consultant and a graphic design consultant.

Table 6: Composition of the team creating the tech-based interventions (nudges) for this project

Team Member	Number of People	Role
Nudge design consultant	1	The nudge design consultant was responsible for drafting the text message in Hindi and storyboarding the associated audio/visual collateral to give direction to the graphic design consultant.
Graphic design consultant	1	The graphic design consultant was responsible for creating the audio/visual collaterals that were shared along with the text nudges every week.

This team created two sets of nudges every week:

- Text nudges were shared via the MDM console and text
- Audio-visual nudges were shared in parents' WhatsApp groups

Table 7: Sample of text nudges and associated visual nudges shared via MDM/WhatsApp

	Day 1 nudge	Day 2 nudge	Day 3 nudge
Text nudges sent to student's device (shared via MDM)	**शाम 5 बजे से शुरू होता है BYJU's TIME! आज एक वीडियो देखें!**	**क्या आप 5 बजे - BYJU's TIME के लिए तैयार हो?**	**शाबाश! डिवाइस पर पढ़ते हुए आपका एक हफ्ता पूरा हुआ।**
Nudging strategy	Instituting a specific time for app usage to encourage habit formation	Reiterating a specific time to build salience for app usage	Encouraging app usage to drive sustained engagement
Text nudges sent to parents (shared via Whatsapp)	**क्या आपके बच्चे ने 5 बजे BYJU's टाइम किया क्या?**	**पढाई और अनुशासन ज़रूरी है | अच्छी आदतें डालें।**	**बच्चो को उनकी मेहनत पर शाबाशी दे। अच्छी आदतें डालें।**

Nudges along with the collaterals were then shared across both Group 3 and Group 4 beneficiaries **thrice a week**:

- The IT assistant was responsible for sending the text nudges via the MDM console three times a week to Group 3 and Group 4 students
- The field coordinators shared the text and audio-visual nudges in parents' WhatsApp groups three times a week to Group 4 students

Interventions for Cycle 1

During Cycle 1, app-based nudges were sent to students' devices via the MDM software for both Group 3 and Group 4. All schools in Group 3 and Group 4 were divided equally into BYJU's and Mindspark schools (to be reversed in subsequent cycles) to send app-based tech interventions to encourage the usage of learning apps. Assigning a learning solution to a WhatsApp group helped in sending a directive nudge towards a specific learning solution in each group, thereby providing students with a clear learning directive. However, students continued to have access to both learning solutions and were free to use either or both as per their preference.

Table 8: Composition of students across treatment groups (Group 3 and Group 4)

Group	Number of students
Group 3	198 students
Group 4	197 students
Total	**395 students**

Table 9: Composition of schools across Group 3 and Group 4

Group	Schools Nudged on Learning Solution 1	Schools Nudged on Learning Solution 2
Group 3	12 schools	10 schools

Group	Schools Nudged on Learning Solution 1	Schools Nudged on Learning Solution 2
Group 4	10 schools	11 schools

Based on the students' engagement time on the learning solution in the previous week tracked via device/app data, they were divided into four usage cohorts: Inactive users, Indifferent users, Active users and Superactive users.

Table 10: Creation of usage cohorts for nudging based on in-app usage

Engagement Time	Usage Cohort	Mindspark Cohorts	BYJU's Cohorts
<1 min	Inactive	**MS_C0**	**BY_C0**
1-30 min	Indifferent	**MS_C1**	**BY_C1**
31-60 min	Active	**MS_C2**	**BY_C2**
> 60 mins	Superactive	**MS_C3**	**BY_C3**

For nudging purposes, specific characteristics and personas were assigned to each cohort type. On a week-to-week basis, students received different nudge messages tailored to their engagement time in the previous week. This strategic approach, explained in Table 11 below, was designed to ensure more effective engagement results for each cohort tailored to their most recent engagement on the learning solution.

Table 11: Examples of text nudges that were sent across usage cohorts of students via the MDM console

Usage Cohort	Example Nudges	Targeted Nudge Strategy
BYC0_W13 - sent to students who were inactive (< 1 min) on BYJU's in Week 14	**शाम 5 बजे से शुरू होता है BYJU's TIME! आज एक वीडियो देखें!**	Habit formation and building salience around device usage
BYC1_W14 - sent to students who spent 1-30 mins on BYJU's in Week 14	**BYJU's में पढ़ो, अगले हफ्ते सुपर 5 बनो** 😊👍🔥👏	Leveraging social effects through leaderboards
MSC3_W15 - sent to students who spent 60+ mins usage on Mindspark in Week 15	**आशा करती हूँ, आपकी मेहनत रंग लायी, आप है Ei Mindspark CHAMPION** 😊	Encouraging Superactive cohorts for sustained engagement on the apps

The nudging strategy was different for each usage cohort: For the Inactive students (<1 min) the nudge narrative was around habit formation by setting a specific timing for app usage every day. For the Indifferent (1-30 mins) and active (31-60 mins) cohorts, nudges were centred around leveraging the social effects in peer groups to encourage increased app usage. For the Superactive (> 60 mins) cohorts, students were encouraged to continue spending more time on learning apps.

In addition to text nudges, the wallpaper on the students' devices was also changed to reflect the learning directive to use learning apps. A month into the programme, a mascot named 'Sheru' was introduced via nudges which was then used in subsequent nudges to encourage students to engage on learning apps.

Examples of device wallpapers used to provide learning directives and introduce mascots to students to encourage the usage of learning apps

In addition to text nudges shared via the MDM software, text and audio-visual nudges were also sent to parents on school-wise WhatsApp groups for all Group 4 schools. Parents who did not own a smartphone (30% of Group 4) and hence did not have access to WhatsApp were nudged via SMS. Nudges sent to the parents' groups were catered towards providing a learning directive to parents and encouraging their involvement in the students' learning journey.

Table 12: Examples of text nudges that were sent to parents in school-wise WhatsApp groups

	Example Nudge 1	Example Nudge 2
WhatsApp nudges	😊😊 अपने बच्चे के साथ हर दिन बैठिये और डिवाइस 📱 पर उन्हें कुछ नया सिखाइये।	हर दिन BYJU's पर पढ़ने से आपका बच्चा कुछ नया सीखता है और पढ़ाई में आगे बढ़ता है| अगर आप सहमत है तो ग्रुप पर '👍' भेजिए!
Poster shared		
Nudging strategy	Encouraging parental engagement in WhatsApp groups	

Interventions for Cycle 2

In-app and device data were monitored weekly and qualitative surveys were conducted at the end of each cycle to gather insights on engagement seen on the learning solutions. Based on the engagement seen on WhatsApp groups (see Annexure 3.3), engagement time observed through device and app data, qualitative insights, and our learnings on engagement from other EdTech programmes, the following changes were incorporated in the creation and deployment of nudges in Cycle 2:

- Nudges need to have a simple and clear directive
- Nudges were sent during the weekends to increase engagement from parents
- Incorporate app colours in design creatives
- Include creatives that contain app logos and screenshots for easy recall
- Introduce fortnightly leaderboards to leverage the social effects of peer learning to encourage app usage

Table 13: Examples of text nudges that were sent to parents in school-wise WhatsApp groups

	Example Nudge 1	Example Nudge 2	Example Nudge 3
WhatsApp nudges	बच्चों को समझाएं रोज़ 60 मिनट पढ़े टेबलेट पे।	कैसा होता, अगर आपके बच्चे सुपर 5 कहलाते?	बच्चो को उनकी मेहनत पर शाबाशी दे। अच्छी आदतें डालें।
Poster shared (in Mindspark Whatsapp groups)			
Poster shared (in BYJU's Whatsapp groups)			
Revised nudging strategy	Encouraging parental engagement in WhatsApp groups	Introduction of 'Super 5' contests to leverage social effects of peer learning to encourage app usage	Including app logos, colours, and screenshots in visual collaterals for easy recall

To leverage the social effects of peer learning, Super 5 contests were introduced in both Group 3 and Group 4 where the top 5 students who have spent the most amount of time (at least 60 mins per week) on the learning apps were selected.

For Group 3 students who were nudged via MDM, Super 5 winners were displayed every two weeks as the device wallpaper.

Super 5 contest winners were displayed in the device wallpaper for Group 3

For **Group 4** students who were nudged via MDM and WhatsApp, contest winners were announced every two weeks in the school-wise WhatsApp groups. At the end of the cycle, all Super 5 winners were felicitated at schools with certificates.

Super 5 contest winners were displayed in the nudges sent in parents' WhatsApp groups for Group 4

Super 5 contest winners being felicitated at schools for Group 4

Photo credits: Sshrishti Trust. Location: Almora, Uttarakhand.

Interventions for Cycle 3

Based on the insights gathered from Cycle 2 quantitative data and qualitative survey, there was an increased focus in Cycle 3 on **leveraging social effects through contests/campaigns** and **teacher involvement to better integrate school work with tablet usage**.

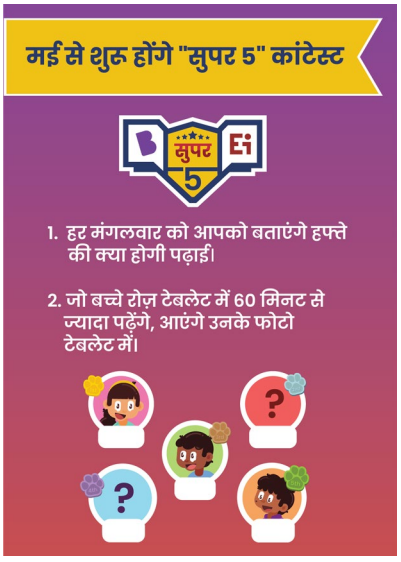
In Cycle 3, all students in app cohorts (Group 3 + Group 4) were then further divided into grade-wise groups on the MDM for better integration of school work with device usage at home.

Table 14: In cycle 3, app-wise groups were further divided into 8 grade-wise groups

Group 3				Group 4			
BYJU's (Grade 4)	BYJU's (Grade 8)	Mindspark (Grade 4)	Mindspark (Grade 8)	BYJU's (Grade 4)	BYJU's (Grade 8)	Mindspark (Grade 4)	Mindspark (Grade 8)
G3BY4	G3BY8	G3MS4	G3MS8	G4BY4	G4BY8	G4MS4	G4MS8

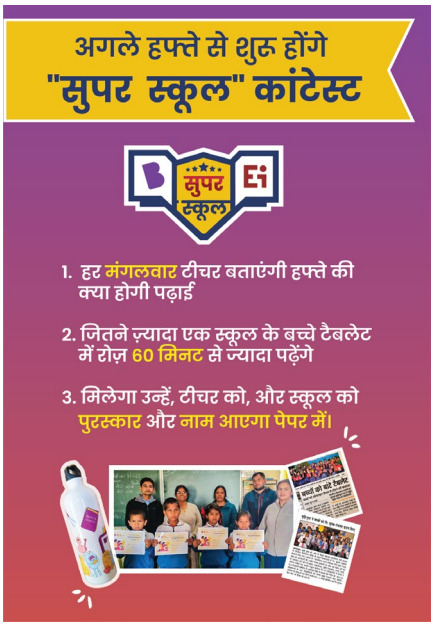
For Group 3 students, Super 5 contests were continued in Cycle 3 where a grade-aligned activity was assigned via MDM nudges on the device. The top 5 students who completed the assigned activity and spent the most amount of time on learning apps were announced as winners through device wallpapers.

Device wallpaper for Group 3 introducing the Super 5 contest



For Group 4, a Super School contest was introduced where the teacher assigned a grade-aligned activity each week to complete on the app. The top 5 students who completed the activity and spent the most time on the app were felicitated with prizes and certificates. The top 5 schools with the most winners were awarded books for the library and the teachers/schools were acknowledged in local newspapers.

Device wallpaper for Group 4 introducing the Super School contest



Examples of nudges sent in parent WhatsApp groups to introduce the Super School contest

Table 15: Examples of text nudges sent by teachers assigning a grade-aligned activity to parents in school-wise WhatsApp groups

	Example Nudge 1	Example Nudge 2	Example Nudge 3
WhatsApp nudges	इस हफ्ते Ei Mindspark पे एक कार्यपत्रक पूरा करे।	क्या आपने Ei Mindspark पे एक कार्यपत्रक पूरा किया?	आज ही Ei Mindspark पे एक कार्यपत्रक पूरा करे।
Poster shared (in Mindspark WhatsApp groups)			
WhatsApp Nudges	इस हफ्ते BYJU's पे "Playing with numbers" Chapter के 6 वीडियोज़ पूरे देखे।	क्या आपने BYJU's पे "Playing with numbers" Chapter के 6 वीडियोज़ पूरे देखे?	आज ही BYJU's पे "Playing with numbers" Chapter के 6 वीडियोज़ पूरे देखे।
Poster shared (in BYJU's WhatsApp groups)			
Revised nudging strategy	Encouraging parental engagement in WhatsApp groups	Introduction of 'Super 5' contests to leverage social effects of peer learning to encourage app usage	Including app logos, colours, and screenshots in visual collaterals for easy recall

Super School contest winners were felicitated with books and acknowledged in local newspapers

Photo credits: Sshrishti Trust. Location: Almora, Uttarakhand.

3.2 Data Collection, Monitoring and Analysis

Quantitative Data Metrics

Data on device usage were collected in the form of an app usage report from the MDM partner which detailed total device usage and a customised app report that could be directly accessed from the MDM console which provided more details on total time spent on each individual app. For one learning solution where the content includes more videos, tests, quizzes, games and engaging video lessons, metrics such as weekly engagement time, test/quizzes completed, test scores, videos watched, etc. were monitored and analysed weekly. Whereas for the other learning solution which includes more learning level-based questions, grade-level assessments and videos in Hindi and English, metrics such as subject-wise learning levels and subject-wise engagement time were monitored and analysed weekly.

Quantitative metrics such as device activation and usage, active usage and average engagement time on both the learning solutions and active usage on non-learning apps were tracked on an automated output monitoring framework to maintain procedural fidelity and accuracy of data.

Table 16: Output monitoring framework to track weekly device and app usage

Week		W1	W2	W3	W4	W5
Date		15 Nov -20 Nov	21 Nov - 27 Nov	28 Nov-4 Dec	5 Dec-11 Dec	12 Dec -18 Dec
Activation	Total student sample					
	Students with devices					
	Total students activated					
	% of devices inactive					
	% of devices active					
	Total students active					
	% of students active (Groups 1,2,3,4)					
	Total students offline/ inactive					
	% of students inactive (Groups 1,2,3,4)					
Engagement on BYJU's	Total students active					
	% Active					
	Weekly average engagement time (all users)					
	Weekly average engagement time (active users)					
Engagement on Mindspark	Total students active					
	% Active					
	Weekly average engagement time (all users)					
	Weekly average engagement time (active users)					

Week		W1	W2	W3	W4	W5
Date		15 Nov -20 Nov	21 Nov - 27 Nov	28 Nov-4 Dec	5 Dec-11 Dec	12 Dec -18 Dec
Engagement on non-learning apps	Number of students using only Google Chrome + YouTube Kids					
	% of students using only Google Chrome + YouTube Kids					

Additionally, a similar framework was created to monitor weekly usage of learning solutions across treatment and intervention groups and bucket users into four usage cohorts: Inactive users (< 1 min), Indifferent users (1-30 mins), Active users (31-60 mins), and Superactive users (60+ mins).

Table 17: Dashboard to monitor the usage of learning solutions and across engagement funnels

Solution 1	BYJUs						
Week		Week 1					
Cohort		Non-active	1-30 min users	31-60 min users	60+ min users	TOTAL (active)	TOTAL
G1	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
G2	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
G3	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
G4	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
Total	Total users from all 4 groups						
	% of users from all 4 groups						
	WAET across cohorts						

Solution 2	Mindspark						
Week		Week 1					
Cohort		Non-active	1-30 min users	31-60 min users	60+ min users	TOTAL (active)	TOTAL
G1	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						

Solution 2	Mindspark						
Week		Week 1					
Cohort		Non-active	1-30 min users	31-60 min users	60+ min users	TOTAL (active)	TOTAL
G2	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
G3	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
G4	# of users						
	% of users within that group						
	Weekly average engagement time per user for the cohort						
Total	Total users from all 4 groups						
	% of users from all 4 groups						
	WAET across cohorts						

Qualitative Data Metrics

In addition to quantitative data, at the end of every cycle, qualitative data was collected from a representative sample from each intervention group to establish baseline behaviours on device usage and uncover user experiences of learning solutions. The survey aimed to build an understanding of the following research themes:

- Students' study patterns
- Familiarity with apps
- Efficacy of MDM nudges
- Difficulty in using tablets/apps
- Parental involvement in learning
- Impact of peers on app usage

Table 18: Qualitative survey design implemented at the end of each cycle

Qualitative Survey	
Type: Open-ended questions, qualitative answers	
Overall Objective: Trying to establish baseline behaviours on device usage and uncover user experiences of learning solutions for 15 beneficiaries in each group	
Sampling	40 beneficiaries (10 from each intervention group) Sampling: equal gender ratio, equal grade-wise split, geographically accessible locations.
Enumerator Training	Training sessions were provided by the CSF team on how to administer the qualitative survey, transcribe and take notes.

Qualitative Survey	
Type: Open-ended questions, qualitative answers	
Overall Objective: Trying to establish baseline behaviours on device usage and uncover user experiences of learning solutions for 15 beneficiaries in each group	
Data Collection	(i) The field coordinators from the implementation team conducted these interviews in person. (ii) Interviews were recorded on their phones and notes were taken by the field coordinators. (iii) Interviews were transcribed on the same day and a Hindi transcript was produced (iv) Photos, recordings and transcriptions were then presented to the Research Assistant

3.3 Snapshots from the Field

Snapshots of students/schools being felicitated with certificates and incentives for spending more than 60 mins per week on learning apps

Photo credit: Sshrishti Trust. Location: Almora, Uttarakhand.

Snapshots of newspaper articles felicitating school/teachers that won the super school campaign

NAINITAL Times

Education | Entertainment | health | Nainital | National | News | Opinion | Sports | Uncategorized | Uttarakhand

नैनीताल टाइम्स :: सृष्टि ट्रस्ट के प्रोजेक्ट डिजिटल शक्ति कार्यक्रम में अल्मोड़ा के 83 सरकारी स्कूलों में विजेताओं की घोषणा की गई

ALMORA | LATEST POST | UTTARAKHAND NEWS

अल्मोड़ा: सृष्टि ट्रस्ट के प्रोजेक्ट डिजिटल शक्ति कार्यक्रम में अल्मोड़ा के 83 सरकारी स्कूलों में विजेताओं की हुई घोषणा

Aarti Bisht · June 1, 2023 · 1 min read

khabribox.com — Private

सृष्टि ट्रस्ट के प्रोजेक्ट डिजिटल शक्ति कार्यक्रम में अल्मोड़ा के 83 सरकारी स्कूलों में विजेताओं की घोषणा की गई

By Rajeev Karnatak

MAY 31, 2023

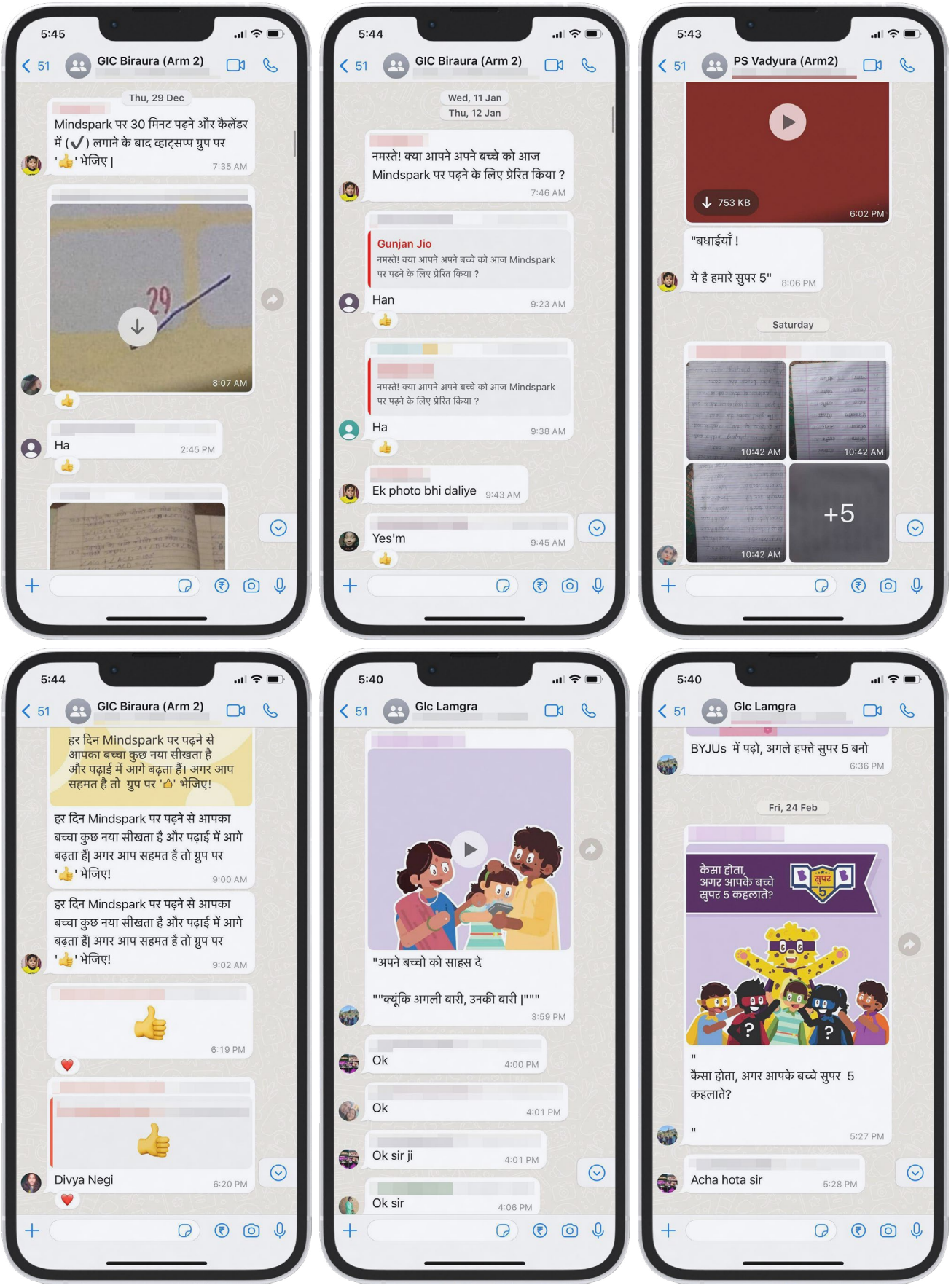
बुधवार
दिनांक– 31 मई 2023

सान्ध्य दैनिक कुमायूँ

सृष्टि ट्रस्ट के प्रोजेक्ट डिजिटल शक्ति कार्यक्रम में अल्मोड़ा के 83 सरकारी स्कूलों में विजेताओं की घोषणा की गई

अल्मोड़ा। सृष्टि ट्रस्ट उत्तराखंड द्वारा सेंट्रल स्क्वायर फाउंडेशन, एसीटी ग्रांट्स, एजुकेशन फॉर ऑल इनिशिएटिव और एजुकेशनल इनिशिएटिव्स के सहयोग से मई, 2022 में लॉन्च किया गया प्रोजेक्ट डिजिटल शक्ति मई 2023 में सफलतापूर्वक पूरा हो गया है। कार्यक्रम के हिस्से के रूप में, अल्मोड़ा जिले के 4 चयनित ब्लॉकों जैसे लमगराह, ताकुला, हवालबाग और द्वाराहाट में 83 सरकारी स्कूलों में घर पर सीखने के लिए 600 छात्रों को उच्च गुणवत्ता वाले शिक्षण ऐप, एमडीएम सॉफ्टवेयर और इंटरनेट पैकेज के साथ स्थापित टैबलेट वितरण किये गए थे।सृष्टि शिक्षा और कौशल विकास के माध्यम से उत्तराखंड की ग्रामीण महिलाओं और युवाओं के उत्थान के लिए पिछले 14 वर्षों से उत्तराखंड में काम कर रही है।2022 में सृष्टि ने डिजिटल शक्ति प्रोजेक्ट हासिल किया। जिसने 600 सरकारी स्कूल के छात्रों को प्रीमियम लर्निंग ऐप और माइंडस्पार्क ऐप वाले टैबलेट वितरित किए। बी वाई जे यू का प्रीमियम लर्निंग ऐप और माइंडस्पार्क ऐप अंग्रेजी और हिंदी वीडियो, क्विज और प्रगति रिपोर्ट में अंतर्निहित सामग्री के साथ विज्ञान, गणित और एसएसटी में उपचारात्मक कोचिंग के लिए स्व–अध्ययन मॉडल प्रदान करता है। परियोजना का समग्र उद्देश्य उपकरण वितरण के स्केलेबल मॉडल स्थापित करना था जो छात्रों के लिए सकारात्मक सीखने के परिणाम सुनिश्चित कर सके और भविष्य के लिए एड–टेक सीखने के लिए सर्वश्रेष्ठ मॉडल को समझ सके। छात्रों के बीच एड–टेक ऐप पर सीखने को प्रोत्साहित करने के लिए, 22 स्कूलों में एक सुपर स्कूल अभियान शुरू किया गया था, जहां शिक्षक छात्रों को घर पर पूरा करने के लिए बी वाई जे यू पर हर हफ्ते पाठ्यक्रम–संरेखित अध्याय या वर्कशीट देंगे। सभी छात्र जिन्होंने 3 सप्ताह के लिए असाइन की गई गतिविधि को सफलतापूर्वक पूरा किया और सीखने वाले ऐप्स पर सीखने का महत्वपूर्ण समय बिताया, उन्हें अभियान के अंत में पुरस्कार प्राप्त करना था। 22 छात्रों को 200 छात्रों में से सर्वश्रेष्ठ प्रदर्शनकर्ता के रूप में घोषित किया गया और उन्हें उनके संबंधित स्कूलों में सृष्टि ट्रस्ट टीम द्वारा पुरस्कार और प्रमाण पत्र से सम्मानित किया गया। 22 स्कूलों में से, सबसे अधिक विजेता छात्रों वाले शीर्ष 5 सरकारी स्कूलों को उनके स्कूल पुस्तकालयों के लिए बी वाई जे यू की विज्ञान और गणित की किताबों का एक–एक सेट दिया गया। प्रतियोगिता में पीएस तानी, हवलबाग ब्लॉक पहले, पीएस रियुनी, द्वाराहाट ब्लॉक दूसरे, जीआईसी बिरौरा, हवालबाग ब्लॉक तीसरे, पीएस ज्योली चौथे और जीआईसी लमगराह पांचवें स्थान पर रहे। पीएस तानी, हवालबाग में चौथी कक्षा के छात्र दिव्यांशु जोशी, बीना जोशी, योगेश लटवाल और दिव्या लटवाल को प्राचार्य सुरेंद्र सिंह भंडारी ने प्रमाणपत्र देकर सम्मानित किया। सृष्टि ट्रस्ट की ओर से वितरण कार्यक्रम में सुश्री नीमा दिनिया, फील्ड कोऑर्डिनेटर मौजूद रहीं, जबकि पीएस रियूनी, द्वाराहाट में कक्षा 4 के छात्र मनीष अधिकारी, पाराश जोशी, विवेक अधिकारी और अनुज जोशी को प्रिंसीपल श्रीमती नविता ने प्रमाण पत्र देकर सम्मानित किया। वर्मा व शिक्षक नवीन। वितरण के लिए क्षेत्र समन्वयक मदन बिष्ट उपस्थित थे। जीआईसी बिरौरा, हवालबाग में कक्षा 8 वीं के छात्रों हिमांशु कुमार, दिव्या नेगी और भास्कर सिंह नेगी को जीआईसी बिरौरा के प्रिंसीपल नवीन चंद्र सोरारी और उनके शिक्षक रमेश चंद्र चतुर्वेदी द्वारा प्रमाण पत्र देकर सम्मानित किया गया, जो इस परियोजना में सक्रिय रूप से शामिल थे। सृष्टि ट्रस्ट की ओर से सुश्री गुंजन देवरी, फील्ड कोऑर्डिनेटर और सुश्री पारोमिता सरकार, प्रोजेक्ट लीड उपस्थित थीं। पीएस ज्योली, हवालबाग में चौथी कक्षा के छात्र तनिष्क चोपड़ा और वंशिका सलाल को प्रिंसिपल मंजू वर्मा और शिक्षक दीप बिष्ट ने प्रमाणपत्र देकर सम्मानित किया। सृष्टि ट्रस्ट की ओर से सुश्री हिमानी भकुनी मौजूद थीं।जीआईसी लामगढ़ में कक्षा 8वीं की छात्रा आराधना नागरकोटी व अजय पाण्डेय को प्राचार्य त्रिभुवन कुमार एवं शिक्षक श्री. केएन जोशी और सीपी यदुवंशी। सृष्टि की ओर से विक्रम सिंह बिष्ट, फील्ड कोऑर्डिनेटर और सुश्री पारोमिता सरकार, प्रोजेक्ट लीड मौजूद थे। हम संपूर्ण सृष्टि परिवार और हमारे सभी उदार दानदाताओं की ओर से परियोजना के लिए उनके समर्थन के लिए स्कूल और शिक्षकों को तहे दिल से धन्यवाद देना चाहते हैं।

Snippets of engagement seen on nudges shared on parents' WhatsApp group



Chapter 04

Bibliography

1. Abdul Latif Jameel Poverty Action Lab (J-PAL.) 2019. *Will Technology Transform Education for the Better?* Evidence Review. Cambridge, MA.
2. Angrist, N., Bergman, P., & Matsheng, M. (2022, July). Experimental evidence on learning using low-tech when school is out. *Nature Human Behaviour, 6, 941–950.* https://doi.org/10.1038/s41562-022-01381-z
3. Bergman, P. (2019). How behavioral science can empower parents to improve children's educational outcomes. *Behavioral Science & Policy,* 5(1), 53–67. https://doi.org/10.1177/237946151900500105
4. Berlinski, S., Busso, M., Dinkelman, T., & Martinez, A. C. (2022, October). Reducing parent-school information gaps and improving education outcomes: Evidence from high frequency text messaging in Chile. *National Bureau of Economic Research*. https://www.nber.org/papers/w28581
5. Central Square Foundation (2023). Bharat Survey for EdTech (BaSE) 2023. https://www.edtechbase.centralsquarefoundation.org/
6. Cole, S., & He, T. L. (2017, March 16). Mindspark: Improving Educational Outcomes in India. *Harvard Business School Case 217-060*. Mindspark: Improving Educational Outcomes in India - Case - Faculty & Research - Harvard Business School (hbs.edu)
7. Erdem, C. & Caya, M. (2020, November). A Meta-Analysis of the Effect of Parental Involvement on Students' Academic Achievement. *Journal of Learning for Development,* 7(3), 367-383. DOI:10.56059/jl4d.v7i3.417
8. Ibarrarán, P. (2012, March 6). And the jury is back: One Laptop per Child is not enough. Inter-American Development Bank. https://blogs.iadb.org/efectividad-desarrollo/en/and-the-jury-is-back-one-laptop-per-child-is-not-enough/
9. J-PAL Evidence Review (2019). Will Technology Transform Education for the Better? *Abdul Latif Jameel Poverty Action Lab:* Cambridge, MA.
10. Karthik, M., Singh, A., & Ganimian, A. J. (2016) Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India. *National Bureau of Economic Research*. Working Paper w22923.
11. Muralidharan, K., Singh, A., & Ganimian, A. J. (2017, July). Disrupting Education? Experimental evidence on technology-aided instruction in India. *National Bureau of Economic Review Working Paper 22923*. http://www.nber.org/papers/w22923
12. Muralidharan, K. (2019). *Reforming the Indian School Education System*. https://econweb.ucsd.edu/~kamurali/papers/Published_Book_Chapters/Muralidharan%20-%20School%20Education%20Reforms%20in%20India%20(February%202019).pdf
13. Norman, J. & Stern, J. (2023, November 7). *What works to improve numeracy at scale: Initial insights from successful large-scale early grade numeracy programmes*. https://shared.rti.org/content/what-works-improve-numeracy-scale-initial-insights-successful-large-scale-early-grade

Design and Artwork: Sanjay Chaurasia
Editor: Debesh Bannerjee and Radhika Israni (Policy & Communications, CSF)
Photo Credits: CSF and Sshrishti Trust teams

CENTRAL SQUARE
FOUNDATION

To know more about CSF

Visit our website

www.centralsquarefoundation.org

Follow us on social media

CSF_India

central-square-foundation

CentralSquareFoundation

Published in May 2024