

# Lessons from the Project on Understanding EdTech Usage at Home Using Dedicated Devices

## Introduction

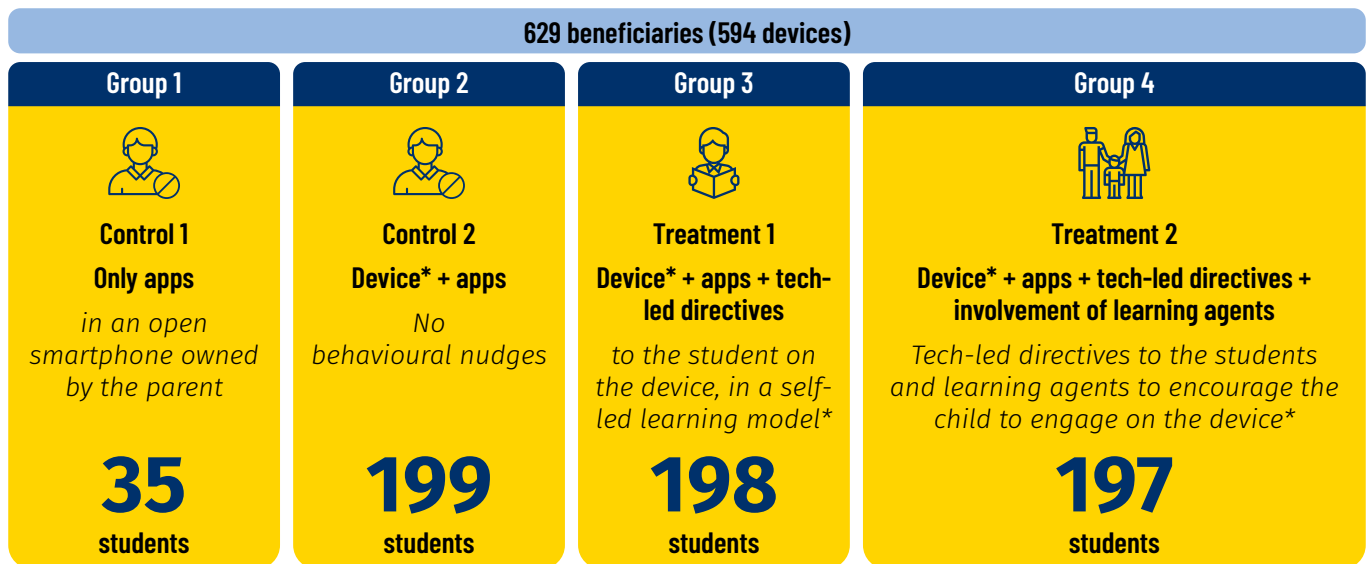
Access has often been quoted as an impediment to equity with respect to EdTech and hence governments across the world have run device distribution programs to provide children with access to digital devices. However, it is important that such programmes have high-quality educational software and well defined structures to encourage student's sustained usage, retention and engagement.

CSF's project on 'Understanding EdTech Usage at Home Using Dedicated Devices' aimed to identify best practices for implementation of a program where dedicated devices were given to children and there were programmatic nudges to encourage EdTech Usage at home.

## Research Design

For this programme, devices installed with Mobile Device Management (MDM) 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.

Under the guidance of Prof. Tarun Jain from Indian Institute of Management, Ahmedabad, this action research was conducted over 7 months (from November 2022 to May 2023) in four groups given below.



\*Device includes **dedicated device + MDM software + data package + customised package of apps (BYJU's + Mindspark)**

**Quantitative Data collected and analysed for all beneficiaries (using in-app data + MDM data)**

**Qualitative surveys (Q2) conducted for 10 beneficiaries in each group**

**No tech-based interventions are deployed**

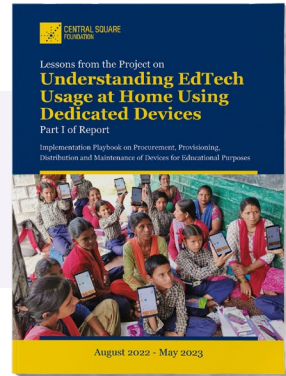
**Programmatic/Tech-based Behavioural Interventions are designed & deployed** *(Few indicative examples below)*

\*MDM based content nudges directed towards students

MDM + WhatsApp based content nudges directed towards parents

## The findings from this project have been collated into two reports:

**Part I** is an implementation playbook that provides learnings relating to procurement, provisioning, distribution, and maintenance of devices which are summarised below:



### Device procurement



- The EdTech learning software most suited to the learning directive of the program was identified and then devices were procured with suitable technical capabilities to support the software.
- Devices were procured under appropriate warranty coverage and the on-field IT team had a clear understanding of the damages that were covered under warranty.
- Additional replacement devices and licenses were budgeted to safeguard against any disruption of learning that could be caused by device damage or loss.

### Device provisioning



- An MDM software was installed on devices to optimize functionality and safety for a fleet of devices from a single unified console. It is used for real-time monitoring of the devices, retrieving usage data, and physically verifying devices for inactive students, and for checking any misuse of the tablet.
- The initial provisioning of devices — where each device was set up with customized user settings and a requisite package of apps — required a large staging area with high-speed internet and technical expertise. Hence, it is recommended that the initial provisioning of devices is carried out by the MDM software partner.

### Device distribution and training



- The “device distribution day” was planned as an opportunity for the teachers, parents, and students to come together to activate their devices and sim cards, build familiarization with the devices and learning solutions, and align on the goals for usage on the learning solution.
- The “device distribution day” was also used as an opportunity to administer a learning baseline test for the students.

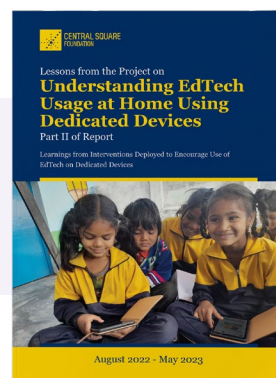
### Device Maintenance



- A proactive issue resolution mechanism was set up which involved elements like providing a helpline number that the parents/students could access, and setting up a similar process with the local service center in the targeted areas to ensure timely servicing of damaged devices.
- This was coordinated by an on-field IT assistant who interacted with the MDM software partners and the learning solution partners in the back end to facilitate quick resolution of any MDM or learning solution-related issues.

The lessons from the project on **Understanding EdTech Usage at Home Using Dedicated Devices** demonstrates the complexities around device distribution, the management of devices once they are distributed to children, and the effort it takes to ensure that devices are being used for the intended purpose.

**Part II** is a learning report that describes the interventions deployed to encourage the use of EdTech on dedicated devices which are summarized below:



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




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