Anuppur SMART Classes

Anuppur District is primarily a tribal district with many first generation learners coming to school. To empower people of Anuppur, it was crucial to impart quality education which could translate into better social and economic outcome for the most socially and economically backward communities of this tribal district.

It was felt that use of state-of-art technology could help students compete with the urban and tech savvy students. Intention was to improve classroom delivery and enabling the teacher with modern (digital) technology.

The idea for smart classes was firmed up in May 2019 after brainstorming sessions with all stakeholders, viz., teachers, students and parents. The academic session had already started. The proposal was taken to the Minister in-charge of the district, who readily gave administrative approval to be funded from District Mineral Foundation.

A tender was floated in July 2019 and the process completed by September 2019. The solution designed by a young start-up founded by an IIT Kanpur alumnus was selected through an open tender. Start-ups are high on enthusiasm and energy. The solution was tech-first and that was the key to scale it up quickly across 50 schools.

The schools in the District were divided into two sets. Set A had 50 schools with smart classes labeled "Smart Schools" and Set B had 83 remaining schools without smart classes labeled "Regular Schools". Focus was to actually have a "SMART" solution and not just digital content.

The objective of the Smart Class initiative was to improve learning outcomes and overall pass percentage of the students of Grades IX and X in the District in MPBSE State Board Exams. The school classrooms were being digitally enhanced, teaching aid to teachers and learning aid to the students were being provided.

The solution deployed had several advantages. The video content was created by engaging local State Board teachers, including local teachers from the District, so that the students can assimilate the vernacular content of the lectures easily. The

idea was also to empower the teachers at Anuppur and give them a platform. Localized vernacular content (in Hindi medium) ensured easy adoption by the teachers and enabled them to relate to it easily.

Content layout is exactly as per the Madhya Pradesh Board of Secondary Education (MPBSE) syllabus and as per the chapters and topics in the text books. Besides regular graphics and animations, the content is augmented with real time experiments, so that students can relate to the concept, visualize it and internalize easily.

The complete solution is tech-first, which means all functions are executed through a Smart App. All content is hosted on the AWS (Amazon Web Service) cloud and any additions can be done real-time, which is immediately reflected in all classrooms. Clickers technology was used in the classroom (just like "fastest-fingers-first" in game shows like "Kaun Banega Crorepati") to provide real-time evaluation to the students based on multiple choice questions wherein each student could see his/her response on the screen immediately and also compare it with the class response and match it with the correct answer. This created a lot of enthusiasm and excitement amongst the students.

Wi-fi enabled IP cameras provide live-feed of the classroom 24 X 7. Any classroom may be checked remotely at any time without the need for a physical visit. All content played in the classroom (videos, notes, multiple choice questions, short answer questions, long answer questions, test papers) automatically generates a coverage report on the App after every play. A cumulative report is auto-generated at the end of the day covering all 50 schools and is accessible to all school principals, teachers and nodal officers.

Attendance of students is keyed in through the App when any class starts and a cumulative summary created. Any school that skips smart classes or plays too little or too much in an allotted class gets automatically flagged.

Daily schedule is provided to each of the 50 schools based on the number of sections to ensure effective time utilization. The entire class is run on a 6x4 projector screen so that it is

clearly visible to all students. State-of-the-art Audio/ Video hardware is used in the setup to ensure best smart class experience. Experts were deployed round the year to ensure smooth functioning of all 50 Smart Schools. Free access to the Smart App was provided to the principals, teachers and students of the 50 Smart Schools to enable them to access the content at any time of the day. All the 50 Schools Principals and Teachers were associated in various stages of the selection process, to help create video lectures and augment the digital content for the next session.

The phenomenal impact was seen in the MPBSE Class X State Board results, 2020:-

a) The pass percentage of the District went up from 59.2% (in 2018-19) to 64.66% (in 2019-20).

b) The 50 Smart Schools were the major contributors to this upward swing as their pass percentage went up from 61.66% (in 2018-19) to 72.11% (in 2019-20), an upward swing of +10.45%.

c) The 83 regular schools registered a marginal improvement from 59.27% (in 2018-19) to 61.70% (in 2019-20)

d) The gap between the 50 Smart Schools and the 83 regular schools stood out clearly: 72.11% versus 61.70%

e) More than 10 Smart Schools achieved an upward increment in pass percentage of 25% to 70.17%. One School registered a pass percentage increase from 19.19% in 2018-19 to 89.36% in 2019-20, an amazing 4.66 times.

All this was done in less than a half year since the program was initiated in September 2019. Anuppur Smart Class Initiative brought out the best of government school teachers, government schools and the students.

It is planned to scale up the initiative to all the schools in Anuppur. It is replicable across the entire state of Madhya Pradesh.