



Reimagining Education
through Technology:
An ecosystem lens

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WHO IS CSF?

Our Vision

Ensuring quality school education for all children in India through system-reform

CSF has been working across the continuum of school education from innovation to policy for 9+ years

Our focus areas



Foundational Learning

Indian Education System on the pathway to achieve universal FLN by Class 3



Technology in Education

Improving the supply and adoption of EdTech solutions, backed by evidence on efficacy



Private School Sector

Building a scalable model to improve quality of private school system

Our approach

Providing strategic, technical, management and implementation **support at Centre and State-level**

Generating credible data and **building evidence** on impact of reform initiatives designed to improve student learning outcomes

Creating high-quality, open source knowledge products, toolkits and other resources

Emerging innovation



EdTech innovations can shape teaching and learning in a myriad of ways, and can support stakeholders across the ecosystem and around the globe

Innovation is pervasive

EdTech innovations have proliferated in a range of contexts and across the spectrum of technology

Innovation is scalable

EdTech innovations have been able to achieve reasonable scale fairly rapidly reaching stakeholders worldwide

Innovation is brewing

Though white spaces exist, the pandemic and mounting global evidence has spurred considerable growth in the sector

Innovation is essential

Continuously catalyzing innovation to strengthen and build on value offerings is essential for meaningful EdTech adoption

Key teaching and learning interactions for EdTech

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

Innovation is enabling solutions for two oft-talked about challenges with EdTech – the digital divide and limited connectivity

Description

Eneza Education is an SMS-based platform that provides grade 4-12 learners with curriculum-linked materials and content in regional languages.



Reach

The platform has reached over 8 million students in 3 countries, and internal studies show a 23% improvement in learning after 9 months of use.

Optimized for **SMS-based learning in areas with low smartphone + internet penetration**

Contains **curriculum aligned content**, quizzes, and practice material in **local languages**

Allows for **live doubt-resolution**

Description

Read Along uses Google's proprietary speech-recognition technology and artificial intelligence to help students learn to read independently.



A variety of **stories** to choose from across multiple languages, which are then available on the device **even when internet is unavailable**

Reach

RA has reached 5M+ users in 180 countries, recent evaluations have shown statistically significant improvement in reading outcomes from exposure to the solution.



वह मुझे गरम-गरम खाना खिलाती हैं।



Real-time feedback as learners read, even with limited connectivity



Leveraging EdTech innovation



Given the varied use-cases of EdTech, multiple facets need to be considered during EdTech adoption

1



What type of EdTech to choose?

Choosing the relevant use-case of EdTech

2



How do you select the right learning software?

Learning solution is critical, can make or break the program

3



How do you implement it well?

Building institutional and individual capacity is essential to effective implementation

Enabling policy environment

Guiding policies that need to be in place for effective implementation in EdTech

#1: Choosing the relevant use-case of EdTech requires an understanding of the context and the evidence for the problem you are trying to solve

Use-case	Challenge	Role of EdTech
In the classroom	<ul style="list-style-type: none"> ● Large backlog in learning leading to huge diversity in learning levels within the classroom leading to multi-grade multi-level teaching 	<ul style="list-style-type: none"> ● Personalized Adaptive Learning (PAL) solutions identify student misconceptions and can remediate at the right level
For teachers	<ul style="list-style-type: none"> ● Teacher incentives in the public school system not aligned to outcomes: ● 25% teachers do not hold a professional qualification ● 20% teachers absent from classrooms²; 15% teaching positions vacant 	<ul style="list-style-type: none"> ● Technology driven need-based teacher training and support ● Tech-enabled delivery of curriculum-aligned teaching content via digital/virtual classrooms
At home	<ul style="list-style-type: none"> ● Low parental education levels & awareness of tech for education in low income communities ● First generation learners do not have access to quality school education ● Lack of practice / remediation at home 	<ul style="list-style-type: none"> ● Smartphone and internet-based access to free high quality content after school in multiple languages through popular platforms ● Self-learning at-home solutions requiring minimal parental support (gamified learning, AI-based virtual reading tutors, etc.) ● Parent-focused tools; evidence suggests that parental engagement in early learning is consistently associated with children's subsequent academic success

#2: It remains challenging to select the right learning solution for one's context, and there is a need to establish what good looks like



Current challenges in the EdTech ecosystem

- **Lack of quality standards** to evaluate EdTech products
- High degree of **information asymmetry** in the system
- **Ad-hoc decision-making for EdTech adoption** by stakeholders – states, teachers, and parents

Creates need for a systemic, long-term approach

...with a focus on convergence of demand and supply:

Encourage **demand** from stakeholders to be basis independent, **evidence-based advice**

Encourage **supply** of interventions that **meet quality standards**

Example: Creation of “EdTech Tulna” in India - an EdTech Product Evaluation Index

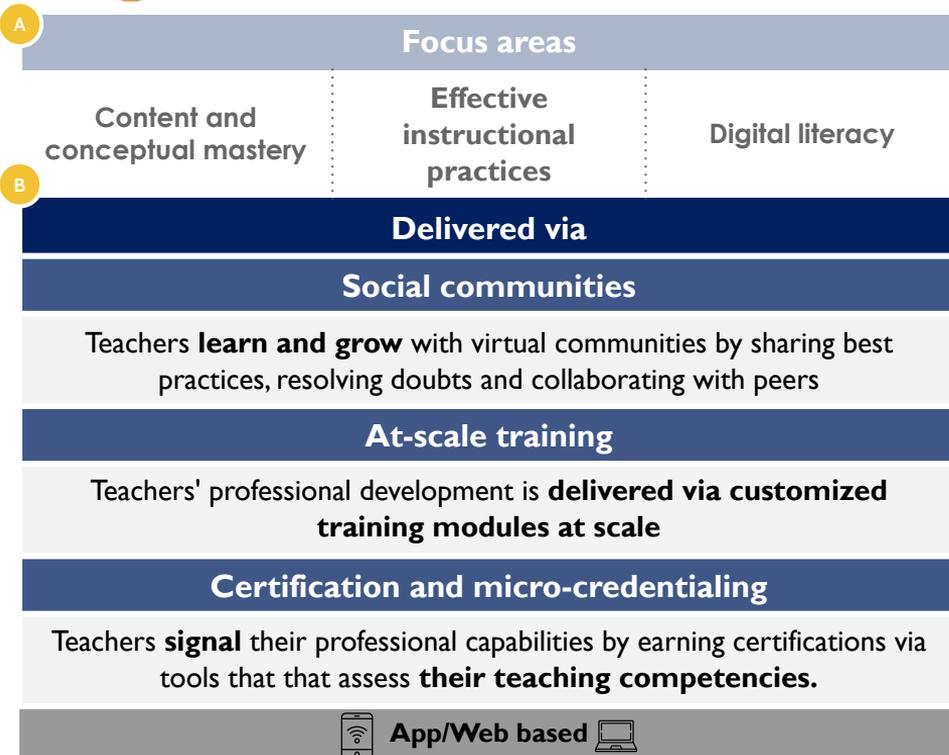
An unbiased, quality assessment of the ecosystem envisaged in 3 parts:

- 1 Create **EdTech quality standards** to define “what good looks like”
- 2 Build **toolkits** to support users in evaluations
- 3 **Publish reviews of products** that drive demand, and shape supply

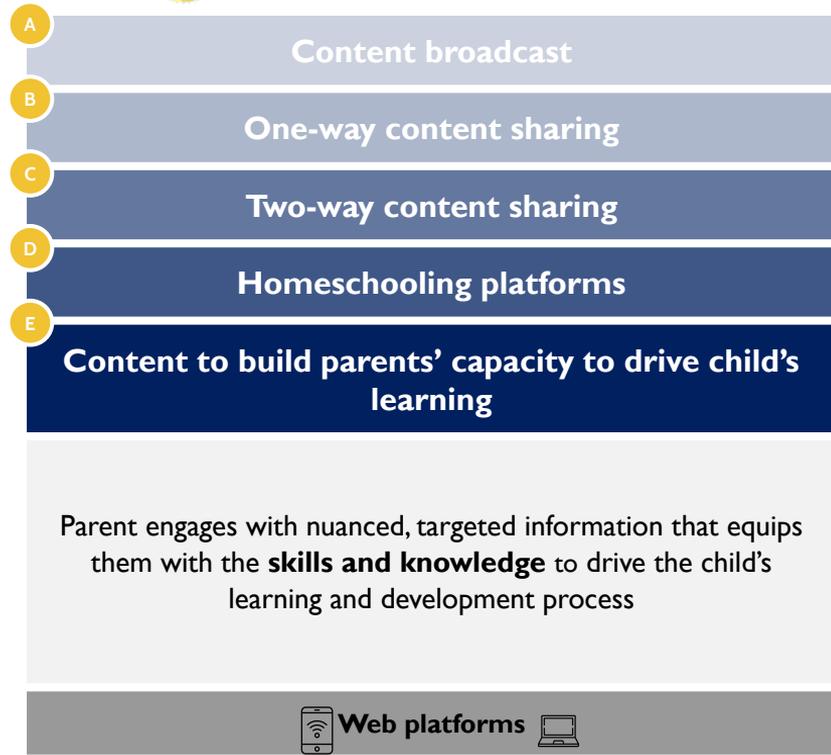
#3: In order to implement EdTech well, it will become critical to build capacity for parents & teachers, and catalyze innovation in these areas



TEACHER PROFESSIONAL DEVELOPMENT



PARENTAL PARTICIPATION



#4: An enabling policy environment is critical to gear the ecosystem toward EdTech innovation and adoption



A dedicated institution with a clear vision to integrate technology in teaching-learning, thereby improving student learning outcomes.



Provide **independent evidence-based advice** to Central and State Government agencies



Articulate new directions for **research and innovation**



Build **intellectual and institutional capacities** in educational technology



Envision **strategic thrust areas** in the EdTech domain

In conclusion, EdTech innovation may be meaningfully leveraged to reimagine education by considering key facets of its implementation

1



What type of EdTech to choose?

Choosing the relevant use-case of EdTech

By understanding the context and the evidence

2



How do you select the right learning software?

Learning solution is critical, can make or break the program

By creating standards for what “good” EdTech looks like

3



How do you implement it well?

Building institutional and individual capacity is essential to effective implementation

By meaningfully building capacity for learning agents

Enabling policy environment

Guiding policies that need to be in place for effective implementation in EdTech

By creating institutional capacity to promote research, innovation, and adoption of EdTech at the national level

Thank you!

