# Reimagining Education Through Technology

January 2021

CENTRAL SQUARE FOUNDATION

#EDthroughTECH

# About Central Square Foundation


**Central Square Foundation (CSF)** is a non-profit organisation working towards ensuring quality school education for all children in India. Since 2012, CSF has partnered with the government, the private sector, non-profit organisations, and other ecosystem stakeholders to improve the learning outcomes of children, especially from low-income communities. CSF is driven by its mission to enable the school education system to adopt solutions that are scalable, sustainable and effective so that all children get equal access to opportunities needed for leading a better life.

To learn more, please visit: **centralsquarefoundation.org**.

# Contents

# Note from the Founder-Chairman

Over the last three decades, EdTech has shifted from being hardware-oriented to focusing on innovative software that meets students at their own learning levels – no matter where they are or what language they speak. Technology supports and empowers teachers; engages and provides agency to students; and meaningfully involves parents and families in the teaching-learning process. Technology can also collect data to provide valuable insight into how students learn. Growing global evidence has shown that EdTech has the power to leapfrog learning – here in India, and across the world.

Catalytic growth, disruption, and innovation are afoot in the sector, riding now on the wave of increased awareness and demand due to the COVID-19 pandemic. India has been making headlines with EdTech in the recent past, and is only behind North America and China as world leaders in EdTech. We, at CSF, created this analysis to fill the need for a one-stop-source for discovering and understanding the diversity of EdTech innovations that are available today across the world.

This document aims to be a ready reckoner for individual and institutional EdTech adopters. It can help to build a deeper understanding of the current EdTech landscape and predict the future evolutions that will shape the sector.

**Ashish Dhawan**
Founder-Chairman,
Central Square Foundation

# Introduction: Reimagining education through EdTech

The global market for EdTech unequivocally continues to burgeon and so does its demand – both by institutions and individuals. With innovations rampant in the sector, EdTech presents boundless possibilities to enhance the learning experience.

***Who should read this document?***

- *Policymakers/practitioners contemplating on appropriate EdTech solutions for their context*
- *Product companies or funders interested in predicting trends, and identifying white spaces and new hypotheses in EdTech*
- *EdTech enthusiasts interested in learning about the global landscape*

***Why should you read this document?***

- *To get a bird's eye view of the EdTech sector and understand innovative and disruptive hypotheses*
- *To uncover and visualize how EdTech can transform a traditional classroom and amplify the learning process for teachers, students and even parents*

The database powering this analysis can be accessed here for independent analysis and additional information on individual products in the landscape


K-12 learners in India affected by COVID-19 school closures[1]

Projected revenue of the Indian EdTech market in 2022

Indian state governments responses to Covid have included EdTech

Projected value of the global EdTech market by 2026[2]

Global innovations landscaped for insights in this report

Teaching - learning interactions re-imagined

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[1] UNESCO [2] GSV Ventures

# Overview

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# Introduction: Innovations in EdTech

## Context

Technology has been reshaping traditional educational interactions around the world. Innovation in EdTech is ubiquitous and is changing how teaching and learning happens

### Innovation is granular

Technology is transforming not only broad teaching-learning interactions, but also the granular actions within them (for e.g. how and when feedback is received by a learner)

### Innovation is scalable

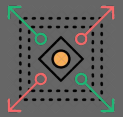
EdTech innovations have been able to achieve reasonable scale fairly rapidly, reaching teachers, students, and parents worldwide

### Innovation is essential

Continuously catalyzing innovation to strengthen and build on value offerings (such as building teacher capacity) is essential for meaningful EdTech adoption

### Innovation is pervasive

EdTech innovations have proliferated in a range of contexts, from developed to developing countries, leveraging technologies along the spectrum from radio to AI



### Innovation is brewing

White spaces exist across the teaching-learning spectrum for EdTech, however, the pandemic and mounting global evidence has spurred considerable growth in the sector

## This Document

This document aims to provide a deeper understanding of how innovations in EdTech have redesigned multiple teaching and learning interactions across varying contexts around the world led by the following stakeholders – teachers, students, and parents.

# INNOVATIONS IN EDTECH

## Transformation of teaching-learning interactions via technology

**Teacher-led interactions**

### Lesson Preparation

**41**

**From static to interactive, personalized plans**
Technology allows for creation and dissemination of high-quality plans for more effective instruction with reduced teacher effort. This can lead to a systemic increase in lesson quality.

### Lesson Delivery

**65**

**From sage on the stage to guide by the side**
Technology can transform the role of a teacher from an instructor to a guide that supports students through a personalized learning journey in the classroom — redefining what a classroom looks like.

### Teacher Professional Development

**23**

**From mandated to incentivized**
Tech can allow for large scale delivery of quality TPD that provides flexibility and agency to teachers for their own learning.

### Homework

**10**

**From task-based to insight-led**
A nascent but disruptive category which envisions automatic creation, dissemination, and correction of homework, allowing teachers to plan for more targeted interventions to support learning.

### Assessments

**20**

**From exam fever to engaging, automated assessments**
Technology enables and automates the creation of increasingly engaging assessments. Easy collection of reliable performance data can feed into and redefine lesson preparation and delivery.

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***# of products** profiled for this interaction*

# INNOVATIONS IN EDTECH

## Transformation of teaching-learning interactions via technology

### Student-led interactions

#### Self-Learning

102

**From learning at grade-level to learning at one's pace**

Technology increases the student's agency in directing their learning, via a basket of innovative solutions offering engaging and personalised learning experiences

#### Doubt Resolution

33

**From being teacher dependent to resolving doubts on demand**

Technology enables greater student independence by provision of on-demand services through virtual communities and AI backed solution repositories to resolve doubts

### Parent-led interactions

#### Parent-Teacher Communication

18

**From receiving information at PTMs to building cohesive parent-teacher communities**

Technology enables increased depth and quality of communication between teachers and parents

#### Parental Participation

16

**From being a supervisor to becoming a partner in child's education**

Technology enables parents to increase their own capacity to meaningfully engage in their child's learning journey

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*# of products profiled for this interaction*

# Approach

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# Approach

*This document aims to demystify the innovations in the EdTech landscape and present it in an intuitive and user-friendly format. The approach adopted to create this document has been detailed in this section.*

**1**

## Landscape

Innovations identified from across the globe – ***over 350 innovative K-12 EdTech solutions***

**2**

## Categorize

Mapped the solutions to **nine prioritised teaching and learning interactions**

**3**

## Synthesize

Analysed the solutions in each interaction to extract the **value that technology has unlocked**

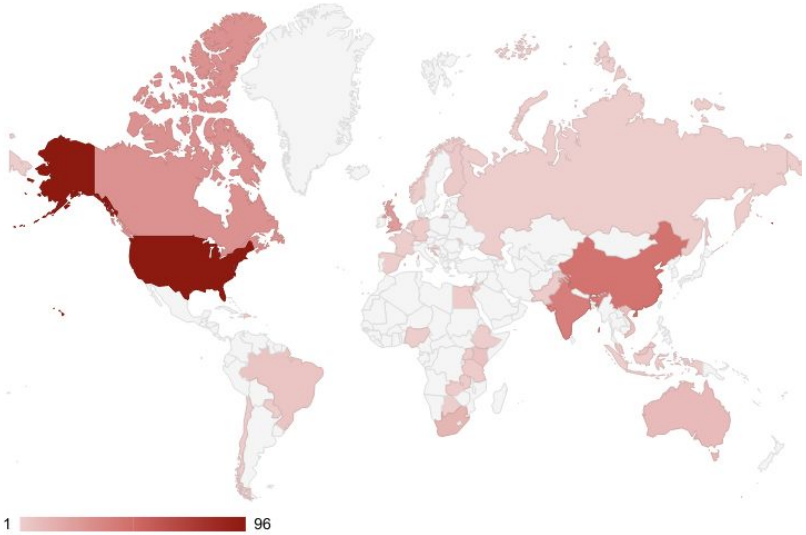
# 1 Landscaping EdTech innovations

*The objective of this exercise was to identify innovative EdTech solutions across the globe. To meet this objective different sources that recognise the most promising innovations were explored. Below is an indicative list of categories that were examined to create this document:*

- ***Awards and competitions** such as CodiE, EdTech Digest, EdTech X, Global EdTech Awards, Global Learning X-Prize, MIT Solve, and the mEducationAlliance.*
- ***Databases** such as Leapfrogging Inequality (The Brookings Institution) & the Global Learning Landscape (HolonIQ).*
- ***Reports/Blogs** by prominent actors working on EdTech like the World Bank, UNESCO, Navitas Ventures, and EdSurge.*
- ***Market research aggregators** such as Pitchbook, Crunchbase, and Tracxn to source top 10 lists of EdTech solutions in different countries and regions across the world including the US, Canada, China, Finland, Kenya, Tanzania, South Korea, South East Asia, Latin America, MENA, etc.*

**Whilst this landscape is not exhaustive, it has aimed to cover enough ground to allow for accurate and thorough analysis of the diversity of innovations that exist in EdTech markets across the globe*

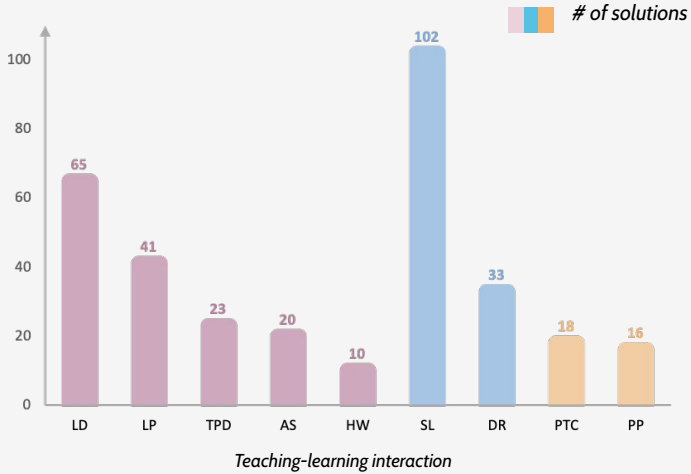
## CONCENTRATION OF EDTECH SOLUTIONS ACROSS COUNTRIES IN THE LANDSCAPE



# 2 Categorizing innovations into the nine teaching learning interactions

| | | | | | | |
|---|---|---|---|---|---|---|
| Teacher-led | LP | Lesson Preparation | LD | Lesson Delivery | TPD | Teacher Professional Development |
| | *Teacher prepares a plan to deliver the lesson* | | *Teacher executes a lesson plan* | | *Teachers engage in learning activities to strengthen & develop their own teaching practices* | |
| | HW | Homework | AS | Assessments | | |
| | *Teacher creates and assigns practice exercises for students and tracks completion* | | *Teachers conduct assessments to gauge progress on learning to inform lesson planning and delivery* | | | |
| Student-led | SL | Self learning | DR | Doubt resolution | | |
| | *Student accesses content to learn independently* | | *Student resolves queries outside class* | | | |
| Parent-led | PTC | Parent-teacher communication | PP | Parent participation | | |
| | *Parents engage with teachers/school on their child's school experience* | | *Parents and families can support a child's learning at home* | | | |

## # OF EDTECH SOLUTIONS PER INTERACTION




*Products have been categorized to an interaction basis their dominant use case. However, with their overall offering, they may belong in more than one interaction/use-case.

# 3 Synthesizing the diversity of innovations

As the landscape covered most continents, the idea was to bring out the diversity of EdTech innovations created to solve for similar issues in different contexts. Some of the key questions being sought through the analysis were:

- *What technology based solutions have been are prominent in both **developing and developed** contexts?*
- *Do solutions exist that have been designed to cater to regions with **infrastructural constraints**, both in terms of hardware and connectivity?*
- *What is the **relative concentration of products**/innovations across different teaching-learning interactions?*
- *How does moving to **technology-enabled learning environments** make the learning interaction more **meaningful**?*
- *What kind of **evidence** exists for solutions/innovations?*
- *How do existing **Indian government EdTech solutions** map to the global diversity?*

## ANALYSIS PROCESS

1. ***Detailing the teaching - learning interaction** into granular processes to understand the actions that technology can enhance*

2. ***Mapping the diversity of solutions** (including Indian government products) across the spectrums of technology, engagement, personalisation, effort*

3. ***Delineating the key features** of each category of products within each interaction to understand how technology has enhanced the interaction*

4. ***Deep dive into an exciting product** within each interaction to showcase its technology, scale and evidence*

# Insights

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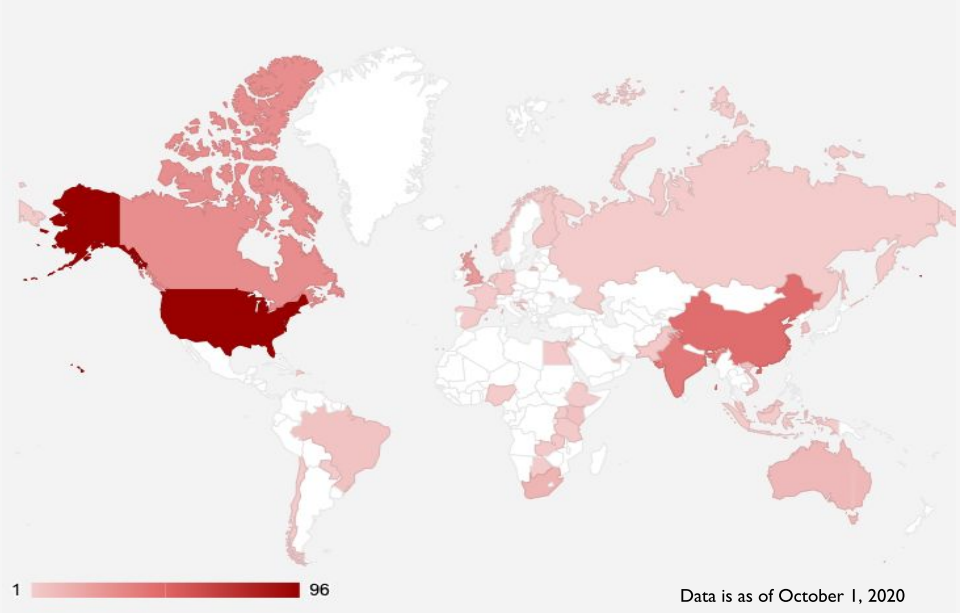
# What are the hotbeds for EdTech innovation around the globe?



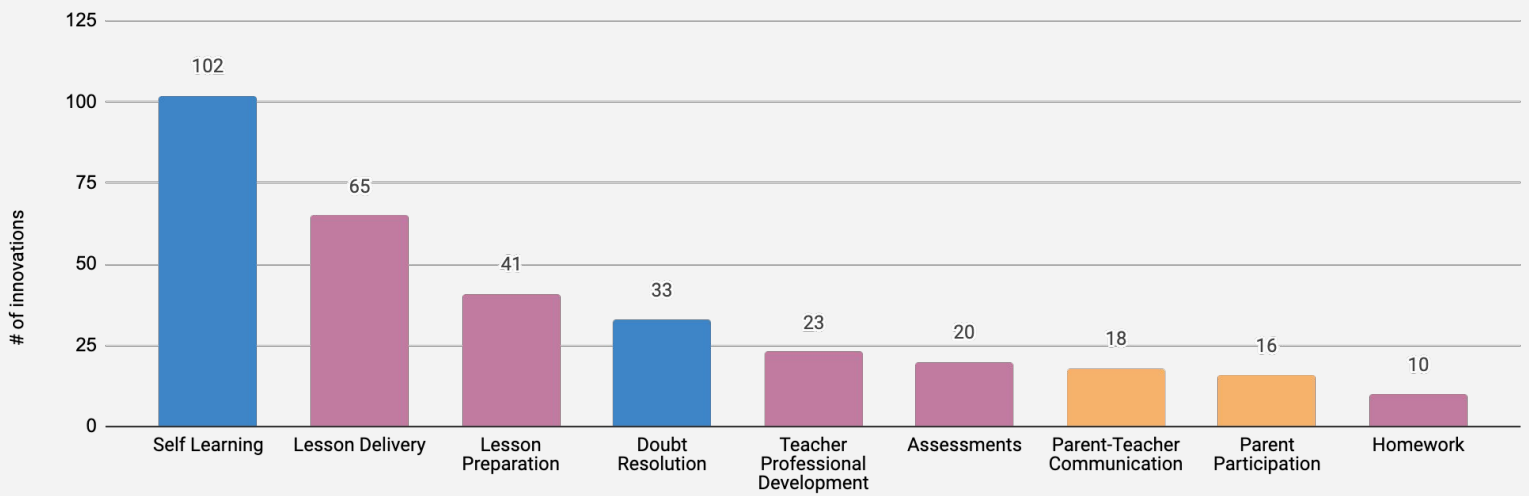

**Top 5 countries by total funding***

- China ($8.7B)
- India ($3.1B)
- United States ($2.7B)
- Canada ($447M)
- Norway ($363M)

**Insight**

Innovation in EdTech is happening, both across the globe and across a range of contexts.
**Led by North America, China & India** – North America has the most number of innovations while China leads the way in funding. India closely follows, both in terms of number of innovations and funding.

# What teaching-learning interactions have seen the most traction and where can we do more?




Teacher-led

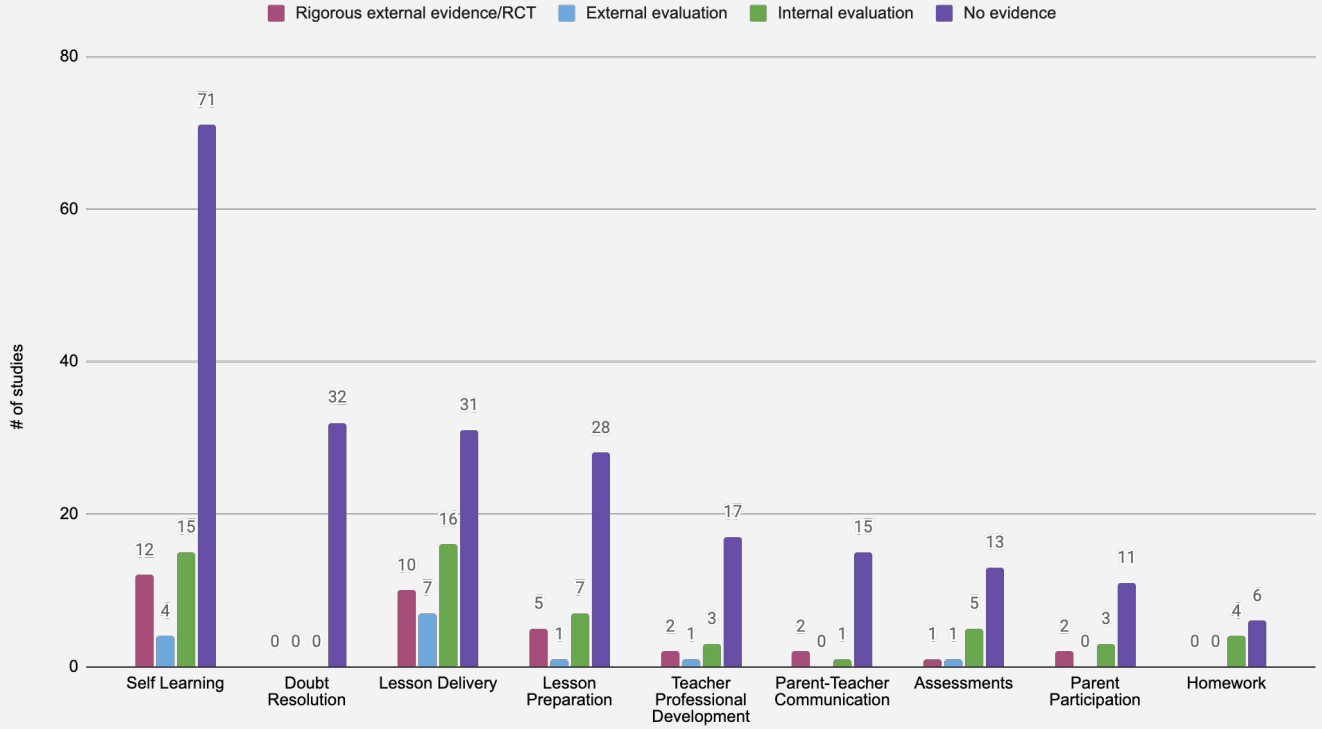
Student-led

Parent-led

## Insight

**Leaders**: Traditional interactions such as Lesson Preparation & Delivery, and Self Learning constitute 67% of the landscape
**Emerging**: Homework and Doubt Resolution backed by Chinese funding
**Laggards**: Teacher Professional Development & Parental Participation have some evidence but need innovation and investment

# What is the nature of evidence on EdTech innovations?



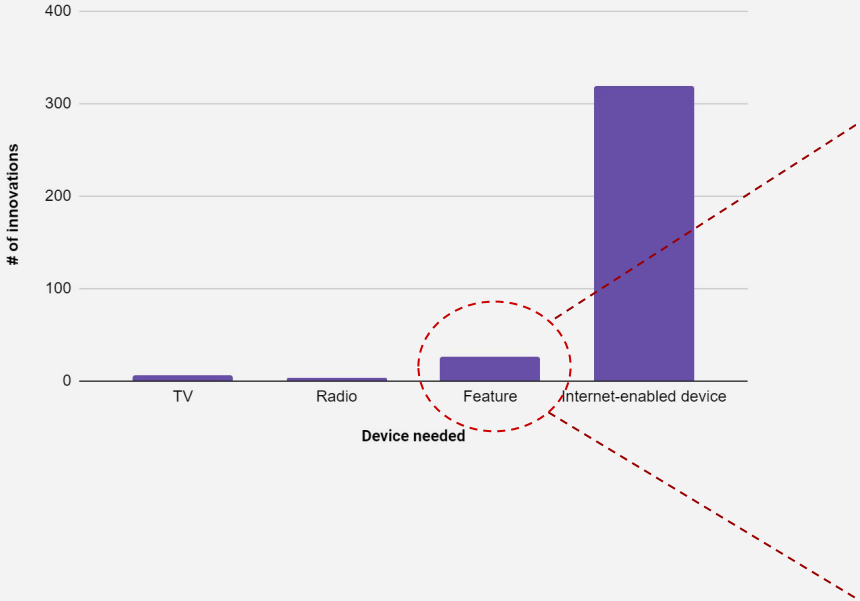

## Insight

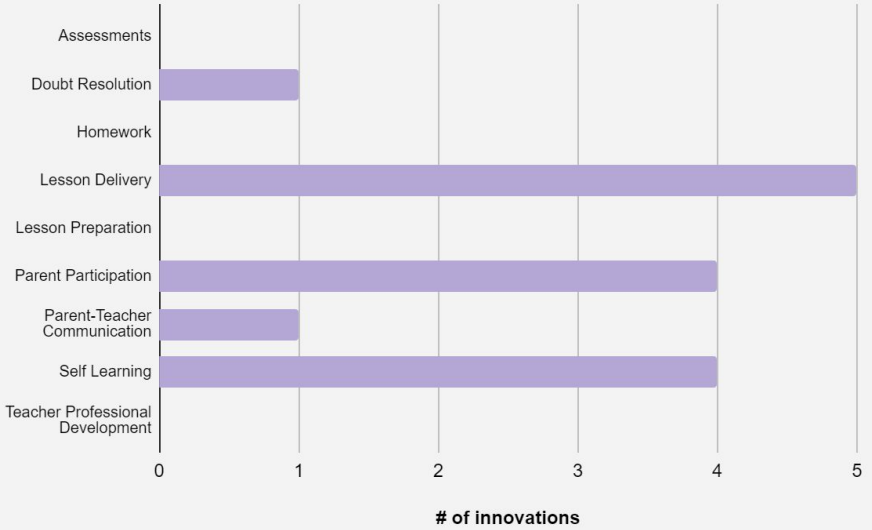
**# of innovations with evidence:** Most solutions in our landscape did not have a rigorous experimental study backing them.

**Type of evidence:** While product company led internal evaluations held the largest chunk, around ~10% of innovations have been evaluated through an RCT or other experimental methods

**Evidence across interactions:** While there are a handful of studies on traditional interactions like self-learning and lesson delivery, it is the parent focused interactions that have started seeing some research momentum around them in the recent past.

# Low-tech innovation and tiding over the digital divide




**Insight**

Close to 8% of innovations are accessible over feature phones, a device that is nearly ubiquitous around the world, enabling last mile reach.

# How to read this document

## Four sections are designed for each of the nine teaching-learning interactions

01

**Definition of the interaction**

- Actions undertaken by stakeholders in the chosen interaction

02

**How tech enhances the interaction**

- Diversity of EdTech use cases
- Mapping of Indian EdTech govt products
- Demo's for select cutting-edge products

03

**How to operationalise the interaction**

- Deep dive on product features
- Device and content required to operationalise the interactions
- Global examples of innovations

04

**Case Study**

- Single product deep dive as an example of that interaction
- Demo to visualise what the product does in practice

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# How to read this document: Icon guide

| Icon | Key | Icon | Key |
|---|---|---|---|
|  | Radio |  | Student response clickers |
|  | Television |  | Video/multimedia |
|  | Satellite television |  | Artificial Intelligence |
|  | Feature phone |  | Mapping of Indian government EdTech solutions against the landscape |
|  | Internet-enabled smartphone |  | Click for product demo |
|  | Internet-enabled laptop/tablet |  | Number of products featuring in the landscape analysis |
|  | Virtual reality (goggles) |  | OCR/Image recognition |

# Teaching & Learning: *Reimagined through technology*

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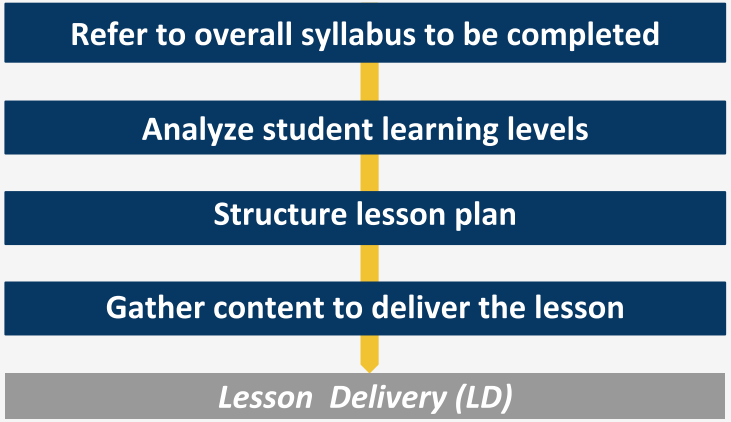
## Lesson Preparation (LP)

Teacher has access to tools and content to prepare lessons, catered to the different learning levels of students in class



# Lesson Preparation (LP)

*Technology reduces teacher effort to create engaging and personalized lesson plans*

| A | B | | | | C |
|---|---|---|---|---|---|
| **Text-based lesson plans (structured)** | **Multimedia enhanced lesson plans** | | | | **Personalized lesson plans (structured)** |
| | **B1** Unstructured | **B2** Structured | **B3** Structured and editable | **B4** Structured and editable LPs, strengthened through peer community | |
| - Teacher accesses **high quality, ready to use lesson plans that are syllabus aligned**<br><br>- But these are only text-based, leaving room to incorporate various content formats | - Teacher accesses a **"laundry-list" of multimedia content** (image, audio, videos etc.)<br><br>- But teacher needs to put in effort to comb through and select what suits her lesson plan | - Teacher accesses **ready to use lesson plans that are syllabus aligned**<br><br>- But, these cannot be edited by the teacher | - Teacher accesses **editable** ready to use lesson plans that are syllabus aligned<br><br>- But, these are still not differentiated plans for the class | **-** Teacher accesses **virtual communities** to collaborate and solicit feedback on lesson plans - **"virtual staffroom"**<br><br>- But, lesson plans are not automatically differentiated | - Teacher accesses **differentiated lesson plans** that are **automatically created**<br><br>- They are built using students' progress data and learning levels |
| LearnZillion, Bridge | DIKSHA, Follett | shmoop | Pobble | Teacherly | nearpod |
| App / Web based | | | | | Web + AI |

*Indian govt. products* *Click for product demo* ***# 41 products** profiled for this interaction*

# Lesson Preparation (LP)

*Technology reduces teacher effort to create engaging and personalized lesson plans*

| Sub use- case | Features | Device | Examples of products |
|---|---|---|---|
| A **Text based lesson plans (structured)** | * **Modular text files/lesson plan and teacher tips** to enhance lesson delivery<br>* **Easily shareable** across various platforms, including **Whatsapp** |  <br>  | * Learn Zillion, Bridge Academy Teacher guides, Khan Academy India |
| B **Multimedia lesson plans** — B1 **Unstructured** | * **Open-source content** that supports LP hosted on an easy-to-search tool | | * Follett My destiny |
| B2 **Structured** | * **Readymade lessons plans** ( scripts, videos, worksheets, quiz, etc.) to deliver class<br>* **Web based interactive repository** with links to external resources as well<br>* Repository **downloadable offline** | | * Muse by Sabq<br>* Shmoop<br>* Onion Math, Elimu |
| B3 **Structured, editable** | * **Create/modify basic elements** of a lesson plan like videos, audios, slides etc.<br>* **Interactive elements** like quizzes, polls etc. can be added<br>* **Collaborate with people** to co-create lesson plan | | * Pobble, Storyweaver, Chalk<br>* Nearpod, Edoome<br>* Seesaw, Chalk |
| B4 **Structured editable with peer feedback** | * **Receive real-time feedback** on lesson plan<br>* **Track teacher performance and display** in virtual (local/global) communities | | * Teacherly |
| C **Personalised lesson plans (structured)** | * **Simple dashboards** with student performance data and assistance with cohorting<br>* **Differentiated lesson plans** & resources for different student learning levels<br>* Create customized activities for self pace individual work or groups | | * Nearpod<br>* ILL<br>* Tailor Ed, Edmircro |

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*Products with presence in developing nations*

# Case study: Nearpod

***Lesson Preparation:*** *The only dashboard you need for interactive instruction*

**What**

Nearpod is a **platform for interactive instruction delivery** for K-12 and beyond - supporting teachers to prepare and deliver great lessons

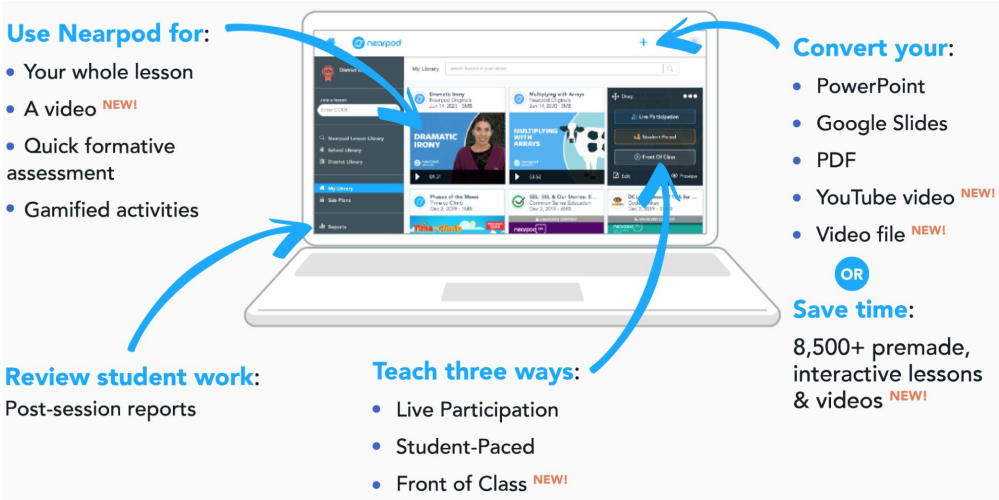
**Evidence**

A recent evaluation of showed that **16% & 35% of improvement in English & Math scores** respectively can be **attributed to usage of Nearpod.**

**Scale**

The company has **raised a total of $41.6M** as of 2019, has 1.3M teachers and over 5M registered student users around the world.

**Demo**

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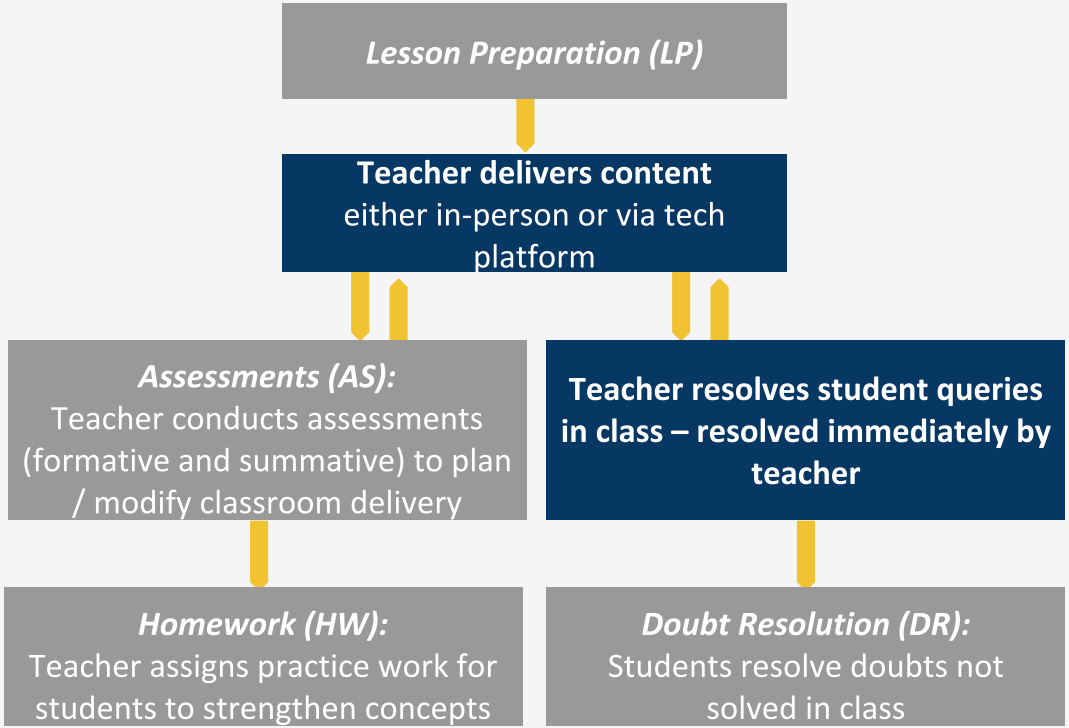
## Lesson Delivery (LD)

Teacher executes the lesson plan through different modalities



# Lesson Delivery (LD)

*Technology enables the teacher provide increasingly personalized instruction to students*

***Degree of personalization***

***Low*** → ***High***

| A | B | C |
|---|---|---|
| **One-way**<br>*Teacher is an instructor, delivering instruction as learners consume pre-set content* | **Interactive**<br>*Teacher is a facilitator, learners independently interact with content at their own pace* | **Personalized**<br>*Teacher is a coach, guiding students as tech enables personalized instruction* |
| **A1** - Teacher instructs students to watch content **broadcasted on television** at home | **A2** - Teacher sends content to students via **text message** | **A3** - Teacher uses multimedia content (text, A/V) via **smart boards, live tutoring platforms, apps, tablets, computers**, etc. | **B1** - Teacher uses **games** to provide students with engaging learning experiences | **B2** - Teacher supports student learning as he/she engages with **immersive learning** content via **AR / VR** and **3D simulations** | - Teacher uses student performance data to provide **differentiated support** as students engage with **AI driven platforms** with personalised learning content, either in the classroom, remotely via virtual classrooms, or over **live-tutoring platforms** |
| - But all students interact with the same content and are expected to move at the same pace | | | - All students learn the same syllabus/content, albeit at their own pace using individual learning paths | | - Each student engages with content tailored to their learning needs, at their own pace |
| SESAME WORKSHOP | | NROER, DIKSHA<br>ZEduPad<br>onebillion | matific | Mysticraft | CHALKTALK |
| TV | SMS/WhatsApp | Video/Multimedia | App / Web | AR / VR | App / Web + AI |

*Indian govt. products* *Click for product demo* *# **65 products** profiled for this interaction*

# Lesson Delivery (LD)

*Technology allows for a teacher to transform into a coach who provides personalized instruction*

| Sub use- case | | Features | Device | Examples of products |
|---|---|---|---|---|
| A **Pre-set content** *Teacher is an instructor, delivering instruction as learners consume pre-set content* | A1 | * **Multimedia content broadcasted at scale** on TV across grades and subjects |  | * Sesame Street, BigBadBoo, EduTree |
| | A2 | * Short, crisp content sent to student via **SMS** |  | * WhatsApp/SMS |
| | A3 | * **Multimedia content** shown to students as a part of lesson instruction i.e. through smart classes that use text, audio/visual content, or over live tutoring platforms and virtual classrooms |  | * Zoom, Google Classroom,, Blackboard, FrogAsia, ZeduPad, Moodle, OpenEdX, Syafunda, Vedantu, EkStep. OneBillion |
| B **Interactive content** *Teacher is a facilitator, learners independently interact with content at their own pace* | B1 | * **Games** help deliver instructional content and allow teachers to track progress | | * Matific, ClassCraft, TeacherGaming |
| | B2 | * Students learn concepts through **3D experiences and AR/VR simulations** |  | * Praxilabs, TopHat, NetDragon, Curioscope |
| C **Personalized content** *Teacher is a coach, guiding students as tech enables personalized instruction* | B3 | * **Personalized adaptive platforms** tailor instruction to learning levels as teachers support in the classroom, remotely over virtual classrooms, and through live tutoring platforms<br>* **Data dashboards** allow teachers to see student performance data in real time<br>* Assessments used to **diagnose lexile level** of individual students<br>* In class, **reading content** on the same topic, provided to students basis their lexile level |  | * SmartSparrow, Knowre Math, Geekie, EdGenuity, ChalkTalk, Century Tech, Accelerated Reader, Achieve3000 |

# Case Study: ChalkTalk

***Lesson Delivery:*** *AI-enabled personalized & adaptive lesson delivery that combines tech with innovative pedagogy*

**What**

ChalkTalk is a **personalized & adaptive lesson delivery tool** for grade 9-12 math & language

**Tech**

Leverages **AI-predicted learning paths** to adapt at the individual, small-group, & classroom levels

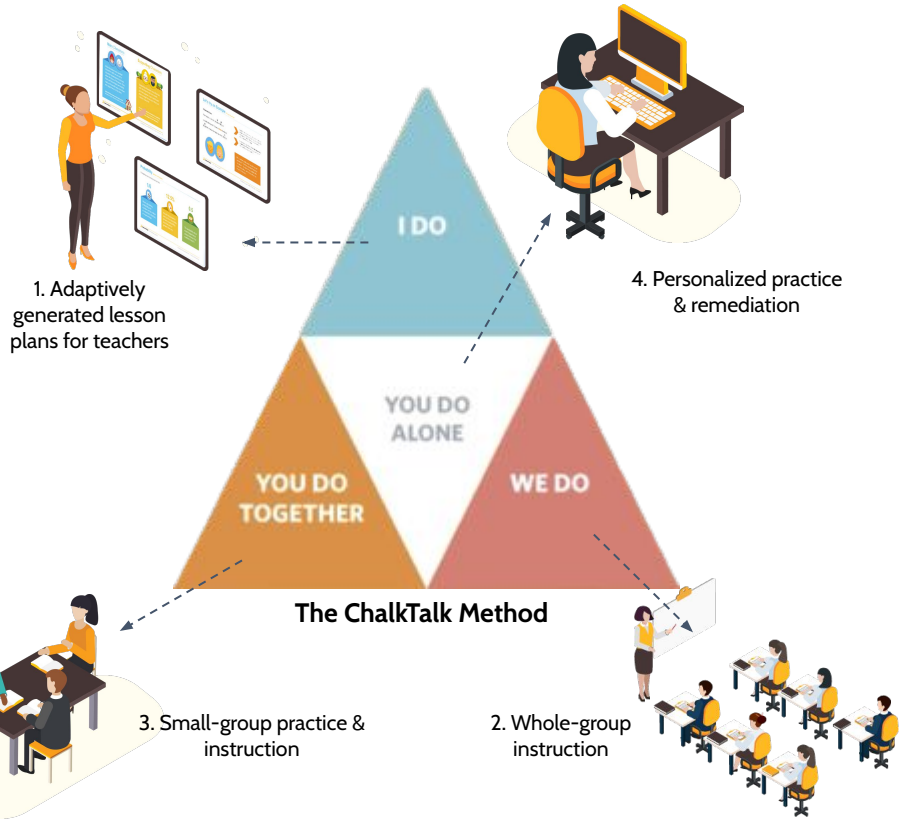
**Funding**

The platform has **raised $4.1M** as of 2020, & is an alumnus of the Learn Launch & AWS EdStart accelerators

**Evidence**

Internal evaluations show a **7 point increase in ACT scores,** 6.4 times the national improvement average & in 15% less time

**Demo**



# Case Study: onebillion

***Lesson Delivery:*** *Multimedia-enhanced personalized & adaptive lesson delivery*

**What**

Onebillion is a **personalized, adaptive learning** solution for early grades, designed to take a learner **from zero to numerate & reading with comprehension.**

**Tech**

Uses an adaptive learning engine to **adapt the learning journey to each child,** backed by data from thousands of learning units.

**Scale**

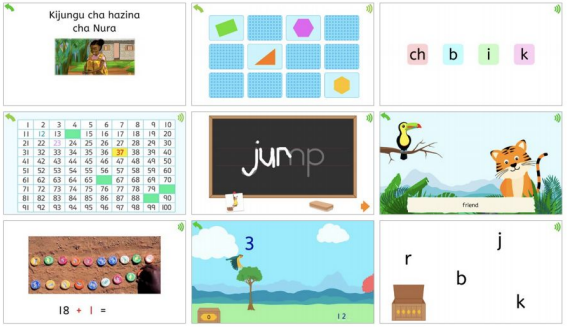
Onebillion has reached over 167K children since 2014 in multiple countries including Kenya, Malawi, India, Tanzania, the UK, & Uganda.

**Evidence**

As one of the winners of the Global Learning X-Prize, onebillion showed an a**verage gain of ~19.2% & ~23%** across multiple domains **of literacy and numeracy respectively**.

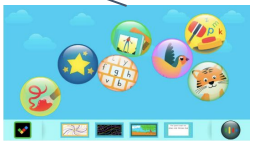
**Demo**

Hundreds of different types of activities **designed to teach, practice, and explore literacy and numeracy**




A **digital teacher**, Alefa, **guides children through their learning**, giving feedback and encouragement.

Features a **library of illustrated books** from around the world, and a p**lay zone for practice, exploration, creativity, and learning.**



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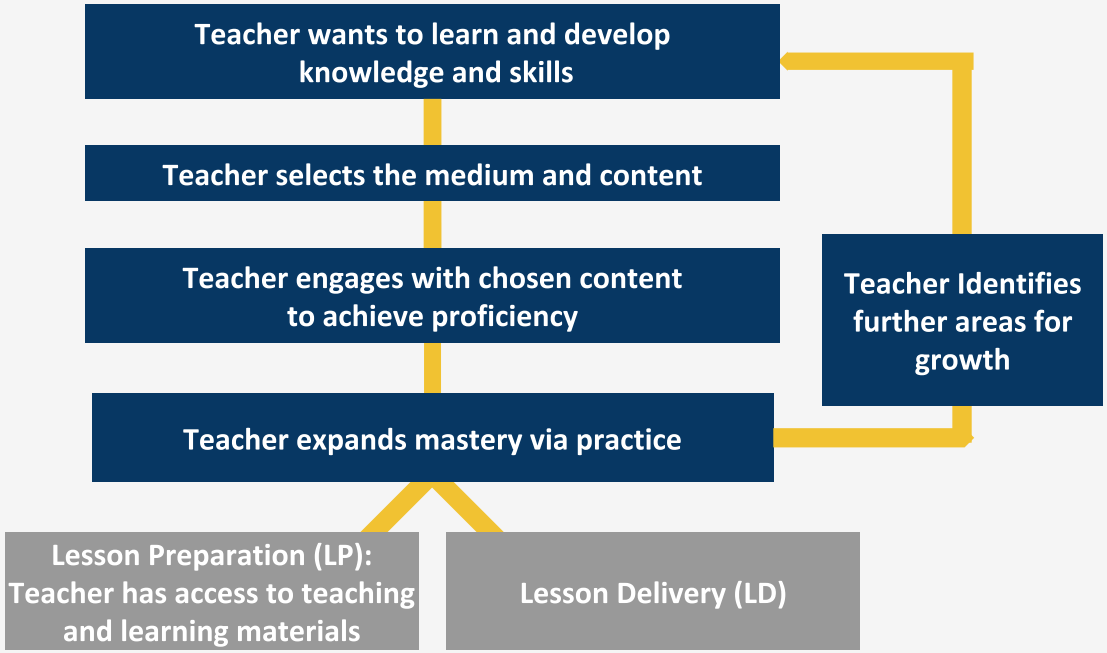
# Teacher Professional Development (TPD)

In-service teachers leverage digital platforms to strengthen and develop their skills and knowledge for more effective instruction.



# Teacher Professional Development (TPD)

*Technology enables scalability and flexibility of TPD, providing agency to teachers for their growth*

**A — Focus areas for TPD**

| A1 Content and conceptual mastery | A2 Effective instructional practices | A3 Digital literacy |
|---|---|---|
| Teachers access content that allows them to improve and achieve mastery over **core academic concepts.** | Teachers access content that enables them to improve their **skills and classroom practices** for **effective delivery of instruction.** | Teachers access content to **build their capacity for using digital tools in the classroom.** Content can focus on developing skills around usage of EdTech tools or leveraging data to drive technology-supported instruction. |
| DIKSHA, The TeacherApp | NISHTHA, DIKSHA, PBS LearningMedia | spongyelephant |

**B — Delivered via**

**B1 Social communities**

Teachers **learn from local and global teacher communities by sharing best practices, resolving doubts, and collaborating with peers via virtual community platforms.**

TEACHERSCONNECT®

**B2 At-scale training**

Teachers' professional development is **systematically facilitated by institutional channels such as states, districts, implementers, and administrators via customized training modules delivered at scale** using tech platforms.

NISHTHA, DIKSHA, ChalkLit

**B3 Certification and micro-credentialing**

Teachers **signal** their professional capabilities by earning certifications or microcredentials via tools that that assess and certify **their teaching competencies.**

BloomBoard

**App/Web based**

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*Indian govt. products* | *Click for product demo* | ***# 23 products** profiled for this interaction*

# Teacher Professional Development (TPD)

*Technology enables scalability and flexibility of TPD, providing agency to teachers for their growth*

| Sub use- case | | Features | Device | Examples of products |
|---|---|---|---|---|
| A Focus for TPD | A1 Content & conceptual mastery<br>A2 Effective instructional practices<br>A3 Digital literacy | *__On-demand multimedia and textual resources__ available through a menu of options categorized by subject, skill, topic, and software<br>* __Classroom observation tools__ that provide feedback to teachers around their classroom teaching practices through live observation remotely by peers, video recordings for self-reflection, and AI-enabled facial recognition to assess student engagement for real-time course correction<br>*__Feedback tools__ that allow peers, students, and administrators to provide feedback to teachers on their content and instruction through digital surveys that are distilled into actionable insights | | *TeacherApp, Firki, PBS LearningMedia, EdConnective, SpongyElephant<br>*Teacher FX, Lessonvu<br>*Educator Impact |
| B Delivered via | B1 Social Communities | *__Traditional social media platforms__ that allows teachers to connect with each other and share resources<br>*__Dedicated platforms__ for teacher social communities with forums, multimedia exchange, topic feeds, etc. that allow teachers to engage with each other/thought leaders<br>*__Curated feeds__ from multiple social channels and sources that __teachers can customize to their needs__ by selecting specific topics, bloggers, or hashtags to aggregate content | | *Twitter, YouTube, LinkedIn, Google Plus<br>*TeachersConnect, EdThena<br>*Feedly, Scoop.it |
| | B2 At-scale training | *Digital platforms with pre set or customisable teacher-facing UI/UX that __allow school administrators to upload their own training content and deploy to teachers at-scale,__ equipped with analytics and dashboards to strengthen monitoring and evaluation efforts<br>*__Structured online courses__/MOOCs that are self-paced, with active practice opportunities, peer feedback, and assessments | | *ChalkLit, EduPlanet21<br>*PBS TeacherLine |
| | B3 Certifications & micro-credentialing | *__Online platforms__ that provide __bite-sized courses__, allowing teachers to __earn digital badges and certificates__ against knowledge and skills developed that may be shared across platforms<br>*__Micro-credentialing platforms__ that __allow teachers to provide evidence from their teaching practice__ to demonstrate mastery of skills against standards-based competencies | | *Bloomboard, CENTA, Teach.com.au |

CENTRAL SQUARE FOUNDATION

*Products with presence in developing nations*

# Case study: The Teacher App

***Teacher Professional Development:*** *Just-in-time, bite-sized courses for teachers*

**What**

**Repository of bite-sized, interactive, high-quality courses for teachers** on core concepts, **customized to the Indian context**

**Tech**

**Open-source multimedia content** that is **accessible offline,** available through the app's **UI/UX built specifically for teachers**

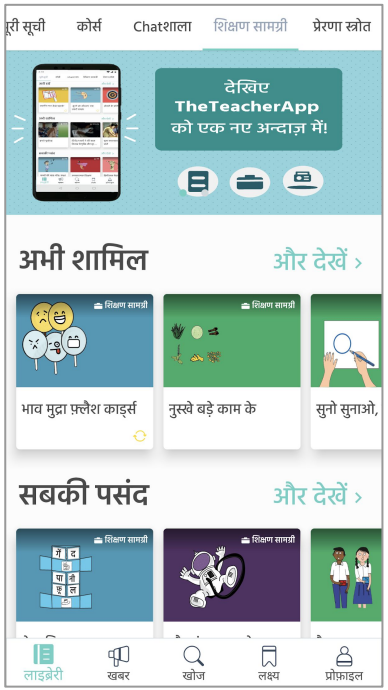
**Scale**

TeacherApp has **reached over 3.5M teachers** through partnerships with **six** states in India, and has raised $1M in funding.

**Evidence**

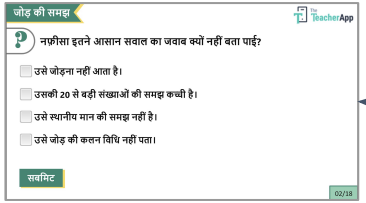
TeacherApp has seen **sustained user engagement** since its launch in 2016, with over **10K daily active users and 25K monthly users**

**Demo**





Each course consists of bite-sized videos that can be downloaded and accessed individually




Specialized UI/UX allows users to set TPD goals, choose courses, access teaching and learning material, and connect with peers.

Teachers' knowledge is assessed at multiple points via interactive questions

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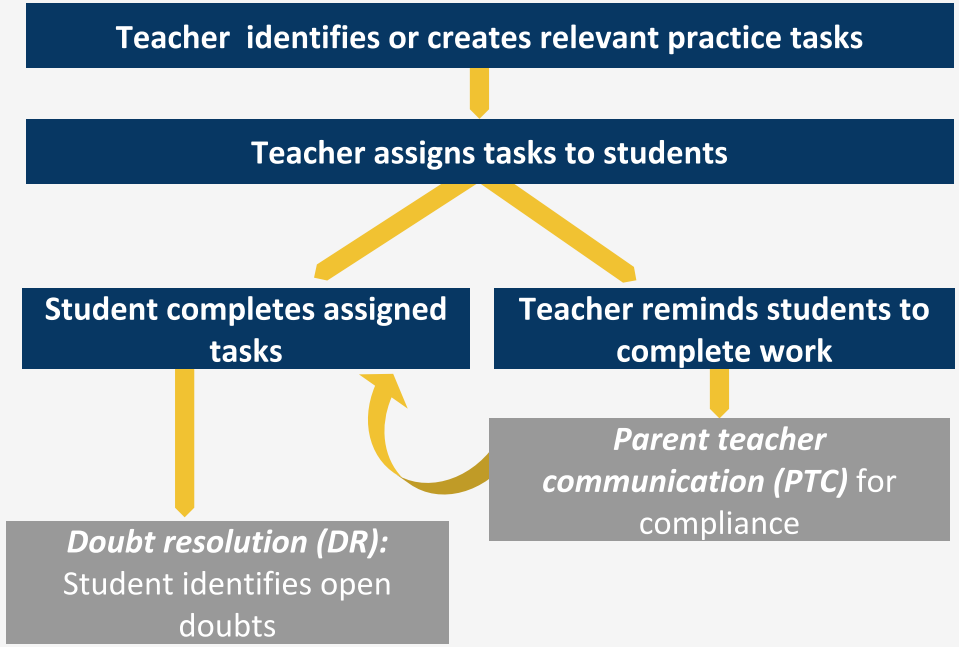
## Homework (HW)

Teachers assign homework to students in order to strengthen understanding of concepts already taught and delivered in the classroom.




CENTRAL SQUARE FOUNDATION

*Activities performed as a part of the current interaction*

*Activities that are key complements / supplements to current interaction, but are covered in a different interaction*

# Homework (HW)

*Technology reduces teachers' time and effort to create, assign & ensure compliance for homework*

| A | B | C | D |
|---|---|---|---|
| **Tech for homework dissemination** | **Tech for homework compliance** | **Tech for homework creation** | **Holistic homework platforms** |
| - Teacher **shares homework** with students outside the classroom using **generic communication/specific homework platforms** | - Teacher **reminds students** and parents to complete homework using technology that **automates communication** and reduces teacher effort | - Teacher **creates homework** assignments using **ready-made resources** or by curating questions through **repositories**, saving time spent on homework creation | - Teacher spends limited time and effort to **create, assign, increase compliance and correct homework** using end to end aggregated homework platforms that can **automate** these functions |
| - But teachers still spend time and effort in homework creation and its completion | - But teachers still spend time and effort in homework creation | - But teachers still spend time and effort in dissemination and ensuring homework completion | - Teachers have end-to-end support for homework including access to insightful data |
| satchel: | showbie | NCERT online textbooks and exercises<br>PowerMyLearning | Zuoyebang |
| Phone / Web based | | App / Web based | App/Web based + AI + OCR |

*Indian govt. products* *Click for product demo* ***# 10 products** profiled for this interaction*

# Homework (HW)

*Technology reduces teachers' time and effort to create, assign & ensure compliance for homework*

| | Sub use-case | Features | Device | Examples of products |
|---|---|---|---|---|
| A | Tech for homework dissemination | * Offline and online communication channels to **disseminate homework** |  | * Phone, SMS, WhatsApp, Email |
| B | | * Platforms that allow **teachers to upload homework** for all students at once | | * SeeSaw,<br>* Firefly Learning<br>* Satchel |
| C | Tech for homework compliance | * Platforms that ensure **compliance by pushing alerts and reminders** to students<br>* Platforms that allow **students to upload homework and share** with teachers<br>* Platforms that allow teachers and parents to **communicate** around students' homework |  | * SeeSaw, Firefly Learning, Satchel<br>* Showbie |
| D | Tech for homework creation | * Platforms that provide access to **ready-to-use worksheets**<br>* **Curriculum-aligned pre-determined activities** for students to do with their parents |  | * HelpTeaching<br>* Power My Learning |
| | Holistic homework platforms | * Platforms **automatically create homework basis students' learning levels**, teacher is able to assign accordingly | | * Knowbox<br>* 17Zuoye<br>* Yuanfudao |
| | | * Platforms that **automatically correct homework** (either in-platform or by scanning worksheets) | | * Zuoyebang<br>* 17Zuoye |
| | | * Platforms that **suggest additional learning content** for improvement based on homework performance | | * Zuoyebang, 17Zuoye, Knowbox, Yuanfudao |

# Case Study: Homework Helper by Zuoyebang

***Homework:*** *China's top aggregated homework platform*

**What**

Zuoyebang's Homework Helper is an **aggregated homework platform** for K-12 math

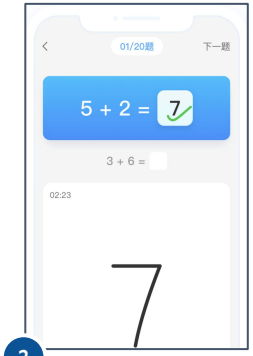
**Tech**

Relies on a question bank of **250 million items** combined with **AI-led personalization** and **OCR**

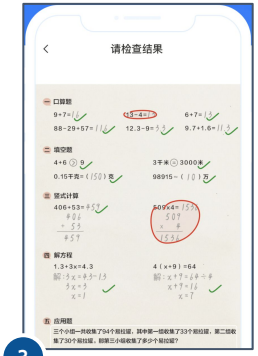
**Scale**

The platform has **raised $1.3B** as of 2020, and caters to **50M daily active users**, and **170M monthly active users**

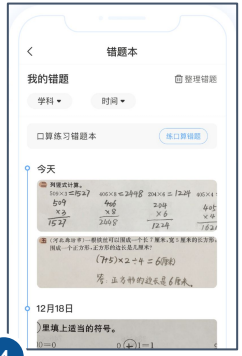

1 Teachers create homework using the **big-data question bank**




2 Teachers can **assign a wide variety of practice exercises** from their dashboard




3 Students complete their homework on paper and take a photo for **automatic correction via OCR**




4 **Incorrect questions can be saved for practice later** in the form of worksheets


Homework Helper allows teachers to auto create and assign homework. Students can take a photo of written homework for immediate correction and feedback.

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## Assessments (AS)
(Formative & Summative)

Assessments conducted
to regularly track students'
understanding and performance

**Identify and create the questions for assessment**

**Assign the assessments to students**

**Check the students' responses**

**Provide performance summary and feedback to student**

***Lesson Preparation (LP) and Lesson Delivery (LD)***

CENTRAL SQUARE FOUNDATION

*Activities performed as a part of the current interaction*

*Activities that are key complements / supplements to current interaction, but are covered in a different interaction*

# Assessments (AS)

*Technology reduces effort to create engaging assessments*

***Student engagement***

***Low***
***Limited data for student profile***

***High***
***Complete data for student profile***

| A | B | | |
|---|---|---|---|
| **Text-based** | **Multimedia-based** | | |
| | **B1 Interactive** | **B2 Gamified** | **B3 Personalized and adaptive** |
| - Tech enables **assignment and correction of objective, text-based** assessments; including customized assessment paths | - Tech enables **easy creation** of **subjective** and **objective (with auto correction)** assessments in interactive formats, and provides real time student **performance data at a deeper level** including when students are guessing, key misconceptions etc | - Tech enables creation and auto correction of **engaging** assessments and providing **real time data** on student performance | - Tech enables **auto curation, assignment and correction** of assessments that adapt to the students' learning level |
| - But this does not cater to subjective assessments | - But there is room to increase student engagement | - But do not cater to individual students' learning levels | |
| DIKSHA, AKINDI | Learnosity | Kahoot! | RENAISSANCE Star 360 |
| Phone + Web | Clickers + Phone + Web + AI | Web/app based + AI | |

Indian govt. products | Click for product demo | ***# 20 products** profiled for this interaction*

# Assessments (AS)

*Technology reduces effort to create engaging assessments*

| Sub use- case | Features | Device | Examples of products |
|---|---|---|---|
| A Text-based, objective | * **MCQs** shared with students via **SMS/Web based communication apps** (Whatsapp) or IVR |  | * SMS, WhatsApp, IVRS |
| B Multimedia-based — B1 Interactive | * **Bubble/scranton sheet** used by students to answer MCQs<br>* Scranton sheets photographed/scanned for instant correction by anyone |  | * Akindi |
| | * Assessment questions include texts, **images, audio/visual**<br>* MCQ quizzes are **corrected automatically** by the platform | | * Zzish/Quizalize, 789.vn |
| | * **Responses** submitted to questions include a **variety of formats** such as images, videos, podcasts, infographics, excel files, online presentations and more | | * Kritik |
| | * Individual student devices not needed, **questions broadcasted** to class using black or smart board<br>* **Clickers** used for live responses by students in-class or remotely, real time data available for teachers |  | * Qwizdom |
| | * **Multiple formats** of question types (drag-and-drop, click to count etc)<br>* Personalised and **aggregated data** on many actions undertaken by child<br>* Speech recognition, text to speech technology to assess oral reading ability |  | * Quizlet, Learnosity, Pear Deck<br>* Google Read Along |
| B2 Gamified | * Badges, rewards, **leaderboards**, competitive team play and other motivational tools in assessments | | * Kahoot, Nearpod |
| B3 Personalised and adaptive | * Adaptive assessments that **diagnose learning level**, augment content and difficulty level of questions basis individual responses<br>* **Students misconceptions** are identified for remediation support | | * Knewton, Sense.ai, Synap |

CENTRAL SQUARE FOUNDATION

*Products with presence in developing nations*

# Case Study: Star 360

***Assessments**: Personalized and adaptive assessments for accurate measurement of learning*

**What**

Star 360 is a **personalized, adaptive assessment platform** for K-12 math and language

**Tech**

Leverages **adaptive technology** on **2.8 bn student data points** to develop personalized assessments

**Scale**

Renaissance has **raised $40M as of 2014,** and Star is used by **34,000+ schools across the US**

**Evidence**

Star provides **high reliability while reducing overall testing time** to 20 minutes.

**Demo**


## Adaptive Testing

Computer-adaptive tests, so e**ach student's testing experience is unique to their learning level**, and **difficulty-level of questions adjusts** as per student responses.

## Accurate Results

**By adapting to students and eliminating unnecessary questions**, the platform can **accurately measure what students know** in real time.

## No repetition

The system understands how skills relate to one another—and that a **student correctly answering advanced items doesn't need to be tested separately on the basic component skills** providing **shorter assessments**

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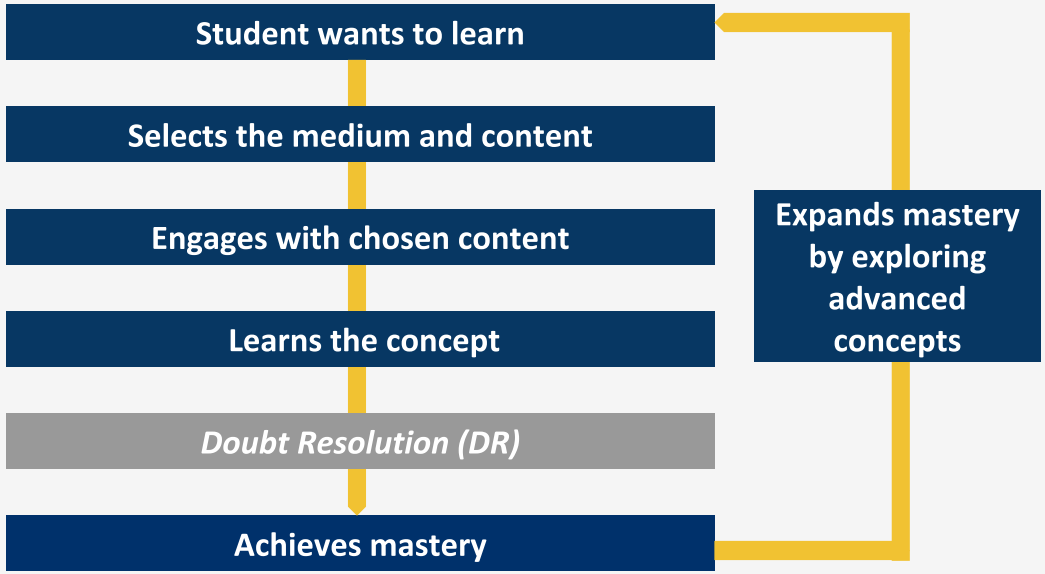
## Self-Learning (SL)

The student independently learns new content, practices content covered in the class to develop mastery or accesses previous content to address learning gaps




CENTRAL SQUARE FOUNDATION

*Activities performed as a part of the current interaction*

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# Self-Learning (SL)

*Technology enables a higher degree of personalization to individual student's learning needs*

***Degree of personalization***

***Low*** → ***High***

## A — Pre-set content

### A1
- Student accesses learning **content** through **public broadcasts** following a set timetable

### A2
- Student initiates a call to access **pre-recorded stories and activities**

### A3
- Student receives text messages with **instructional content, questions and activities**

## B — Interactive content

### B1
- Student learns concepts via **game-based interactive text messages**

### B2
- Student selects **A/V content** to view basis their own needs/interest

### B3
- Student learns through **game based or gamified** content platforms, exercising choice on their learning paths

### B4
- Student interacts with content **in a simulated or augmented reality,** enhancing their engagement

## C — Personalised content

- **Student engages with personalized content that adapts to their learning level**

-But student can neither select nor interact with content

- But content is not customized to student's learning levels

| Radio/ TV | IVRS | Messaging | TV/Web | App / web | AR/VR | App/Web + AI/ML |
|---|---|---|---|---|---|---|
| Swayam Prabha, PBS KIDS | PHONE शाला | Young 1ove | eneza education | DIKSHA, Khan Academy | Read Along, Kitkit School | Labster | |

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*Indian govt. products* | *Click for product demo* | *# **102 products** profiled for this interaction*

# Self-Learning (SL)

*Technology enables a higher degree of personalization to individual student's learning needs*

| | Sub use- case | | Features | Device | Examples of products |
|---|---|---|---|---|---|
| A | Pre-set content | A1 | *Learning content broadcasted on **radio and TV**<br>* Pre-determined **schedule** disseminated basis grades/subject |  | *Listenwise<br>*Galli Galli Sim Sim<br>*Swayam Prabha |
| | | A2 | * Student selects the grade and subject via **IVRS** and **listens to audio stories and lessons**<br>* Number to dial can be a **toll-free number** |  | *Phoneshaala |
| | | A3 | * Students engage with learning content sent periodically via **SMS / WhatsApp** | | *SMS/ Whatsapp |
| B | Interactive Content | B1 | * Platform responds to learner's inputs, creating an **engaging SMS game-based experience;** contains live doubt solving by a teacher via SMS, literacy games, certificates to the learner, leaderboards and online search |  | *Eneza |
| | | | * **Remote control** used to interact with **satellite TV programs** to **choose** content |  | *Dish TV, Tata Sky |
| | | B2 | * **Online platform/micro sites** hosting curriculum aligned content for students<br>* Available in multiple languages and allows for keyword search for content |  | *DIKSHA,WorldReader<br>*Khan academy |
| | | B3 | * Product creates a **game-based** (with interactive characters, learning ladders etc.) or **gamified** (rewards, leaderboards etc.) to create an engaging environment | | *ABRA, Enuma, Read Along, Graphogame |
| | | B4 | * **VR**: Learner uses headset to interact, engage with 3D visual explanations of concepts<br>* **AR:** Smartphone camera scans a QR code or an object and displays a virtual 3D model explaining the concept in the phone screen |  | *Labster |
| C | Personalised Content | | * Predetermined **adaptive algorithm** that diagnoses misconceptions and identifies most efficient learning pathway (non AI driven) |  | *Apex Learning, Byju's |
| | | | * **AI engine** predicts efficient learning pathways basis students' performance data<br>* **Virtual avatar** that examines the learner's responses, communicates to provide feedback, suggests remediation and encourages the learner to complete their learning journey | | *Sparkx, MindSpark, SquirrelAI,Embibe, ConveGenius |

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*Products with presence in developing nations*

# Case study: Squirrel AI

***Self Learning:*** *Personalized Adaptive Learning powered by an AI engine*

**What**

Diagnoses student misconceptions and provides content tailored to child's learning level

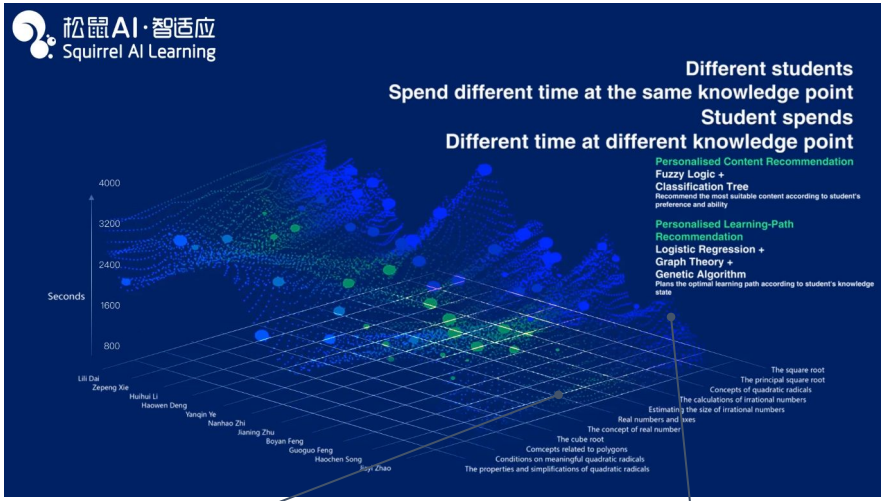
**Scale**

2 million registered users, covering more than 600 cities and counties in China

**Tech**

Uses AI to diagnose student levels leveraging knowledge points. 70% of lessons delivered via AI **teachers**

**Demo**

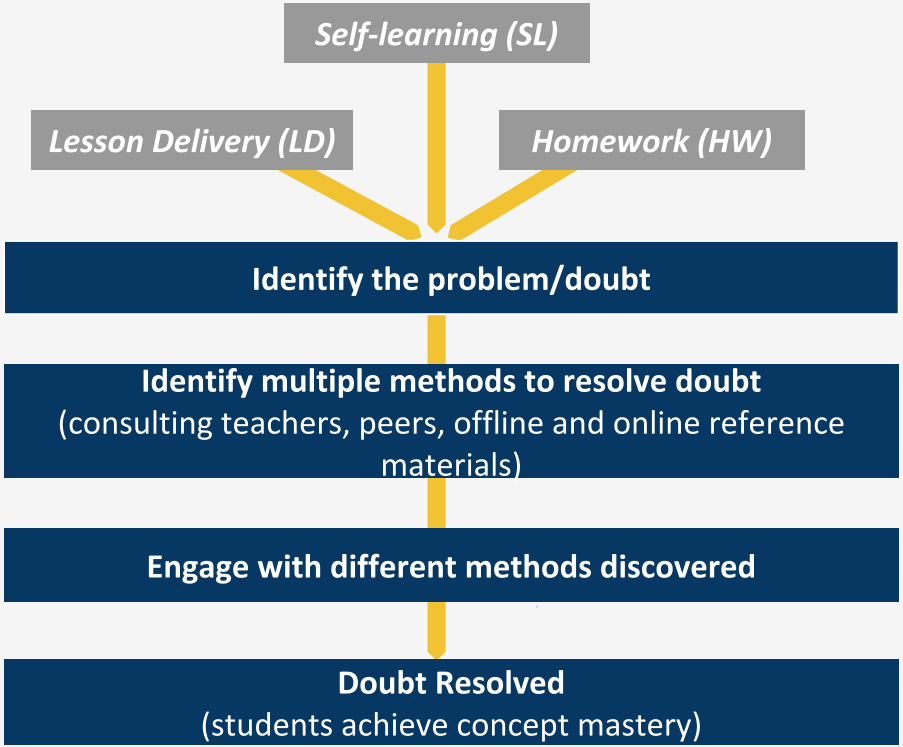



Each **concept is broken into** thousands of **knowledge points** (addressed by videos, examples and practice problems) that are linked to form a **knowledge graph**.

It can **analyze the subtle differences in real time in each student's learning speed and mastery** of each knowledge point, thereby **matching personalized knowledge points** that students need to master.

## Doubt resolution (DR)

Student identifies doubts and queries throughout the learning process, and resolves them by accessing resources that allow him to learn and apply information that was previously unclear



# Doubt Resolution (DR)

*Technology enables students to become increasingly independent in the doubt resolution process*

***Independence***

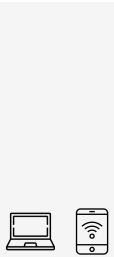
***Low*** → ***High***

| A | B | C |
|---|---|---|
| **Person dependent** | **Community dependent** | **Independent** |
| A1 **Teachers** | A2 **Online live tutoring** | C1 **Virtual community** | C2 **Online content resources** | **Automated matching to solution** |
| - Student can **send messages** (text, audio/video) to teachers for immediate doubt resolution | - Student can get help with specific doubts by an expert from an **online pool of teachers** | - Student can post queries in **online forms** and get answers from peers and/or teachers | - Student independently uses resources online, e.g. **search engines, curated repositories** etc. to solve doubts | - Student **uploads doubts** to a platform that **instantly matches** it to the appropriate solutions |
| - But student is dependent on only known teachers, and their availability | - But student is still dependent on tutors' availability | - But quantity and quality of responses is not consistently reliable | - But student may still spend considerable time in the process | - Student needs to put minimal effort to resolve doubts instantly and independently |
| | TUTOR MUNDI | ePathshala Kishore Manch; BRAINLY; Chegg | DIKSHA, NROER, Swayam, NDLI; Revisely | Tara; doubtnut; Mtabe |
| **SMS/Multimedia** | **Web-based** | | | **OCR + AI** |

*Indian govt. products* · *Click for product demo* · *# **33 products** profiled for this interaction*

# Doubt Resolution (DR)

*Technology enables students to become increasingly independent in the doubt resolution process*

| Sub use- case | | | Features | Device | Examples of products |
|---|---|---|---|---|---|
| A | A1 | Person-dependent: Teachers | * **Doubts shared via text messages or calls** with teachers |  | *WhatsApp |
| | | | * **Doubts shared via web-based communication platforms ( text, audio and visual formats) with teachers** |  | *WhatsApp, Skype |
| | A2 | Person-dependent: Online live tutoring | * **On demand service** to match learners with tutors for specific doubts; either basis location of student or agnostic of it | | *ChangingEdu, Tueetor, CueMath, TutorMundi, TutorBin, Zhangmen, GSX, Toppr, PhotoSolve |
| B | | Community dependent: Virtual community | * **Crowdsource answers** from online communities around the globe<br>* **Closed group forum discussions** at school, grade or classroom level<br>* Doubts shared in **multi media formats** | | *Chegg, Brainly<br>*Piazza<br>*Embibe |
| C | C1 | Independent: Online Content Resources | * Read **solved examples** for questions in textbooks and past papers via curated **online repositories** | | *Revisely, NCERT Solutions |
| | | | * Use **keywords search** for explanation pertaining to specific doubts in multimedia formats (text, audio/visual) | | *Khan Academy, YouTube |
| | C2 | Independent: Automated matching to solutions | * **Instant doubt resolution** via sms/web-based platforms that use ML and AI |  | *Mtabe, Whatsapp |
| | | | * **Photos** of doubts **uploaded** to platforms that automatically detect the text (using OCR tech) and provide pre-matched detailed explanations in multimedia formats |  | Doubtnut, PhotoSolver by GotIt!, 17Zuoye, Photomath |
| | | | *__Online calculator__ for advanced mathematics | | Microsoft Math Solver<br>*Symbolab |

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# Case Study: PhotoStudy

***Doubt Resolution:*** *Live tutoring for instant doubt resolution*

PhotoStudy

**What**

PhotoStudy by GotIt! is an instant math and science doubt resolution tool for grades 9 and above.

**Tech**

Uses an **AI-powered bot** to provide instant doubt resolution, or **connects the student to a live tutor** for further explanation.

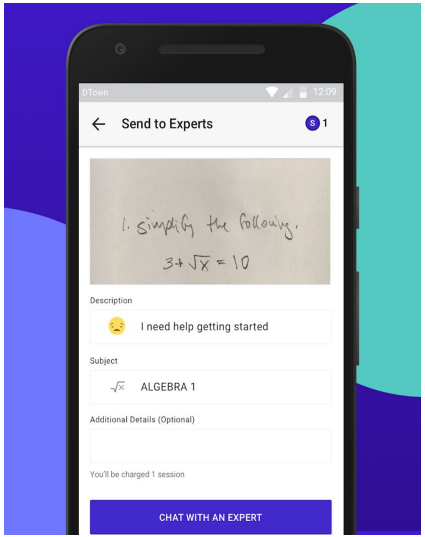
**Scale**

The platform has **raised $22.5M as of 2015**, and **more than a million students around the world** have used the app to solve 3M doubts.

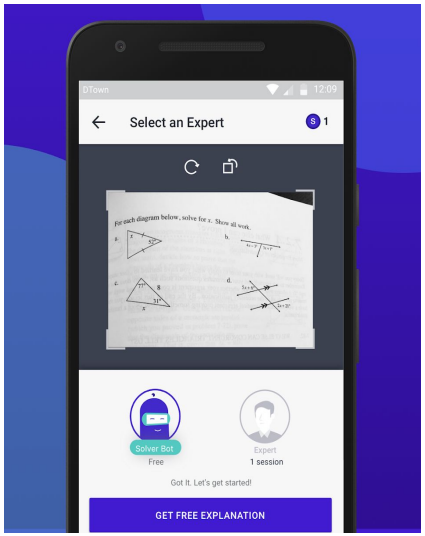
**Evidence**

Internal evaluations show that **90% of students** who used PhotoStudy **saw at least a letter grade improvement** in their Math/Science course.

**Demo**




1. Take a picture of your doubt or question




2. Choose to have it solved by an AI-powered bot or connect with a tutor for a live session

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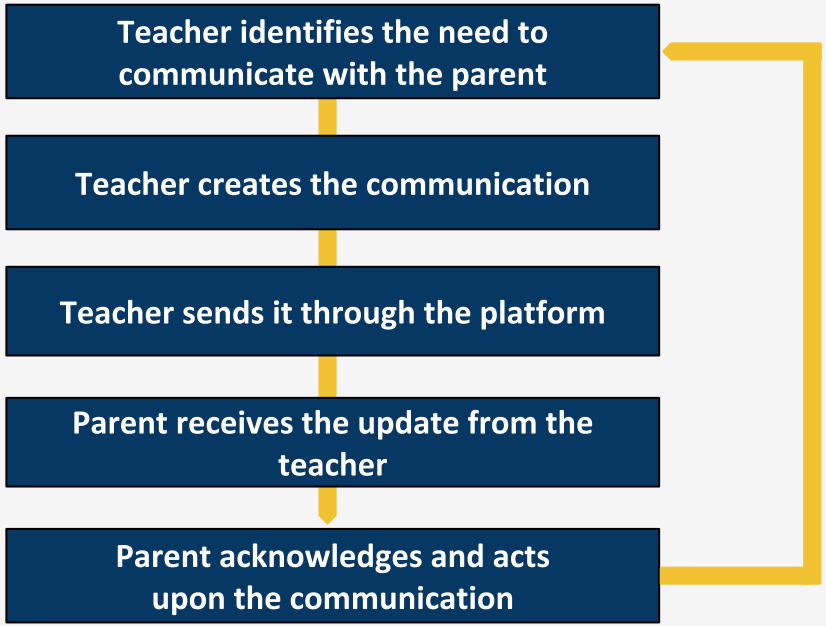
## Parent-Teacher Communication (PTC)

Teachers / schools leverage digital platforms to strengthen teacher-parent communication

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*Activities performed as a part of the current interaction*

*Activities that are key complements / supplements to current interaction, but are covered in a different interaction*

# Parent-Teacher Communication (PTC)

*Technology enables increased depth and quality of engagement between parents and teachers*

***Depth and quality of engagement***

***Low*** → ***High***

| A | One-way information sharing | | | B | Two-way information exchange | | |
|---|---|---|---|---|---|---|---|
| A1 | A2 | A3 | | B1 | B2 | B3 | |
| **Broadcast** | **Helpline numbers** | **Text messages** | | **Multimedia communication via generic platforms** | **Textual communication via dedicated platforms** | **Multimedia communication via dedicated platforms** | |
| - Parent receives updates about school events through **locally produced TV programs and radio shows** | - Parents can **call a school / district helpline** for pre-recorded updates | - Parents receive information via **text messages** from teachers/school | | **-** Parents can engage in a **dialogue** with teachers leveraging **existing communication platforms** | - Parents receive updates and can keep track of child's learning and activities at school | **-** Parents and teachers can communicate using **multimedia messages** and create engaging **virtual communities** | |
| - But parents can miss the update if they miss the broadcast | - But parents cannot engage in a conversation for specific questions | | | - But there is room for missed messages | - But there is room to make the communication more engaging | | |
| ▷/II | ▷/II | ▷/II FollowClass | | | ▷/II remind | ▷/II ParentSquare<br>▷/II ClassDojo | |
| TV/Radio | IVRS | SMS | | Web-based | | | |

*Indian govt. products* | *Click for product demo* | ***# 18 products** profiled for this interaction*

# Parent-Teacher Communication (PTC)

*Technology enables increased depth and quality of engagement between parents and teachers*

| | | Sub use- case | Features | Devices | Examples of products |
|---|---|---|---|---|---|
| A | A1 | Broadcast | * School produced content (recorded student activities, student shows, logistical info etc) to update the parent community via **TV/radio** |  | * Parkhill TV, Lodgers Berwick radio |
| One way info sharing | A2 | Helpline numbers | * **24/7 IVRS number** available for parents to call to obtain info on school events/admin/meetings | | * Karnataka |
| | A3 | Text messages | * SMS sent to parents with school updates, student attendance and performance information<br>* Customize messages by **personalisation of names** |  | * FollowClass<br>* ParentAlert |
| B | B1 | Multimedia communication via generic platforms | * Teachers and parents can exchange **multimedia updates** (including pictures, videos) wrt to student learning activities | | * Whatsapp |
| Two way info exchange | B2 | Textual communication via dedicated platforms | * **Parent-teacher meetings** can be conducted on virtual platforms | | * Zoom, Teams |
| | | | * Dashboards for teachers to **schedule messages**<br>* Tracking of **read receipts**<br>* Automatic **in-app language translation** for multilingual communication<br>* **Pre-designed responses** for parents to revert<br>* **Privacy** protection of both parties |  | * Remind<br>* Sync<br>* SchoolVoice |
| | B3 | Multimedia communication via dedicated platforms | * **Dashboard** on student learning data and teacher feedback available<br>* **Multi lingual updates** can be scheduled with read receipts<br>* **Quiet hours** for teachers to decide communication windows with parents<br>* **Efficient school admin** processes e.g. fee payments | | * ParentSquare<br>* ClassDojo |

# Case Study: Parent Square

***Parent Teacher Communication:*** *Two-way communication between parents and teachers*

**What**

Platform connecting K-12 schools and families for seamless communication for all school related activities

**Scale**

Parent Square has 2 million users across 44 states in the US and has disclosed $4.2M in funding

**Tech**

Teacher quiet hours, in-app translation, personalized messages to parents

**Demo**


**Mass Notifications**

- **Urgent Alerts** — Send with a few clicks
- **Attendance/Lunch Balances** — Day/period absences + excuse notes
- **Social & Web Share** — Post to existing sites and channels
- **Secure Document Delivery** — Save paper, maintain privacy

**Classroom Communications**

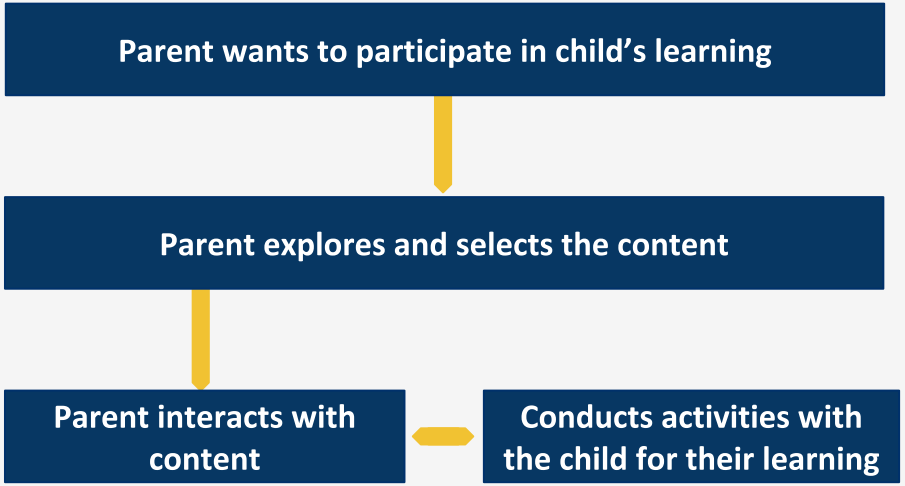
- **Direct & Group Messaging** — Connect students, teachers, parents
- **Parent-Teacher Conferences** — Save time, increase bookings
- **Volunteering & Sign-ups** — Fill needs faster, chase less
- **Newsletters** — Streamline, ensure brand consistency

**School Services**

- **Forms & Permission Slips** — Save time and paper
- **Calendar & Event RSVPs** — Increase attendance
- **School Directory** — Automatically updated from your SIS
- **Invoices & Payments** — Accept secure online payments

## Parental participation (PP)

Parent uses tools to engage with their child's learning (academic and SEL) at home and build their own capacity to do so meaningfully






*Activities performed as a part of the current interaction*

*Activities that are key complements / supplements to current interaction, but are covered in a different interaction*

# Parental participation (PP)

*Technology enables parents to provide increased level of learning support to their children*

| A | B | C | D | E |
|---|---|---|---|---|
| **Content broadcast** | **One-way content sharing** | **Two-way communication to facilitate engagement with content** | **Homeschooling platforms for parent to engage with child's learning** | **Content to build parents' capacity to drive child's learning** |
| - Parent accesses **learning content broadcasted on TV** to engage with the child | - Parent receives **activities to conduct with child** through SMS/IVRS | - Parent can **discuss and get assistance** to conduct the activities better with the child | - Parent uses a platform to **select learning content** for their child and **access dashboards** to keep a track of their performance/progress | - Parent engages with nuanced, targeted information that equips them with the **skills and knowledge to drive** the child's learning and development process |
| ubongo | Ready4K<br>Makhalidwe Athu | Saarthi | K12 | टॉप पेरेंट |
| TV | Messaging/Calls | | Web platforms | Web platforms |

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*Indian govt. products* *Click for product demo* ***# 16 products** profiled for this interaction*

# Parental participation (PP)

*Technology enables parents to provide increased level of learning support to their children*

| | Sub use- case | Features | Device | Examples of products |
|---|---|---|---|---|
| A | Content broadcast | * Learning activities broadcasted via edutainment channels on **television** |  | * Ubongo (Tunakujenga) |
| B | | * Videos uploaded on **shared tablets** at community locations weekly |  | |
| | One way content sharing | * Learning activities sent out as **text-messages** at regular intervals<br>* Activities range across **different domains** - art/craft, health/hygiene, numeracy, language etc<br>* Activities designed to **target student learning levels**<br>* **Tips** provided to parents on child development to deepen engagement |  | * Makhalidwe Athu, Delhi govt<br>* Dost edu, Ready 4K<br>* Botswana - Young 1ove |
| C | | * Parents call an **IVR line** which will tell them the story of the week along with a discussion question | | * Makhalidwe Athu |
| | Two-way communication to facilitate engagement with content | * **Dedicated relationship manager** calls parents to communicate activities/tips<br>* Operators available on call to clear doubts, provide support or additional material to parents |  | * Saarthi |
| D | Homeschooling platforms for parent to engage with child's learning | * **Online platforms** with learning content for child to engage with directly<br>* Parents **choose classes** and create the learning journey for the child<br>* **Dashboards** that allow parents to track child's learning journey |  | * Homeroom, K12, Outschool |
| E | Content to build parents' capacity to drive child's learning | * **Online platforms** with parent facing content spanning **across different aspects of child development** including nutritions, managing relationships, safety/security of children etc.<br>* One-stop shop for parents to access high-quality learning resources for children |  | * Top Parent |

# Case Study: Ready4K!

***Parental Participation:*** *A communication tool to help parents meaningfully engage in their child's learning*

**What**

Ready4K! **delivers a family engagement curriculum to K-3 parents** via **personalized text messages.**

**Tech**

Uses an **adaptive engine** to send personalized SMS messages on any device

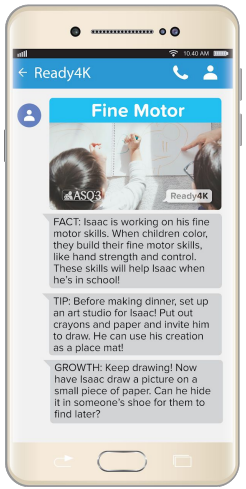
**Scale**

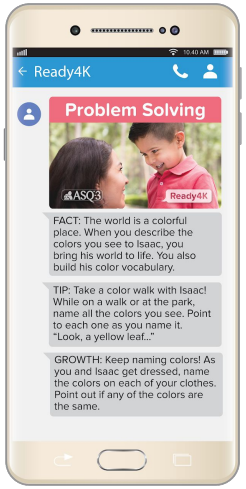
The platform has **raised $3.7M as of 2019**, and **more than 300K families across the US use Ready4K**

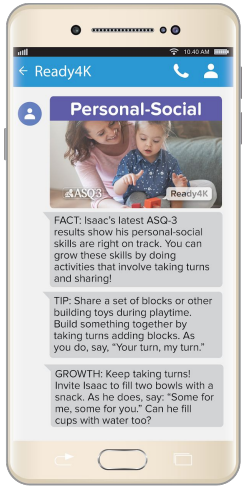
**Evidence**

A series of RCTs have shown that the approach **can accelerate literacy outcomes by 2 to 3 months** over a school year.

**Demo**


**FACTS** inform parents about the skill of the week and the importance of that skill for academic growth of the child.

**TIPS** suggest an easy, at-home activity based on that skill.

**GROWTH** messages contain a more advanced activity that is meant to extend the learning opportunity presented earlier in the week.

# Power your own analysis

The database powering the analysis in this document is available for open access.

A deeper glance through the database can provide you more information -

- *On the broader EdTech landscape - e.g. "Which use-cases of EdTech have most evidence of impact?"*
- *On very specific questions such as "What are some parental engagement products I can look at as I think about solutions for my district?"*

Access the database to discover interesting products across different geographies, devices, grades and subjects. Information on funding, scale and evidence is also included where available. From over 350+ innovations landscaped, this database features 328 innovations categorized into the nine teaching-learning interactions.

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