

Anuppur SMART Schools

Where Technology “Compliments” Education

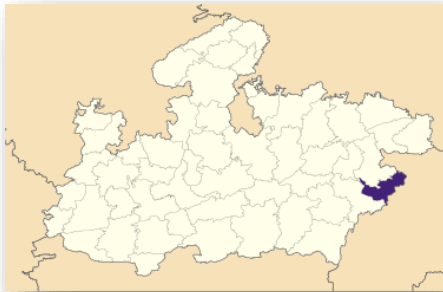


Ed-Tech solution using a “Hybrid Online-Offline SMART-class” model
with scalable tech to augment our Government schools & teachers

Identifying the NEED/PROBLEM



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ANUPPUR DISTRICT, M.P.



- Education is a very powerful tool for the growth of any region, especially in a **tribal district** inhabited by some of the most socially and economically backward communities.
- To empower the people of Anuppur district, it was **crucial to impart quality education** which could translate into better social and economic outcome.
- In schools with shortage of subject-specific teachers, **need for a tool to aid teachers in teaching more than one subject.**
- There was need to provide **state-of-art technology** so that our students can compete with the urban and tech savvy students.

- Population: 7,49,237
(as per 2011 census)
- Primarily tribal belt with 48% SC/ST population
- Literacy Rate: 67.90 %
(as per 2011 census)
- Student Demographics: Literacy rate was 35.45% in 1991 : many students are **First Generation learners** (2011 Literacy Rate - 67.88%)

Available ED-Tech Solutions



Established EdTech Solutions

- ❖ Tailor made for **Urban** India
- ❖ **Lacks localized vernacular content** (transliteration does not suffice)
- ❖ **More suited as B2C** rather than a B2B solution. Unsuitable for B2G

Social Learning Apps

- ❖ **Pen-drive/Skype solution** lacks automation and scalability
- ❖ **Needs human intervention** at every step
- ❖ **Localized content** is missing

- We did not intend to replace the traditional teacher in classroom with digital technology. We were interested in improving classroom delivery and **enable the teacher with modern technology**. So the need for **vernacular and localized content**.
- We needed a **hardware-independent model** that could be easily scaled up. Also needed **tech-based monitoring** with little manpower requirement. So cloud based technological solution was required.
- The available market solutions couldn't address all our concerns. So we had **brainstorming sessions with all stakeholders**, viz., teachers, students and parents, and we scouted for **young start-ups** through a start-up friendly e-tender.

Anuppur SMART Schools Solution : Key USPs



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CONTENT

- **Vernacular Content** created by local State Board Teachers
- Video Lectures and Practice Questions (MCQ, SAQ, LAQ, MTP) as per **MPBSE Syllabus**
- **Live Experiments** and interesting animations



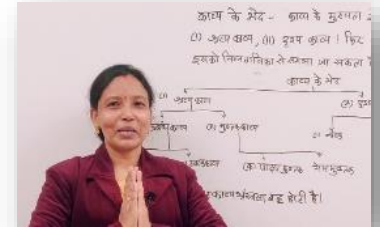
TECHNOLOGY

- Content hosted on **AWS Cloud**, real-time online content access and updation unlike pen-drive solutions
- **Wi-Fi enabled IP Cameras** provide live feed of classroom 24x7. No need of physical inspections.
- **Monitoring & Execution Modules**



EXECUTION

- **Smart Classroom** (with 4G Internet Access) where teacher explains at pre-defined pauses in videos.
- **Attendance monitoring through app**
- **Clicker (KBC model)** for generating excitement in students and assessing learning outcome immediately after a class.



“Tech-First” solution to ensure Scalability

CONTENT



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Vernacular
Content by
Local Teachers



Live Experiments



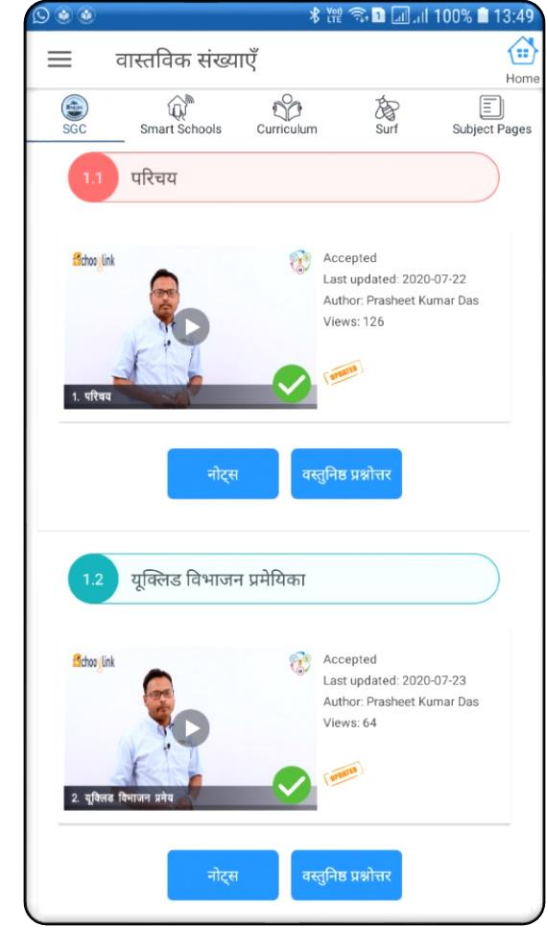
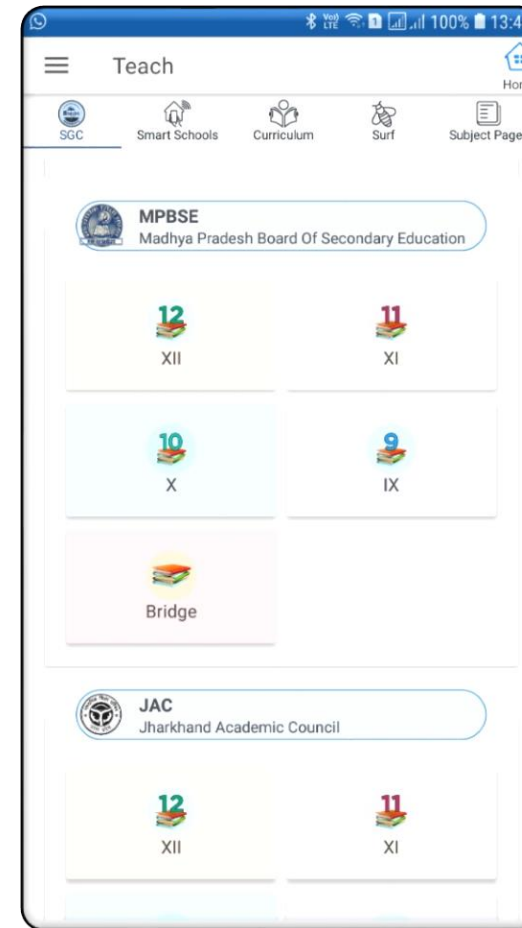
MPBSE Chapter wise content



TECHNOLOGY



- **IP camera feed to Algorithms (AI/ML)**
 - Captures **live status of classroom** (Eliminates physical visits to the schools)
 - Provides feedback on quality of content being streamed by the **attention span of students**, helps improve the content
- **Clickers (Similar to Audience Poll of KBC)**
 - Real time feedback of how much the students grasped
 - Direct feedback to teacher
 - Give the progress of students year-on-year
 - Give insights into students – their weaknesses, strengths and interests thus creating **individual student profiles**
- **App**
 - Stream and Track progress of content
 - Track attendance of teacher and students
 - **Add new content on the fly**
- **5G** will give a shot in the arm to all the above components when they start getting connected (IOT) using the HTTP/2 protocol



AWS (Amazon web Services) CLOUD TECH enables real time content play, attendance and content delivery progress report

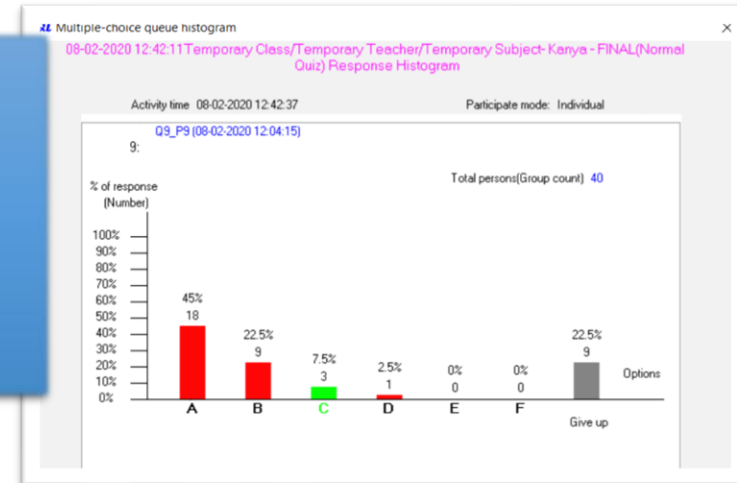
EXECUTION



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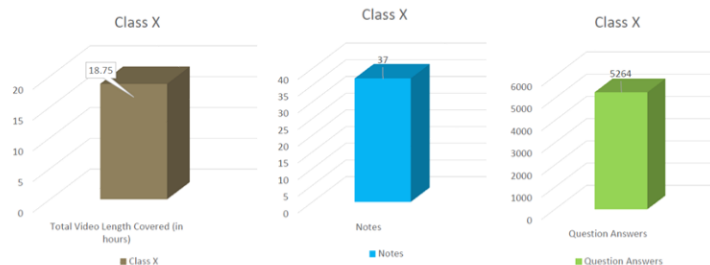


CLICKER TECH
(like Audience Poll of KBC) for instant feedback to students and teachers



MONITORING
— Attendance,
Video Length,
Notes, Q&A

SMART CLASS SUMMARY (Class X) : 07.02.2020



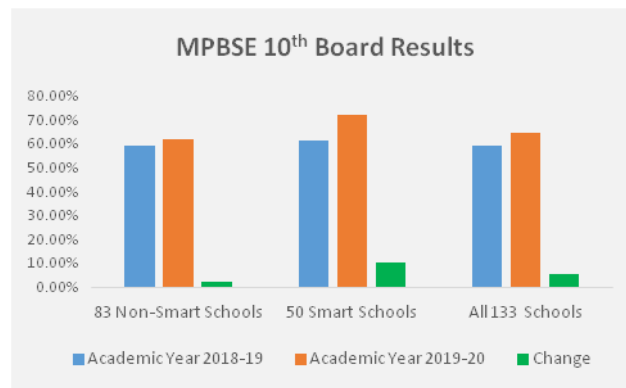
Technology
augmenting the
Classroom Teacher

Evidence Based Policy Making



- The decision had to be backed by clear evidence and not on mere intuition of the District Collector.
- As a Randomized Control Trial experiment, 50 schools (**9,134 students :- Std IX- 5,404 and Std X- 3,730**) were selected randomly for smart class intervention and rest 83 were kept as control group.
- The impact analysis after an academic year shows clear and significant impact in academic outcomes (although smart classes were **implemented mid-session**) .

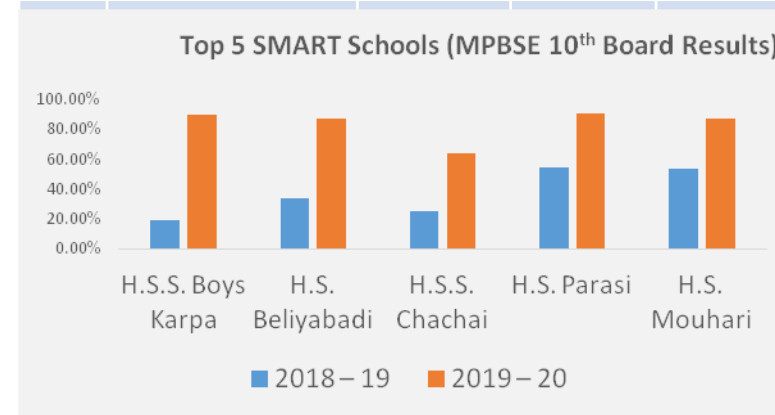
(MPBSE 10 th Board Results)	Academic Year 2018-19	Academic Year 2019-20	Change
83 Non-Smart Schools	59.27%	61.70%	+2.43%
50 Smart Schools	61.66%	72.11%	+10.45%
All 133 Schools	59.20%	64.66%	+5.46%



- First Division went up** from 42.8% (2018-19) to 48.7% (2019-20) while **Third Division went down** from 2.7% (2018-19) to 1.3% (2019-20) of total pass students.
- A research study to understand the impact of the project has been commissioned under Prof Omkar D. Palsule-Desai (Department of Operations Management and Quantitative Techniques) and Prof Rajhans Mishra (Department of Information Systems) of **Indian Institute of Management (IIM) Indore**.

TOP 5 SMART SCHOOLS (MPBSE 10th Board Results)

No.	SMART School	2018 – 19	2019 – 20	Change
1.	H.S.S. Boys Karpa	19.19%	89.36%	+70.17%
2.	H.S. Beliyabadi	33.33%	86.96%	+53.62%
3.	H.S.S. Chachai	25.00%	63.64%	+38.64%
4.	H.S. Parasi	54.17%	90.32%	+36.16%



Bright Future Ahead ...



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BOARD OF SECONDARY EDUCATION, M.P., BHOPAL HIGH SCHOOL CERTIFICATE EXAMINATION - 2020 DISTRICT LEVEL MERIT LIST (TOP 3 POSITIONS)					
DIST: ANUPPUR					
Name of Student / Father's name	Rollno	Mark obtained	Posi- tion	School/Centre code	Name of School/Centre
MANDAKINI PATEL	103629656	392/400	1	362004	SARASWATI H S SCHOOL, CHACHAI, ANUPPUR
ASHOK KUMAR PATEL					
OM SAHU	103635255	294/300	1	362086	BHARAT JYOTI VIDYALAYA ANUPPURBHARAT JYOTI VIDYALAYA, SAMATPUR, ANUPPUR, WARD NO. 7
RAVI SANKAR SAHU					
CHANDRA PRAKASH PRAJAPATI	103635278	294/300	1	362086	BHARAT JYOTI VIDYALAYA ANUPPURBHARAT JYOTI VIDYALAYA, SAMATPUR, ANUPPUR, WARD NO. 7
BAL GOVIND PRAJAPATI					
ANKITA PRAJAPATI	103635626	294/300	1	362087	NOBLE PUBLIC HIGHSCHOOL, JAITHARI, ANUPPUR
RAMDHANI PRAJAPATI					
SANJANA KUSHWAHA	103628327	391/400	2	362057	SARSWATI H.S.SCHOOL, BIJURI, ANUPPUR
CHANDRABHUSHAN KUSHWAHA					
AFREEN KHATUN	103636160	391/400	2	361030	GOVT H S SCHOOL, JAMUNA COLLIERY ANUPPUR
MINAJ ANSARI					
RADHIKA KEWAT	103628177	390/400	3	362057	SARSWATI H.S.SCHOOL, BIJURI, ANUPPUR
PRAHLAD KEWAT					

Candidates securing 75% or more have only been considered for this list.
Those candidates who have secured position in state level merit list are excluded in District level merit list.

Secretary
Board of Secondary Education
Bhopal, M.P.

WAY FORWARD

- ❖ Hardware belongs to schools and not Schooglink so will stay with Schools.
- ❖ Schools shall need to pay monthly subscription of Rs.5,099/- only to continue the SMART Classes
- ❖ Planning to scale up the project to all 133 schools and increasing the contract from 2 years to 5 years.
- ❖ Tech-first solution will enable easy state-wide scalability.
- ❖ Individual Student profiling shall be used for **Personal Adaptive Learning (PAL) Plan**



Our SMART School Student, **Afreen Khatun (97.75%)** - Topper of all 133 Government Schools, 2nd ranker of district.

The TEAM



Smart Class Initiative
ANUPPUR DISTRICT, M.P.



Mr. Chandra Mohan Thakur
(Collector Anuppur)
IAS (2012)
B.Tech. - IIT Kanpur (2006)



Himanshu Agrawal
(Founder & CEO,
Schooglink)
B.Tech. (EE) - IIT Kanpur
(2000)
*Certificate of Merit, year
1 at IIT-K*



Shantanu Vibhore
(Co-Founder & CTO,
Schooglink)
B.E. (CS) - VTU (2005)
*"Entrepreneur of the Year"
Award*



Dr. Kaushlendra
Master Trainer
HSS Kanya Anuppur



Mr. D. S. Rao
Assistant Commissioner
Tribal Welfare



Mr. Ajay Jain
Govt. School Principal
HS Parasvaar



Mr. Ajay Chauhan
Govt. School Principal
HS Kendra Kotma



Mr. D. C. Mishra
Govt. School Teacher
HSS Jaithari

THANK YOU