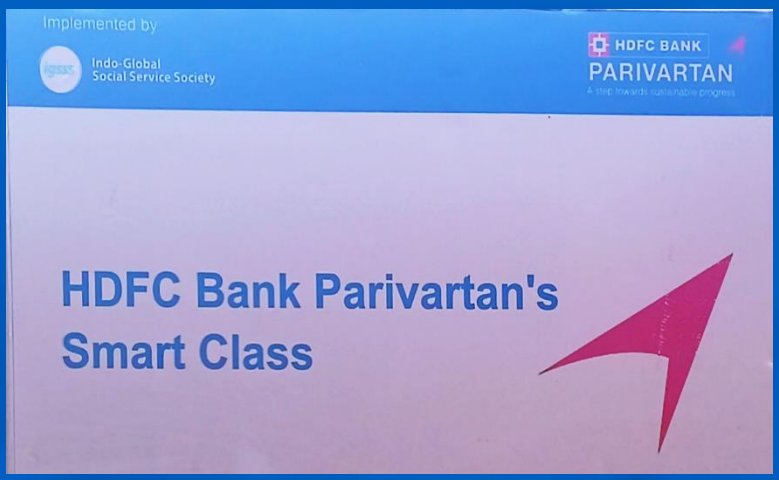
Creating Access to Digital Education in 400 Schools of the Rajasthan State

Impact Assessment Study Report



IMPACT
Partners in Social Development

Creating Access to Digital Education in 400 Schools of the Rajasthan State

Impact Assessment Study Report

March 2025

Project ID	P0692

Study Team

Dr. Manish Subharwal
Dr. Sanjay Gupta
Mr Naresh Chand

Abbreviations

AV	Audio-Video
CSR	Corporate Social Responsibility
IGSSS	Indo-Global Social Service Society (www.igsss.org)
MI	Monitoring and Impact
NGO	Non-Government Organization
SS	Smart Schools
TLM	Teaching Learning Materials

IMPACT
Partners in Social Development

Table of Contents

GRAPHS

TABLES

Executive Summary

1. Background

HDFC Parivartan provided a grant to the Indo-Global Social Service Society (IGSSSO) to implement a project in 400 schools across 33 districts of Rajasthan from October 2023 to February 2024. The project primarily focused on installing smart TVs in one classroom at each of the 400 schools in consultation with the schools.

A research agency: 'Impact PSD' was assigned to undertake the third-party impact assessment study. A summary of the assessment is shared below:

Project/Impact Assessment Details	
Implementing NGO Partner	**Indo-Global Social Service Society (IGSSS)**
Project Location and coverage	33 Districts of Rajasthan
Project Duration	October 2023 – February 2024
Assessment Approach and Methodology	
Study Objectives	• To assess the extent to which the project achieved its intended results. • To ascertain the perception of stakeholders and project participants on the relevance and usefulness of the project interventions. • To identify learnings from the project that can be adapted for similar projects in future.
Research Design	Mixed methods approach (Quantitative and qualitative) Quantitative – Smart classroom checklist, Interviews with Principals and Teachers Qualitative – In-depth interviews with school principals and Focus Group Discussion with students and parents
Sample Covered	Out of 400 schools covered, 40 schools were selected to get a representative sample using PPS sampling methodology

2. Key Observations and Impact

2.1 Smart Classroom Intervention

The physical verification process was administered to assess the current status of access to digital classrooms regarding availability, functionality and current usage by the intended target groups (teachers and students). The results of the physical verification and interaction with teachers, principals and students are discussed as follows:

The smart classrooms in almost all the schools (39 out of 40) were found to be completely functional and available to students and teachers). These smart classes provide opportunities like using smart TVs for delivering the topics and demonstrating the concepts that enable teachers to facilitate engaging lessons customised to the specific grade-level academic syllabus.

- All 40 schools have confirmed the receipt of the smart class setup, which includes a Smart TV, Inverter, and Battery (power backup). This comprehensive support meets all the teachers' classroom teaching needs.
- More than 90% of the principals reported a highly positive perception across multiple dimensions of student engagement and learning outcomes.
- Principals have noted significant improvements in students' understanding of complex topics and ability to apply knowledge in new and varied contexts.
- All the principals believed that there had been a marked increase in students' interest in academic subjects, particularly in the fields of Science and Mathematics. The inclusion of smart TV heightened enthusiasm, which has resulted in students engaging more actively in their studies and meeting the expectations set by their teachers.
- Teachers also highlighted the positive impact of utilizing smart TVs to present digital content that complements the academic curriculum. This approach has fostered a vibrant and interactive learning environment, encouraging students to participate in discussions actively.
- The use of technology has been instrumental in creating a space where students feel comfortable asking questions and seeking clarification on various topics, thus enriching their understanding of the subjects being taught.
- The smart classes have intensely heightened students' interest in various subjects and areas of study. About 94% of students reported experiencing positive transformations in their learning journeys. 96% of students reported grasping topics and concepts quickly when engaged in smart classes.
- The integration of digital content enhances the overall educational experience. These digital contents facilitate a more interactive and dynamic approach to learning and play a crucial role in streamlining the learning process. The effectiveness of the smart classes highlights the potential benefits of incorporating technology into education to foster better learning outcomes.
- Parents also expressed their satisfaction with including smart TVs in schools and the appropriate use of support for their children.

Figure 1. A Glimpse of a Smart Classroom

3. Findings on the OECD Criteria

This section provides the impact assessment findings considering the OECD research framework or criteria to oversee the overall impact of the HDFC Bank-supported Project on Access to Digital Education across 400 schools in Rajasthan.

CRITICAL INFRASTRUCTURE

Overall Results	Relevance	Efficiency	Effectiveness	Impact	Sustainability
Smart Class	4.2	Timeliness-4.5	Current Status-4.8	3.9	3.6
		Quality of Services-4.5	Usage-4.5		

Overall Average Score – 4.2

4. Key Recommendations

- Offer interactive panels to schools instead of smart TVs. Interactive panels provide a wider range of options for teachers, such as creating multiple windows on the screen, using the screen as a green or whiteboard for teaching, saving their written material for future classes, displaying videos in a second window, and using the first window for teaching to ensure a smooth flow in delivering their topics.
- Teachers should be provided with training on digital content and how to use it at the school level.
- Offer access to multiple educational web portals by providing a username and password for at least 5 years. This would ensure the availability of updated digital content for a long duration. The username and password should be displayed in the Principal Office so that all teachers can use the same for teaching.
- Enhance technical support and maintenance for smart class equipment, addressing its functionality. Local district-level vendors should be identified to provide a 5-year extended warranty, and schools should receive the warranty cards. The smart class should include a wall painting with invoice number, installation date, and other necessary details, ensuring anyone can contact the service provider with all the required information to register a complaint.

•••

Introduction

1.1 Background

HDFC Bank Parivartan supports focused development programs (FDPs) in multiple areas, such as education, rural development, skills development and livelihood enhancement, healthcare and hygiene, and financial literacy. In one of the focused development programs (FDPs), HDFC Bank has committed to creating 2,500 smart classrooms in partnership with non-profit organisations to promote education, where Digital Classrooms were introduced.

During the last few years, HDFC Bank supported the efforts of the government education department by providing them with need-based support to a large number of schools in many states across India. Primarily, the aim is to strengthen the school infrastructure holistically so that students are provided with an enabling environment for joyful learning, promoting enhanced participation and engagement and strengthening teacher-pupil dialogue and discussions. Ultimately, the inclusion of SMART classes and digital classrooms, along with developed infrastructure, led to improvements in students' learning outcomes and observed an increase in enrolment and attendance. The HDFC Bank's support for the schools enhances the school's reputation among the local communities, stakeholders, and teachers, who are also equipped with techno-pedagogy.

1.2 About Project

HDFC Bank had joined forces with the Indo-Global Social Service Society (IGSSS) to launch an ambitious project to revolutionize digital education in 400 schools across the vibrant state of Rajasthan. This initiative aimed to create a strong digital education infrastructure in 26 districts to enhance the learning environment and play a vital role in children's holistic development.

At the heart of this project lies a commitment to upgrading school facilities. Classrooms were being transformed into modern learning spaces equipped with state-of-the-art information, including smart TVs for interactive learning and reliable power backup solutions to ensure uninterrupted access to digital resources.

Moreover, this initiative placed a significant emphasis on empowering both teachers and students. Teachers were provided with an orientation on operating smart TVs to help them integrate technology effectively into their teaching methods, while students were encouraged to leverage the smart class to enhance their learning experiences. Through this comprehensive approach, the project aimed not only to improve the educational outcomes of the students but also to cultivate a generation of tech-savvy learners ready to thrive in an increasingly digital world.

1.3 Key Activities Undertaken

Installation of a Smart TVs for Accessing Digital Education
Installation of Power Backup support

1.4 Objective of Impact Assessment Study

HDFC Bank aimed to assess the overall effectiveness and efficiency of the project interventions and the sustainability of the outcomes achieved through the project.

IMPACT PSD Private Limited was entrusted to undertake the impact assessment of the project. The ensuing chapters of this report present the study's methodology and findings.

Study Methodology

2.1 Assessment Framework

For undertaking the impact assessment studies, the following assessment framework was proposed as the standard OECD-DAC criteria[1] which is considered as one of the gold standards in evaluation. This framework recommends adapting this framework wherever feasible and applicable:

Using this framework, the following questions/indicators were suggested to assess each program, using the six parameters stated above.

	Indicators/Questions
Relevance	• What criteria were adopted for identifying the schools for support • How was the need assessment undertaken for the support • To what extent did the supprot meet the identified needs
Coherence	• What challenges were faced by schools due to non-availability of SMART class • How the type of equipment, digital content and other essentials were finalized for the SMART Class • How did the SMART class and infrastructure supported the school in achieving the expected results • How the SMART class helped schools fulfilling the needs of the students • Options available with the school for repair and maintenance services of SMART Class

[1] https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

	Indicators/Questions
Efficiency	• What proportion of students were regularly attending SMART class • What proportion of teachers could receive the benefits and type of benefits achieved • What subjects are being taught using the SMART class • How many students could get benefits of Classrooms academically
Effectiveness	• The extent to which SMART class contributed in improving the retention and regularlity of students in classes

Impact	• Proportion of teachers and students stated the type of benefits and achievements
	• Proportion of teachers/principal reported:
	  ○ Increase in attendance or participation of students
	  ○ Improvement in learning outcomes of students
	  ○ Improvement in critical thinking and analytical skills of students

Sustainability	• Teachers and Principal have the understanding on how SMART class must be used to support students and in achieving the desired and improved results/ learning outcomes. • Mechanism in place for regular maintenance and repairing, availability of vendors' contacts and allocation of funds for smooth functioning of SMART class

2.2 Research Methods

A mixed-method approach was adopted for the impact assessment study, during which face-to-face interviews were conducted as part of the quantitative research, and checklists were completed in each school. For the qualitative component, focus groups were conducted with students who participated in the smart classes to discuss their experiences related to project support within the schools. Additionally, focus groups were conducted with parents, and in-depth interviews were carried out with the principals of the selected schools.

2.3 Geographic Coverage

Of the 26 districts covered under the project, 14 districts (50%) were included in the impact assessment study. The districts were selected to represent the entire state, covering all directions, and a number of schools were chosen in proportion to the total number of schools in each district.

2.4 Target Groups

The following target groups were included in the impact assessment study:

(a) Principal

(b) Teachers (preferably, Science and Mathematics)

(c) Students

(d) Parents

2.5 Sample and Sampling Procedure

To obtain the optimum sample size, we calculated the statistically valid sample size with a 90% confidence interval, 400 schools, a population proportion of 0.8, and a 10% margin of error as **40 schools**[2]. Therefore, a survey was conducted in 40 sample schools across the state.

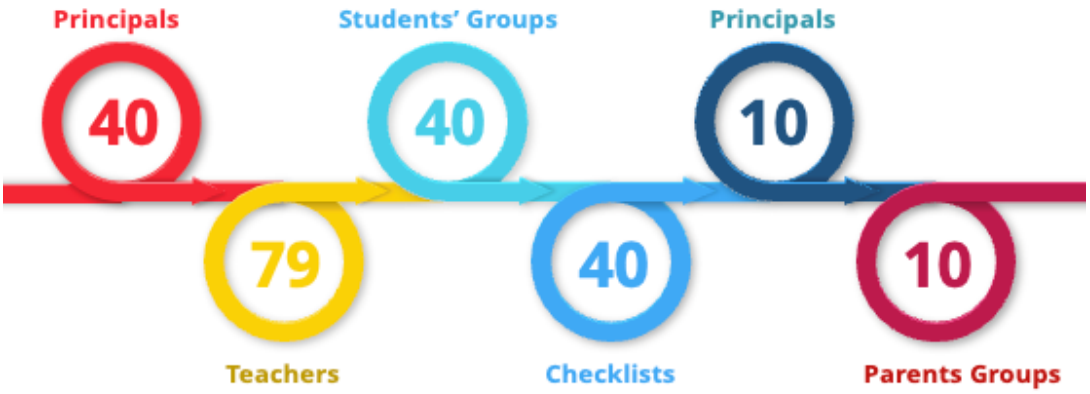
For the selection of schools, we categorized the districts into three groups: Lower (up to 15 schools), Medium (between 16 to 30 schools), and Higher (more than 30 schools). In each group/stratum, the desired sample of **40 schools** was selected and proportionately distributed among the groups/strata.

District	Total No. of Schools Supported	No. of Schools Covered
Bharatpur	4	2
Ajmer	6	2
Bundi	10	2
Bhilwara	13	2
Banswara	15	2
Barmer	15	2
Alwar	16	2
Jaipur	16	2
Kota	21	4
Nagaur	26	4
Hanumangarh	27	4
Jhunhjunun	34	4
Ganganagar	42	4
Churu	46	4
Total Schools	**400**	**40**

A TOTAL OF 40 SCHOOLS WERE COVERED ACROSS 14 DISTRICTS OF RAJASTHAN

In each school, five students were randomly selected inclusive of boys and girls both. Two teachers (one Science and one maths teacher), and one Principal from each of the selected schools were also interviewed.

2.6 Sample Coverage



[2] http://www.raosoft.com/samplesize.html

2.7 Study Tools

The quantitative data collection was undertaken on a customized application in the Survey CTO platform designed by the HDFC Bank MI team. The following tools were developed for collecting data:

- Verification **Checklist** for Assessment of **Smart Classrooms**
- **FGD Discussion Guide** for the **students** and **parents**, which was semi-structured in nature
- Qualitative **in-depth interview discussion guides** for **Principals**

All the developed tools were shared for review and were finalised in association with the HDFC MI team. The tools were duly translated into Hindi for the data collection.

2.8 Training of Data Collection Teams

A day-long training of data collectors was organised at Jaipur, and all the team members were experienced in social sector surveys and other impact assessments of the smart schools project funded by HDFC Bank. Senior management from IMPACT facilitated the training to ensure the quality of the data collection team's training. We sincerely acknowledge the support received from the HDFC Bank CSR MI team representative, physically at the training venue for seeking clarifications related to the data collection application.

2.9 Team Deployment

One trained investigator was sent to each of the 40 sample schools, and one school was completed on a daily basis. A total of 10 investigators were deployed for the data collection in 14 districts. The distribution of teams was done in such a way that each investigator covered at least four schools. Data collection was conducted simultaneously in multiple districts. Additionally, three coordinators were deployed to supervise, undertake accompanied checks and facilitate the discussions. The coordinators served as the link between the team and the researchers. IMPACT researcher supervised the data collection and provided general support.

2.10 Survey Implementation

The data collection process followed by the teams is described as follows:

- A trained investigator was deployed to visit the selected sample school for the assessment.
- The team member reached to the selected school with prior appointments coordinated by the IGSSS team.
- A team member completed the data collection in one day, covering the qualitative and quantitive interviews and physical verification of the digital infrastructure support.
- Initially, the principals were contacted and informed about the purpose of the survey, and informed consent was obtained from them.
- Principals were interviewed and then teachers teaching Science and Maths subjects were interviewed.
- Later, physical verification was undertaken, which was facilitated by the teachers and/or principals to provide details of the smart class support and its status.
- In the end, the teachers were requested to allow and interact with the students who had undergone sessions in the smart class, and information was gathered in mini-groups without

disturbing the classes. Additionally, written consent was obtained from the principals for conducting the discussions with students.

- On the assessment day, in-depth interviews with principals and small group discussions with parents were conducted in some schools.
- Before the return, the principals and teachers were duly acknowledged for their coordination and support offered for the impact assessment study.

2.11 Data Analysis and Report Writing

Considering the project indicators and analysis requirements, a detailed Data Analysis Plan and Content Analysis Guide were developed to obtain the results and outcomes. The report incorporated the analysis of data received from the schools. Additionally, it included a separate chapter on findings obtained through the content analysis of in-depth discussions with the respondents. Senior management was involved in writing the report.

Scoring Analysis as Basis of OECD Evaluation

The assessment of HDFC's support to schools follows the OECD framework. The data, primarily collected on a Likert scale (1-5), was analyzed based on the range from highest (5 marks) to lowest (1 mark). For the support category under Critical/Communication Infrastructure, weighted scores were computed. The mean scores were then calculated to determine the overall status, aligned with the OECD framework, providing a clear understanding of the support levels.

Here's a step-by-step breakdown of how the analysis of HDFC's support to schools was conducted using the OECD framework:

1. **Data Collection**
   - Data was gathered using a **Likert scale** (1–5), where:
     - **5** = Highest support/relevance/adequacy/sufficiency/etc.
     - **1** = Lowest support/relevance/adequacy/sufficiency/etc.
   - Each school's response was recorded for Critical Infrastructure (Smart Class).

2. **Weighted Scores Calculation**
   - For each school, responses were multiplied by their respective Likert score.
   - Formula: Weighted Score=∑(Response Count for Score×Score Value)\text{Weighted Score} = \sum (\text{Response Count for Score} \times \text{Score Value})

3. **Mean Score Calculation**
   - The mean score was calculated to assess the overall status of support.
   - Formula: Mean Score=Weighted ScoreTotal Responses\text{Mean Score} = \frac{\text{Weighted Score}}{\text{Total Responses}}

4. **Overall Status Interpretation (OECD Framework)**
   - The mean score for each category was aligned with the OECD framework to assess the extent of support:

Score Range	Likert Score	Category	Description
More than 0.90 (90%)	More than 4.5	Excellent	Exception Performance; Fully meets or exceeds all expectations for the parameter
0.70 (70%) to 0.9 (90%)	3.5 to 4.5	Good	Adequate Performance; Meets some expectations but requires improvement

Score Range	Likert Score	Category	Description
0.50 (50%) to 0.69 (69%)	2.5 to 3.5	Needs Improvement	Below Average Performance; Significant gaps in meeting expectations
Less Than 0.50 (50%)	Less Than 2.5	Poor	

2.12 Challenges Faced

- No challenges were faced during the study.

Current Status of the Equipment

This chapter presents the assessment findings conducted on the physical verification of the support provided under the project aimed at creating access to digital education for students in selected schools across various districts in Rajasthan, specifically involving a sample of 40 schools from 14 out of 26 districts. The findings detail smart classrooms' current status, functionality, and sustainability. Additionally, this section ranks the participating schools from all 14 districts based on their composite scores in various aspects of smart classrooms. The evaluation focused on Smart TVs' availability and operational effectiveness in these institutions. Each school was assigned a score derived from the maximum possible score, with higher scores indicating the effectiveness of equipment, functionality and maintenance provisions.

3.1 Smart Class

The assessment was conducted in 14 districts, encompassing 40 schools (ranging from 2 to 4 schools in each district, based on the proportion of schools supported by the project in a specific district) to verify the installation, availability, and functionality of Smart Class equipment.

All **40 schools** confirmed the availability of one LED Smart TV provided to them. Of these, 39 Smart TVs (98%) were found to be functional at the time of the visit, and 38 out of 39 Smart TVs (97%) were being fully used by the teachers to deliver their topics. Only one school reported a non-functional Smart TV since December 2024 due to a display-related technical issue in the Alwar district.

Despite over half the schools (21 out of 40) having dedicated internet facilities, 90% (36 out of 40 schools) of teachers used personal mobile hotspots to connect the Smart TVs.

This reflects that teachers understand the usefulness of Smart TVs for students and practice demonstrating various concepts, principles and theorems, effective communication, current affairs, etc., so that students can grasp the topics effectively.

	Fully Functional	Moderately Functional	Partially Functional	Not Functional
Current Status	85% *(N=34)*	10% *(N=4)*	2.5% *(N=1)*	2.5% *(N=1)*
Reasons		Internet connectivity and teachers' availability	School has an issue with wiring, internet and battery issue	Smart TV has a technical problem

More than half of Schools (53%) reported having Internet connectivity through a dedicated line with modem equipment. However, 36 schools (90%) reported using the Smart TV through a Mobile Hotspot used by the subject teachers.

Interestingly, digital content for all the classes was found available in all 40 schools (100%). Largely, most schools had access to YouTube videos and the digital content provided by the State Government

portals for various classes and multiple subjects based on the academic curriculum. Of all 40 schools, 39 (98%) reported having functional access to digital content, while one school in Kota district reported issues with accessing the digital content provided by the department.

All 40 schools (100%) had power backup provided by the implementation partner through a battery and inverter. Additionally, three schools reported having more than 1 unit of power backup (mainly inverter and battery). All reported equipment was functional on the day of the visit.

Figure 2. Smart Classroom Set-up with Power Backup and Smart Class in Progress

Principals and teachers in many schools also complained that the battery provided with an inverter is small and provides power backup for a limited time, which is a big issue.

Thus, schools with erratic power supplies face a major challenge in delivering topics, and teachers need to restart everything repeatedly, which hampers class proceedings.

The data suggests a moderately effective system for managing and sustaining Smart Class equipment but reveals gaps in its overall functionality implementation. On enquiry, it was observed that 'warranty cards' were present in only 20 out of 40 schools (50%), and all were found functional. The assessment findings revealed that maintenance provisions were completely lacking across all 40 schools (100%), indicating a critical gap in the sustainability of HDFC Bank's support.

Around two-thirds of schools (65%) had access to a helpline or complaint number, and the remaining 14 schools (35%) did not have any provisions. This highlights the need for concrete accessibility to such provisions for all the supported schools. Addressing these shortcomings is crucial to ensuring all schools' efficient management and long-term sustainability of Smart Class infrastructure.

The assessment team suggests that while providing Smart Class support, the implementation partner must include wall paintings in the Smart Class that display the helpline number, equipment purchase date, invoice number, warranty expiration date, and contact information for the designated representative from the implementation partner.

Additionally, there should be a provision for extended direct AMC support from the vendors, such as three years. This would ensure smooth operations for at least three years from the installation date.

Ranking of Schools

An effort was made to rank the schools based on key parameters, and for each parameter, a score of 1 was given to a school. Using the criteria, a composite score was obtained for each school, and then a ranking was obtained. All the parameters used for computing the composite score and ranking are listed as follows:

1. Availability and functionality of Smart TV	2. Battery for power backup available and functional
3. Modem-based Internet available and functional	4. Warranty card available
5. Hotspot internet facility available and functional	6. Helpline and Complaint number available
7. Digital content available and being used	8. Maintenance funds available
9. Inverter available and functional	**TOTAL 9 parameters (Max Score = 9)**

Table 1: School Rankings by Composite Smart Class Scores

District	Block	School	Composite Score (MM=9)	Rank
Hanumangarh	Hanumangarh	GGSSS Hanumangarh Town	9	1
Nagaur	Nava	GSSS Sirsi	9	1
Jaipur	Greater Jaipur	GSSS Rajiv Nagar Bhatta basti	9	1
Alwar	Tizaza	GSSS Thada	9	1
Jhunjhunun	Jhunjhunun	GSSS Uttarasar	9	1
Sri Ganganagar	Sadulshahar	GSSS Gadarkhera	8	6
Hanumangarh	Hanumangarh	GSSS Uttam singh wala	8	6
Churu	Taranagar	GSSS Bhaluri	8	6
Nagaur	Nava	GSSS Thikriya Khurd	8	6
Jhunjhunun	Udaipur wati	GSSS Bara gaon	8	6
Ajmer	Ajmer	GSSS Danta	8	6
Nagaur	Nagaur	GSSS Jhatera	8	6
Barmer	Barmer	GSSS Bhothiya	8	6
Banswara	Banswara	GSSS Samariya	8	6
Hanumangarh	Nohar	GSSS 22 NTR	7	15
Churu	Taranagar	GSSS Kailash	7	15
Nagaur	Nava	GSSS Haripura	7	15
Bharatpur	Deeg	GSSS Seu	7	15
Alwar	Tizaza	GSSS Maheshra	7	15
Jhunjhunun	Mandawa	GSSS Bhojasar	7	15
Jhunjhunun	Mandawa	GSSS Nua	7	15
Ajmer	Puskar	GSSS Leswa	7	15
Bundi	Hindoli	GSSS Trideni Chauk Hindoli	7	15
Kota	Kota	GSSS R.K Puram Kota	7	15
Sri Ganganagar	Sail shahar	GSSS Kardvala	6	25
Sri Ganganagar	Sri Ganganagar	GSSS 2LL	6	25
Sri Ganganagar	Sri Ganganagar	GGSSS Naitevala	6	25
Hanumangarh	Hanumangarh	PM GSSS Hanumangarh j.	6	25
Churu	Taranagar	GSSS Bhamra	6	25
Bhilwara	Bijoliya	GSSS Chhoti Bijoliya	6	25
Banswara	Garhi	GSSS Himta ki Dhani	6	25

District	Block	School	Composite Score (MM=9)	Rank
Bhilwara	Bijoliya	GSSS Bijoliya	6	25
Churu	Churu	GSSS Molisar bara	5	33
Bharatpur	Nagar	GSSS Alamshah	5	33
Jaipur	Jaipur	GSSS Harmada	5	33
Barmer	Barmer	GSSS Punroo ki Basti	5	33
Bundi	Hindoli	GSSS Trideni Chauk Hindoli	5	33
Kota	Itawa	GSSS Rampuriya	5	33
Kota	Kota	GGSSS Sakatpura kota	4	39
Kota	Itawa	GSSS Joravarpura	2	40

The overall average and median composite scores were found to be 6.775 and 7, respectively. However, 24 out of 40 schools (60%) achieved an average composite score of 7 or more. The remaining 16 schools had less than 7. A total of 32 schools (80%) could score an average composite score of six or more, indicating the effectiveness of the intervention.

Summary

The assessment conducted across 40 schools in 14 districts revealed Smart Class equipment's expected availability and functionality, with 98% of Smart TVs operational and all (100%) having access to digital content. However, over half of the schools (53%) had internet access via Line/Modem, while power backup was universally available. Maintenance provisions were completely absent in all schools; half of the schools (50%) had warranty cards, while 35% had no helpline numbers for support. These gaps highlight the need for better support to ensure long-term sustainability.

Study Findings

This chapter explores the findings from in-depth discussions with diverse stakeholders, including school principals, teachers, parents and students from the intervention schools across Rajasthan. The insights gained from these conversations illuminate the valuable support HDFC Bank provides for developing essential communication facilities such as smart classes and empowering teachers to access digital content for improving their teaching pedagogy.

4.1 Sample coverage

Districts	14	**Schools**	40
Principals	40	**Teachers**	79
Students (SGDs)	233	**Parents (SGDs)**	30
Principals (IDIs)	30		

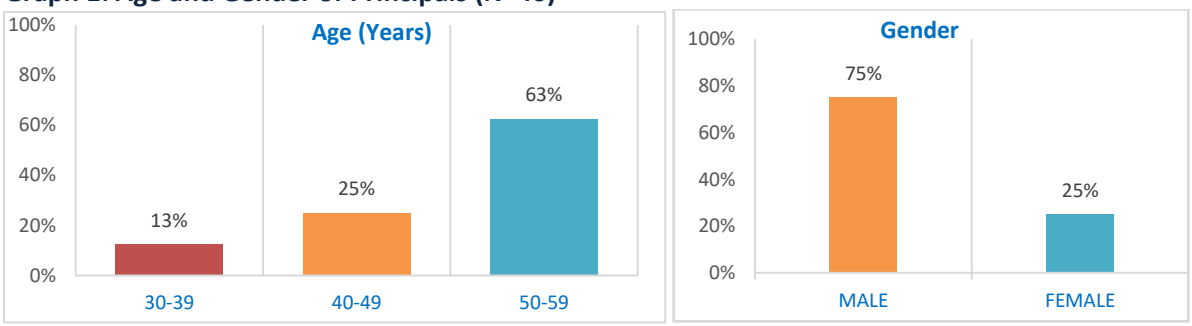
4.2 Profile of the Respondents

This section presents the overview of the profile of the target respondents covered under the impact assessment, as discussed in the following sub-sections.

4.2.1 Principals

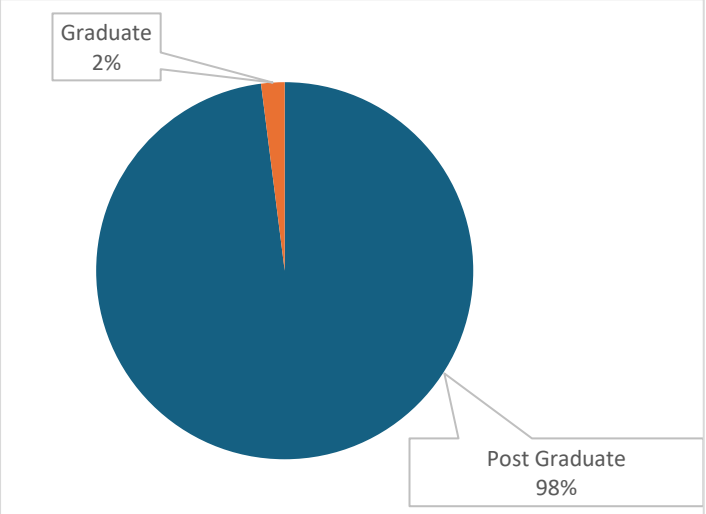
Forty (40) principals participated in the survey across 40 schools in 14 districts of Rajasthan, offering valuable insights into the critical infrastructure of smart classes in schools. The age and gender distribution of principals has been presented as follows:

Graph 1: Age and Gender of Principals (N=40)



Out of 40 respondents, three out of five (63%) were aged between 50 and 59 years, indicating experienced leadership. About a quarter (25%) fall in the age range of 40-49 years, while the remaining (13%) were into the 30-39 years age range, showing limited younger representation. A gender divide was observed as 75% of principals were men and 25% were women. Clearly, male leadership is prominent in the covered schools in the state.

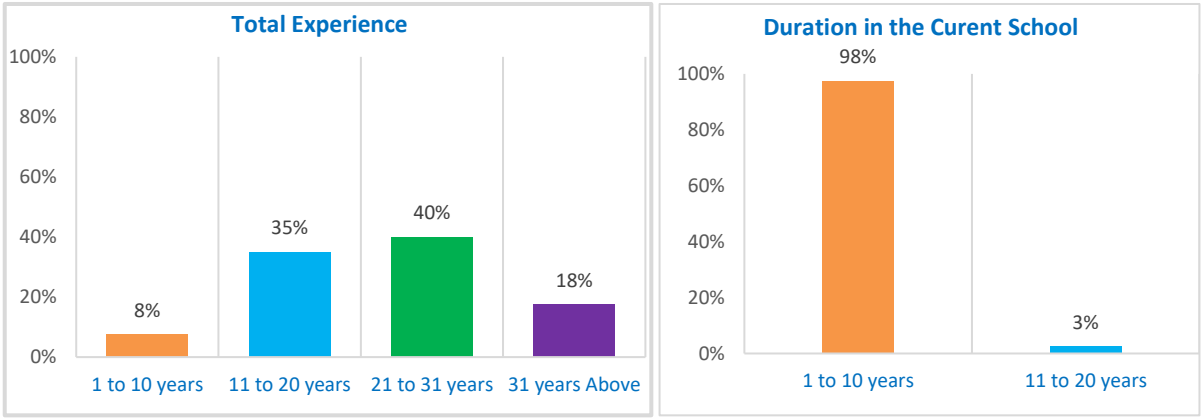
Graph 2: Educational Qualification of Principals (N=40)



Among 40 school principals, 98% (39) were postgraduates, indicating a strong preference for advanced qualifications in leadership roles. Only 2% (1) were graduates, suggesting that higher education needs to be prioritized for effective school management and academic outcomes. Many of these principals also had a professional degree, such as BEd, and a few had a diploma in education (DEd) as a technical skills course.

Further, all the school principals were asked about their total experience and number of years working in the current schools. The teaching experience and duration are presented in the following graph.

Graph 3: Total Teaching Experience of Principals and Duration in the Current School (N=40)

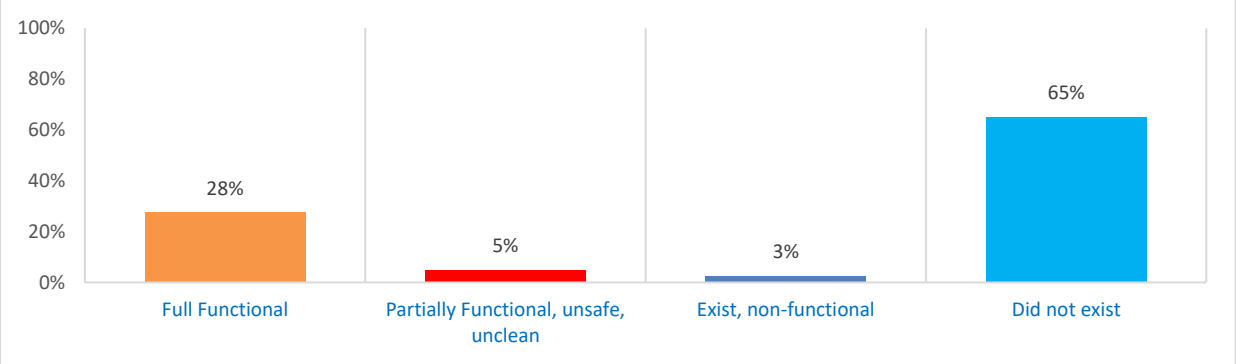


Regarding teaching experience, most principals (40%) had 21 to 31 years of experience, followed by 35% with 11 to 20 years. Additionally, 18% (7) had experience of over 31 years, reflecting a strong presence of highly experienced teachers. Additionally, many principals (98%) served at their current schools for up to 10 years. This reflects stability and sustained leadership across all schools.

4.2.1.1 Principals' Opinion on the Status of Critical or Communication Infrastructure

The principals were requested to share the status of smart classes set up in their schools before the HDFC Bank's support. It was observed that one out of three schools (35%) had Smart TVs or Interactive LED Panels in their schools, and 28% were fully functional. The status is presented in the following graph.

Graph 4: Status of Critical Infrastructure BEFORE HDFC's support (N=40)



Before receiving support, only 28% of smart classrooms were fully operational**,** while 7% were partially functional due to certain physical limitations (electric wiring, etc.) or because they had not been upgraded technically**.** However, a significant 65% of schools did not have Smart TVs**,** which highlights a noticeable gap in access to digital learning infrastructure prior to HDFC Bank's support.

98% of principals thought that the HDFC Bank support was **ADEQUATE** and meets the needs of their schools	**85%** of principals had opinion that the HDFC Bank support for the school was **ESSENTIAL** & **HIGH PRIORITY**
In **93%** schools, the support was provided **ON TIME**	**100%** of principals expressed their **SATISFACTION** with the support provided by HDFC Bank

Based on the Principals' perspective regarding the OECD framework components, responses were collected and analyzed to determine the average score for all the components. The results are shown in the following table.

Table 1: Interpretation of Critical Infrastructure on OECD Framework (On a scale of 1-5)

Overall Results	Relevance	Efficiency	Effectiveness	Impact	Sustainability	Overall
Smart Class	4.3	4.6	4.7	3.9	3.8	4.2

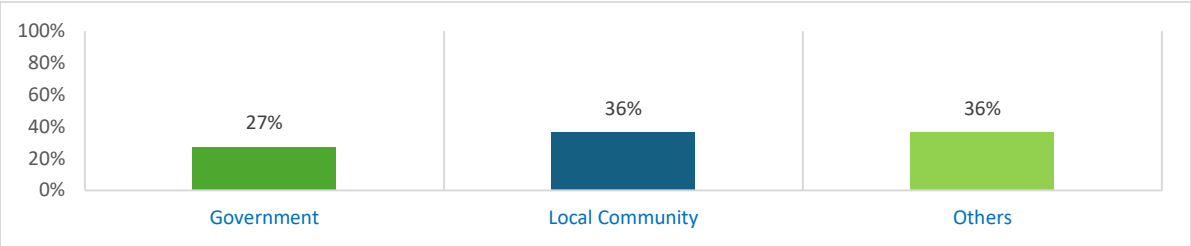
Findings suggest that the Smart Class setup is **highly effective** (4.7) and **efficient** (4.6), contributing significantly to improved educational experiences. The **relevance** score (4.3) is also positive, highlighting that the expectations or needs are truly met. The **impact** score (3.9) has been moderate, which informs that there are still some challenges due to which the impact is not as tangible as expected. The **sustainability** score (3.8) suggests a **need for regular updates, maintenance provisions and other measures to ensure long-term utility** for the schools.

An overall score of 4.2 proves that the intervention was successful and effective.

4.2.1.2 Support from Other Stakeholders in the Last Four Years (Convergence)

In the past four years, only 28% of principals shared that their schools received additional support from various stakeholders other than HDFC Bank.

Graph 5: Support Received from Multiple Stakeholders (N=11)



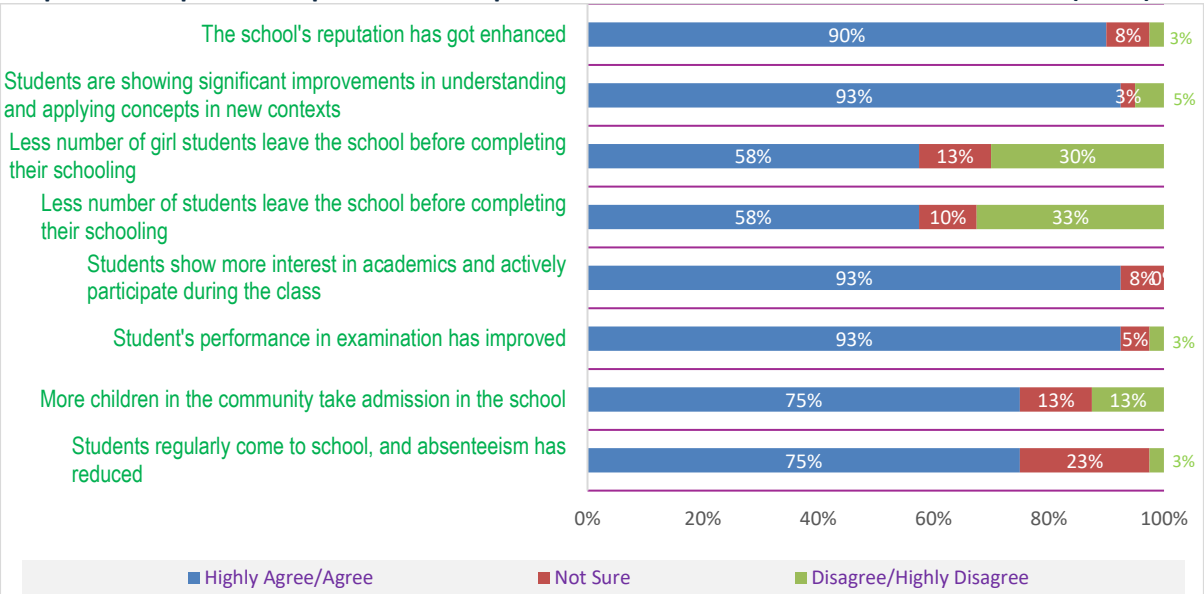
Among those schools that received support (out of 11), the local community assisted 36% (N=4), another 36% (N=4) received support from other sources**,** and the government supported 27% (N=3). No support was reported from parents, students, or other partners**.** This suggests that while some external assistance was available during the past four years, it was very much limited, with the local community and other sources (mainly other NGOs) being the primary contributors.

4.2.1.3 Perception of Principals on the Impact of Smart Class

All the school principals were requested to share their insights regarding various types of impacts on both students and their schools. Fortunately, more than 90% of the principals reported a highly positive perception across multiple dimensions of student engagement and learning outcomes. They noted significant improvements in students' understanding of complex topics and their ability to apply knowledge in new and varied contexts. Furthermore, there has been a marked increase in students' interest in academic subjects, particularly in the fields of Science and Mathematics. This heightened enthusiasm has resulted in students engaging more actively in their studies and meeting the expectations set by their teachers.

Additionally, the principals observed considerable advancements in students' performance on both examinations and class tests, indicating that the educational strategies implemented are effectively enhancing student learning. The feedback suggests a transformative impact on the learning environment, fostering academic excellence and a deeper interest in core subjects. The following graph shows the extent of principals' perceptions of different aspects.

Graph 6: Principals' Perception of the Impact of Smart Class on Students and Institution (N=40)



However, 2 out of 5 principals (43%) stated that there is no impact on reducing school dropout rates among students or female students.

4.2.1.4 Principals' Views on HDFC Support and Its Impact

> "We acknowledge the Smart TV; however, it would have been great if an interactive panel had been provided. Also, one crucial requirement was to provide orientation for Smart TV operations and share relevant web portals for downloading or accessing the digital content for the classes."
>
> **--Bundi**

> *"I am impressed that smart TV has offered an opportunity for revisions to our students. If many students have doubts about certain topics, teachers can revisit them using smart TV for the students' benefit."*
>
> **--Kota**

> *"I could not see any benefit of the smart TV support. It's a TV where any program, like a home, can be seen. I did not see any increment in interest among the students. I can only say that teachers sometimes run videos on YouTube for the students on specific topics. We generally switch it on when any subject teacher is absent so that students get engaged in some activity."*
>
> **--Bundi**

> *"The videos related to subjects shown on smart TV are very helpful for students in communicating the essence of topics/principles/theories. Teachers even demonstrate practical exercises to help students understand the context better. Students can recall those learnings which they had seen as a film in their minds."*
>
> **--Bharatpur**

> *"The best part of a smart class is that teachers can repeat difficult topics as often as they want. Teachers' only objective is to do everything that can help students in their learning."*
>
> **--Ajmer**

> *"I am disappointed to see the size of the battery that has been given with the Smart TV as a power backup. It is very small and unsuitable for schools. We need a large battery that can serve its core purpose for the smart class."*
>
> **--Nagaur**

> *"Whatever we get for the school or students is always good. The best part I could see for our students is that they can see, visit, feel or observe anything without going anywhere. Thus, no charges are to be paid, or any expenditures are needed for this purpose. Students also see the 'Pariksha pe Charcha' program on smart TV."*
>
> **--Hanumangarh**

> *"Once, we faced a settings problem with our smart TV, and we immediately contacted the helpline for guidance on recovering and restoring the previous settings; it was very helpful."*
>
> **--Jhunjhunu**

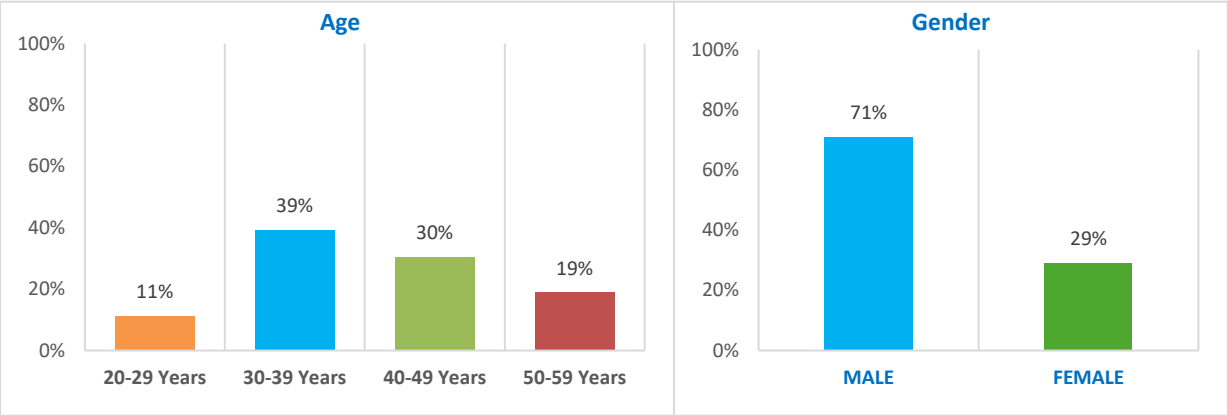
4.2.2 Teachers

A total of 79 teachers were covered against the target of 80. All the teachers were interviewed to assess their experiences with the smart class and captured information on their profiles. The profile details are discussed as follows:

Findings revealed that more than one-third (39%) of teachers were aged 30-39, forming the largest group, followed by 30% in the age range of 40-49 years. A smaller proportion of teachers (19%) were aged 50-59; similarly, 11% (N=9) were in the youngest age group of 20-29. It can be inferred that the

age distribution indicates a balanced mix of mid-career and experienced teachers, with fewer young ones. The age and gender distribution of teachers have been shown in the following graph.

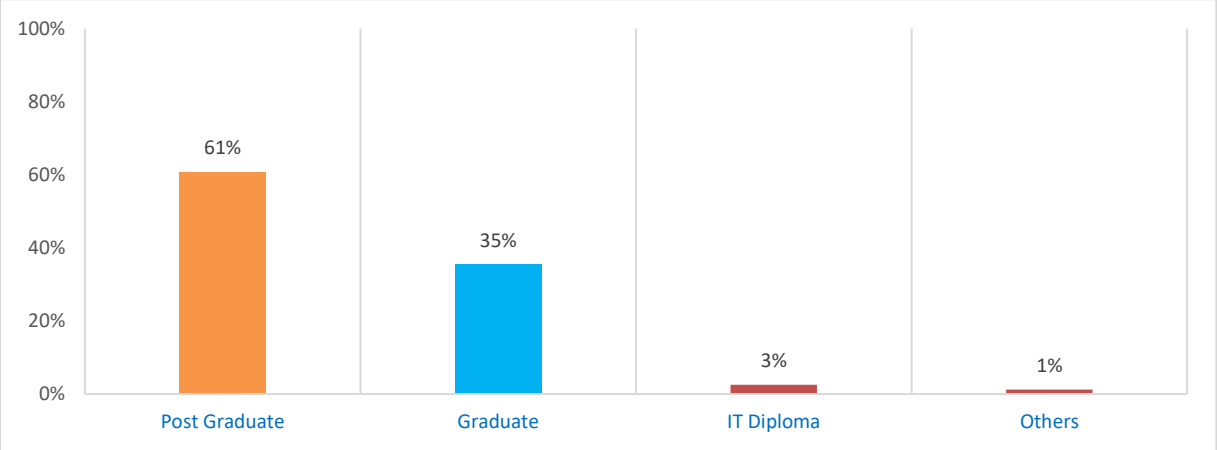
Graph 7: Age and Gender Distribution of Teachers (N=79)



Male teachers comprise the majority at 71%, with female teachers constituting 29%. This indicates a higher representation of male teachers across all districts in Rajasthan.

Most teachers (61%) hold postgraduate degrees, an additional 35% hold graduate degrees, and none at the senior secondary level. This indicates that the teaching staff has a strong educational foundation.

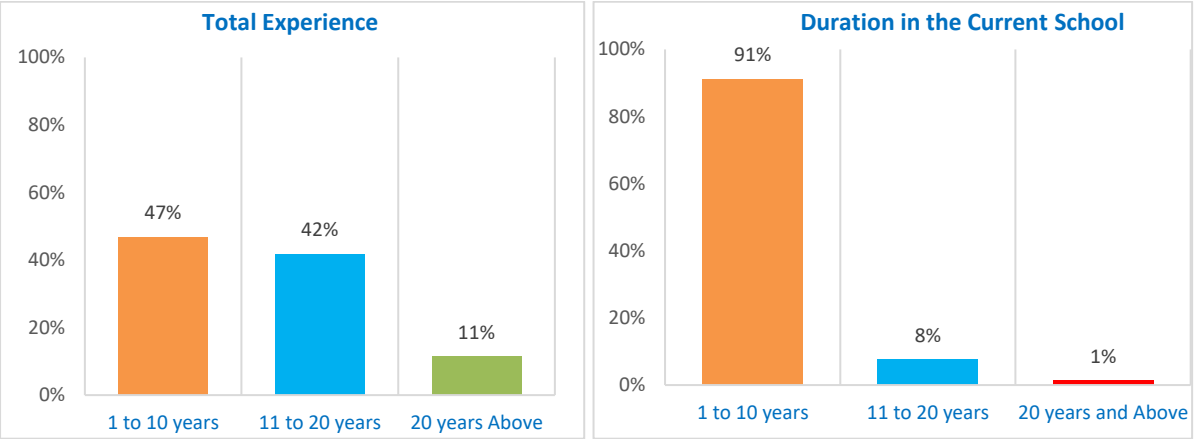
Graph 8: Educational Qualifications of Teachers (N=79)



Many teachers also have additional professional qualifications, such as BEd degrees or a Diploma in Education. Many teachers also have an RSCIT certificate, which is an essential qualification for applying for teaching positions.

Information on experience reveals that out of 79 teachers, less than half the teachers (47%) have up to 10 years of total teaching experience, while two out of five teachers (42%) have experience in the range of 11 to 20 years. There were only 11% of teachers who have experience of more than 20 years. This highlights that a considerably higher portion of experienced teachers exist in the schools. With respect to their duration in the current school, a higher proportion of teachers (91%) have been working for 1 to 10 years, followed by 8% for 11 to 20 years and only 1% for over 20 years**,** indicating a relatively high turnover or recent recruitment in most cases. This also reflects a considerably lower length of service at their current schools. The following graph illustrates teachers' teaching experience and duration in the current schools.

Graph 9: Teaching Experience of Teachers and Duration in the Current School (N=79)



Another observation is that more teachers in the schools were fairly new to the system and were more inclined towards effectively using techno-pedagogy in the smart class.

4.2.2.1 Teachers' Opinion of Critical/Communication Infrastructure

In this section, teachers share their perspectives on the critical and communication infrastructure, providing valuable feedback on its impact and functionality.

4.2.2.2 Perception on Smart Class Support for the Schools

In a recent survey of 79 teachers, a significant majority—53%—identified the support from HDFC as not only essential but also closely aligned with the unique needs and priorities of their students within their educational set-up. Additionally, over one-third of the teachers (38%) expressed a strong conviction that this support is of paramount importance, particularly in light of the necessity for students to engage with innovative techno-pedagogy in today's rapidly evolving educational landscape.

Teachers also highlighted the positive impact of utilizing smart TVs to present digital content that complements the academic curriculum. This approach has fostered a vibrant and interactive learning environment, encouraging students to actively participate in discussions. The use of such technology has been instrumental in creating a space where students feel comfortable to ask questions and seek clarification on various topics, thus enriching their understanding of the subjects being taught.

When further asked about their perception of sufficiency, merely a quarter of teachers (25%) accepted that smart TV support is 'extremely' adequate, followed by the remaining three-fourths (75) who could perceive the support as 'somewhat' adequate (48%), 'adequate' (22%) and 'slightly' adequate (5%). This shows that a single Smart TV doesn't serve the purpose in higher secondary or middle schools and there is an emergent need for more smart classes.

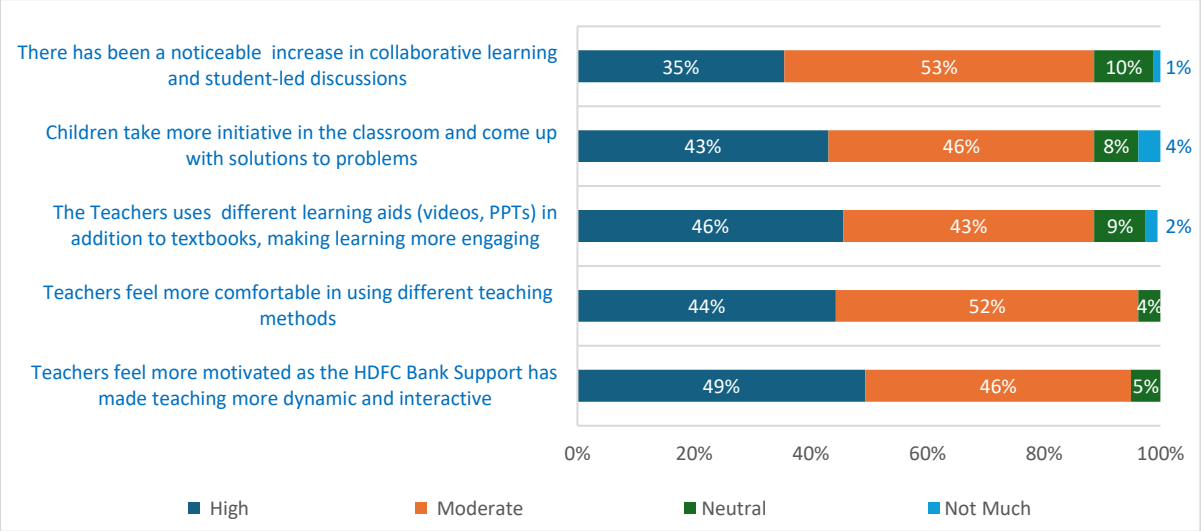
In terms of satisfaction levels, 95% of these teachers expressed their satisfaction with the support received from HDFC Bank. Of all 79

teachers, 94% were 'regularly' using Smart TV for demonstrations and teaching, and the remaining mentioned using 'sometimes' or 'rarely'.

4.2.2.3 Impact of Using Smart Class by Teachers

To assess the impact of using Smart TV for teaching, all the teachers were presented with the statements and asked to express their agreement to understand the noticeable changes they experienced. The noticeable changes and agreement on the statements are shown as follows:

Graph 10: Teachers' Perception of the Impact of Using Smart Class (N=79)



About 95% of teachers accepted that they feel motivated as Smart TV has given opptortunity to make their teaching more dynamic and interactive where students get engaged in the topic. When students demonstrate their interest and enthusiasm, 96% were using different teaching learning methods not only Smart TV that helps students in making projects, float ideas of making workable models, etc. About 89% of teachers thought that students get more engaged in discussions, peer learning, coordinated solutions to the queries, etc. Teachers were found encouraged for using Smart TV as a key resource for their teaching that students enjoy the most as the classroom environment turns into a joyful and learning-intensive process.

With respect to measures taken for the sustainability of the support, more than half the teachers (56%) stated that they are trained for operating the Smart TV and use of digital content. This reflects that the handling and management of smart TV has been supervised by the teachers who frequently use it. Two out of five teachers (43%) reported having full support of School Management Committee (SMC) who monitors the school operations and multiple equipment and facilities. There were only 9 teachers (13%) who informed that they have some sort of arrangement where vendors and contractors have agreements/contracts for the upkeep of instruments and equipment.

Overall, teachers were found appreciative of the initiative that HDFC Bank has taken for supporting the schools for Smart Class set up.

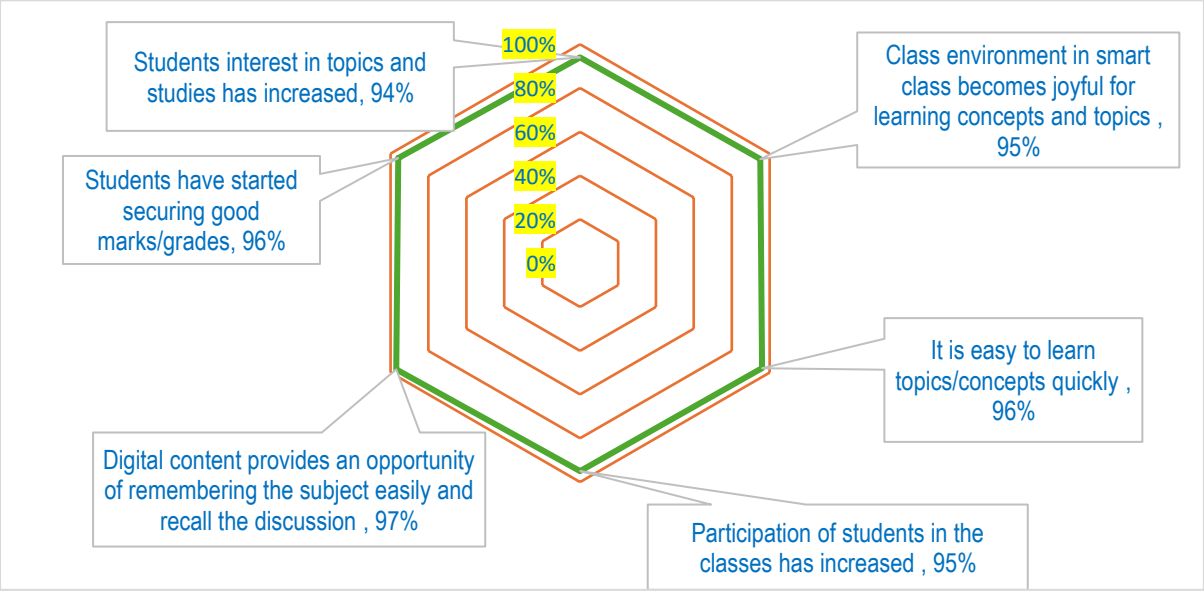
4.2.3 Students' View on the Development Support

This section presents insights collected from Small Group Discussions (SGDs) held with students. It highlights their perspectives on the advantages of several educational developments, such as the introduction of smart classrooms. These discussions reveal how students perceive these initiatives as beneficial for their learning experiences and overall academic growth.

A total of 38 small group discussions were conducted across 40 schools in 14 districts of Rajasthan. In all the schools, the assessment team obtained permission and consent from the principals to conduct the small group discussion related to their experience of Smart Class. A total of 233 students were covered, comprising 104 boys and 129 girls. Of these 233, the majority of students (46%) were from Grades 9-10, followed by 37% from Grades 11-12 and 17% in Grades 6-7.

Under the assessment, students were posed with statements and their extent of agreement was determined. The results are shown in the following graph.

Graph 11: Students' Response on the Perceived Changes Due to Smart Class/Digital Class



Based on the data in the above illustration, the majority of the students expressed agreement over the benefits of smart classes. The detailed description for each component has been discussed as follows:

Increased Interest in Topics and Studies: The introduction of smart classes has intensely heightened students' interest in various subjects and areas of study. An impressive 94% of students reported experiencing positive transformations in their learning journeys. This overwhelming enthusiasm reflects the power of digital classrooms to captivate students, enhance their engagement, and make the learning process both enjoyable and intriguing.

Joyful Class Environment: The introduction of smart classes has significantly transformed the learning environment into one that is more joyful and conducive for students. A remarkable 95% of students surveyed expressed positive sentiments regarding this shift, indicating that they feel the class atmosphere has become not only more enjoyable but also more engaging. This welcoming and stimulating environment has likely enhanced students' overall learning experiences, fostered a greater sense of enthusiasm and encouraged active participation in lessons.

Students shared numerous anecdotes about their experiences in the smart classrooms, emphasizing the interactive and dynamic nature of the learning processes. Overall, the adoption of smart classes is proving to be a positive development in education, creating an atmosphere where students feel motivated and excited to learn.

Ease of Learning Topics/Concepts Quickly: A significant 96% of students reported that they found it noticeably easier to grasp topics and concepts quickly when engaged in smart classes. The integration

of digital content seems to enhance the overall educational experience. These digital contents not only facilitate a more interactive and dynamic approach to learning but also play a crucial role in streamlining the learning process. As a result, students achieved a deeper understanding of the topics and context and improved their ability to retain information. The effectiveness of these smart classes highlights the potential benefits of incorporating technology into education to foster better learning outcomes.

Increased Student Participation: Student participation has significantly increased following the implementation of smart classrooms, as indicated by 95% of the surveyed students. These respondents reported a marked enhancement in their engagement during class sessions. The interactive components of digital learning environments foster a more active involvement of students in the educational process.

Enhanced Recall with Digital Content: The integration of digital content in smart classrooms has significantly enhanced students' capacity to memorize and retrieve information. An impressive 97% of students have acknowledged the advantages of this innovative approach, highlighting how the use of multimedia and web portals in smart classes not only enriches the learning experience but also reinforces their understanding, ultimately leading to improved knowledge retention. The engaging nature of visual aids, interactive presentations, and various digital contents plays a crucial role in solidifying their comprehension of the material.

Improved Grades/Marks: The influence of smart classrooms on students' academic performance has been remarkably beneficial. An impressive 96% of students reported experiencing enhancements in their grades and marks. Many expressed a strong belief that their performance had seen a positive shift due to the innovative and interactive teaching method through Smart TVs. This underscores the significant role that engaged effective pedagogical strategies in smart classes that help in fostering students' academic success and improvement.

Students' Perception of Digital/Smart Classes

1. **Ease of Understanding Concepts**: When concepts are presented using videos, animations, and digital resources, students find it much simpler to comprehend and remember the material. Teachers' demonstrations and visual aids facilitate rapid comprehension among the students.
2. **Teaching Methods**: Typically, teachers combine discussions, videos, animation, films, and demonstrations on YouTube Channels and other educational web portals. Some of them would rely more on video content to deliver information, while others might actively interact with pupils throughout the digital lessons.
3. **Improvement in Learning**: Since smart classes were introduced, students' learning results have improved noticeably. Students in the discussions report an overall improvement in their learning experience, as well as improved comprehension and faster information recall.
4. **Challenges**: One of the main issues that students faced was erratic power supply, which interfere with their ability to learn. Small battery size and its life, classroom seating capacity, sporadic smart TV technical glitches, and internet access were additional concerns.
5. **High Satisfaction Levels**: Despite certain difficulties, students said that they are quite happy with smart classes. They valued the enhanced educational setting (smart TV) and the ease with which they learn and retain new ideas with the help of their teachers and smart TV. The overwhelmingly positive comments indicate how successful the digital learning efforts were. The credit goes to HDFC Bank for such a meaningful initiative.

4.2.4 Parents' Views

In the study, parents were actively involved in gathering their perspectives on HDFC Bank support and understanding their observations regarding any changes they witnessed in the schools. The discussions with parents unveiled a rich array of insights, highlighting their views and experiences related to the bank's contributions and how these have impacted the educational environment.

> *"Our children are very happy with the Smart Class methodology. It helps in capturing the minute details of the topics that were not easy to comprehend through lectures only. Now, teachers teach those difficult topics on board and show animated videos with sound effects. Through motion and sound effects, students can easily understand and visualize the phenomenon and context."*
>
> **--Kota and Bundi**

> *"We did not have such a technology, but our children enjoy smart classes. Many of us have seen teachers delivering their topics using smart TVs."*
>
> **--Banswara**

> *"In our opinion, smart TV has given children an opportunity to see things happening that were not possible earlier."*
>
> **--Bharatpur**

> *"During visits to schools for SMC meetings, we were informed about the Smart TV provided by HDFC Bank and children also informed that teachers use it to show the education related videos."*
>
> **--Barmer**

Conclusion & Recommendation

After thoroughly synthesising the study findings, we concluded that the schools have benefitted significantly from the Smart TV support provided. Based on this analysis, we have crafted a comprehensive set of recommendations aimed at enhancing future initiatives. The ensuing discussion will delve into our conclusions from engaging with principals, teachers, students, and parents. Additionally, it will outline our targeted recommendations for upcoming projects, reflecting the diverse perspectives and insights gathered from these key stakeholders.

5.1 CONCLUSION

The impact assessment included a thorough evaluation of 40 schools across 14 districts of Rajasthan, each visited in person to measure the level of support being provided. During this detailed examination, key stakeholders—principals, teachers, students, and parents, all vital beneficiaries of the support initiatives—were engaged in discussions. Their insights were crucial for understanding the effectiveness and impact of the resources allocated to the schools.

Respondents' Profile

Out of 40 principals, three-fourths were males (75%), and the remaining were females. The majority of the principals (3 out of 5 – 63%) were aged between 50 to 59 years. Almost all (98%) were seasoned professionals with postgraduate degrees. Their extensive teaching experience was more than 21 years for three-fifths (58%) of them. Almost all (98%) had their tenure at their current school for up to 10 years. Long work experience gives them a deep understanding of their schools' needs and challenges, fostering consistent leadership.

All principals acknowledged that the HDFC Grant has been crucial in improving school facilities and enhancing schools' reputations. Of all principals, 98% thought that the HDFC Bank support was adequate and met the needs of their schools and students. Four out of five (85%) considered the smart TV support for the school as Essential and of high priority. 93% of principals stated that the support was provided on time.

79 teachers were interviewed to obtain their views on HDFC Bank support. More than two-thirds of the teachers (69%) were aged between 30 and 49, 71% were men, and the remaining were women. Three out of five teachers (61%) had a postgraduate degree and 35% were graduates. Many of them also had a professional degree (B.Ed.) that provided a strong foundation for schools. More than half the teachers (53%) had teaching experience of more than 11 years, and 91% of them were in the current school for up to 10 years.

A total of 233 students, comprising 104 boys and 129 girls, were also contacted to gain insights into their experience and understand the impact of techno-pedagogy used by their teachers. The majority of them (46%) were from Grades 9-10, followed by 37% in Grades 11-12.

Smart Class

In all 40 schools, Smart TVs were available and found functional in 39 schools. Of these 39, teachers regularly used smart TVs in 37 schools for different subjects. Over half the schools (21 out of 40 – 53%) had dedicated wired internet facilities, which teachers used for their classes. In addition, 90% of teachers (36 out of 40) were using mobile hotspots for teaching, which was encouraging.

In all the schools, the power backup (inverter and battery) was found to be functional at the time of the visit; however, the battery life was lacking, as reported by the teachers. The installation was efficiently managed by the suppliers/vendors (100%).

Electricity issues and equipment maintenance remain challenges. While most teachers (99%) are satisfied with digital education, most schools (90%) have some funds for maintenance. The findings reveal a moderately effective system for managing and sustaining Smart Class equipment, but there are gaps in its overall functionality implementation. The 'warranty cards' were present in only 20 out of 40 schools (50%)**,** and all had the warranty available.

The maintenance provisions were completely lacking across all 40 schools (100%)**,** indicating a critical gap in the sustainability of HDFC Bank's support. Only 65% of schools had access to a helpline or complaint number, and the remaining 14 schools (35%) had no provisions. This highlights the need for concrete accessibility to such provisions for all the supported schools. Addressing these shortcomings is crucial to ensuring all schools' efficient management and long-term sustainability of Smart Class infrastructure.

More than 90% of the principals reported a highly positive perception across multiple dimensions of student engagement and learning outcomes. Principals have noted significant improvements in students' understanding of complex topics and ability to apply knowledge in new and varied contexts. All the principals believed that there had been a marked increase in students' interest in academic subjects, particularly in the fields of Science and Mathematics. The inclusion of smart TV heightened enthusiasm, which has resulted in students engaging more actively in their studies and meeting the expectations set by their teachers.

Teachers also highlighted the positive impact of utilizing smart TVs to present digital content that complements the academic curriculum. This approach has fostered a vibrant and interactive learning environment, encouraging students to participate in discussions actively. Using such technology has been instrumental in creating a space where students feel comfortable asking questions and seeking clarification on various topics, thus enriching their understanding of the subjects being taught.

The smart classes have intensely heightened students' interest in various subjects and areas of study. About 94% of students reported experiencing positive transformations in their learning journeys. 96% of students reported that they quickly grasp topics and concepts when engaged in smart classes. The integration of digital content enhances the overall educational experience. These digital contents facilitate a more interactive and dynamic approach to learning and play a crucial role in streamlining the learning process. The effectiveness of the smart classes highlights the potential benefits of incorporating technology into education to foster better learning outcomes.

Parents also expressed their satisfaction with the inclusion of smart TVs in schools and the appropriate use of support for their children.

5.2 RECOMMENDATIONS

- **Provision for Advanced LED Interactive Panels**: Offer interactive panels to schools instead of smart TVs because interactive panels provide a wider range of options for teachers, such as creating multiple windows on the screen, using the screen as a green or whiteboard for teaching, saving their written material for future classes, displaying videos in a second window, and using the first window for teaching to ensure a smooth flow in delivering their topics.
- **Training of Teachers**: Teachers should be provided with training on digital content and how to use it at the school level. They should be given hands-on training to use techno-pedagogy for the classes.
- **Access to Education Web Portals**: Provide a username and password for at least 5 years to get instant access to multiple educational web portals available for Indian students. This would ensure the long-term availability of updated digital content. The username and password should be displayed in the Principal's Office so that all teachers can use them.
- **Maintenance and Services**: Enhance technical support and maintenance for smart class equipment, addressing its functionality. Local district-level vendors should be identified to provide a 5-year extended warranty, and schools should receive the warranty cards. The smart class should include a wall painting with invoice number, installation date, and other necessary details, ensuring anyone can contact the service provider with all the required information to register a complaint.

Findings on the OECD Criteria

This chapter provides the impact assessment findings considering the OECD research framework or criteria to oversee the overall impact of the HDFC Bank-supported project on smart school development.

CRITICAL INFRASTRUCTURE – SMART TV

Overall Results	Relevance	Efficiency	Effectiveness	Impact	Sustainability
Smart Class	4.2	Timeliness-4.5	Current Status-4.8	3.9	3.6
		Quality of Services-4.5	Usage-4.5		

The component-wise details have been discussed in the following sections as follows:

Relevance

The smart school project was found to be relevant for the government schools covered in 40 schools of Rajasthan across 14 districts. In order to provide access to digital content and strengthen the digital learning in the government schools based in the rural areas, the support was very relevant. The project provided an opportunity to the schools in having the adequate infrastructure such as smart classes with digital content. The schools were selected appropriately to provide the smart TVs. The infrastructure support was provided in discussion with the HDFC Bank team and Department of Education.	Beneficiaries Needs Alignment 4.2

All support provided under the project was found to be Relevant, as it was well aligned with the need of the schools which was having a smart classes for their students. The teachers were willing to use smart class for a better understanding of the concepts and contextual topics.	Local Context 5
The project's design was found to be excellently designed for the students and schools. The quality was also suitable for the grades the project aimed at.	Quality of Design 5

HDFC Bank support has been found profoundly RELEVANT. This indicates that the needs of the schools were appropriately identified, and schools were selected based on the information received from the needs assessment.

Coherence

The support provided under the project was well-designed and executed by the implementation partner. With respect to coherence, it was found fully aligned with CSR strategy and policy of HDFC Bank and integrated with external frameworks like government provide the support to schools. All type of support was matching with no overlaps. Support was required at the schools.	Internal & External Coherence 5

Efficiency

HDFC Bank's initiative to support government schools successfully targeted the intended audience. All participating schools provided students in Grades 6 to 12 with access to smart classes. Both principals and teachers acknowledged the benefits of the smart class, noting improvements in student grades and a better understanding of concepts through hands-on activities. The principals and teachers confirmed the timeliness of the interventions wherein the support was well received by the schools on time. Smart TVs were working and functional, providing the students with the desired benefits and support is helpful. Students also expressed satisfaction with the smart classes. Both principals and teachers were found very satisfied and satisfied with the product they have received.	Timeliness 4.5 Usage 4.5

The support provided to the schools under the project was well-designed and implemented after considering their needs. Suitable options were discussed and identified in discussion with the schools. Some potentiial risks are seen like maintenance and availability of internet as well as power backup. The project design incorporates well-designed M&E system that covers indicators to track the progress. Project had the dedicated project staff for tracking and reporting to monitor the progress of completion of the work in the schools. This helped in identifying the challenges and concerns and were thoroughly addressed.	Operational Efficiency 4 Project Design & MEL System 4.5

The intervention was identified as EFFICIENT for the students and the teachers.

Effectiveness

The integration of smart class support through the smart TV has had a significant positive impact on students in Grades 6 to 12. This technology has not only engaged the students but has also enhanced their understanding of various subjects. Teachers have expressed their appreciation for the Smart TV provided, highlighting that the use of smart class support has been extremely beneficial for enhancing teachers' pedagogy. In terms of current status, the smart TVs were found functional in all 40 schools at the time of visit. The smart classes were fully operational, offering students a conducive space for acquiring knowledge and learning concepts, which in turn has contributed to improved performance in their assessments. Additionally, the availability of smart class and power backup support have proven invaluable for students seeking to deepen their understanding of diverse topics. Furthermore, the effective utilization of funds allocated for providing digital access to schools through smart TVs reflects a commitment to enhancing educational resources, thereby fostering a holistic learning experience for students.	Current Status 4.8 Usage 4.5

The target assigned were achieve, performance and status of work was found in good condition. School had full intention and willingness to use the provided support and also using the same fully. Enviroment was enabling as department of education and schools accepted the support and gave permission to work for the schools. Due permissions were obtained prior to implementation and all stakeholders were in sync with the project objectives and had willingness to support students and schools both. Even parents were found happy with the receipt of support and express their satisfaction.	Reach 5 Influencing Factors 4

Provided support was appropriately used by teachers to support students and no gender disparity was seen in any schools. Students and teachers adopted the support fully. Schools have nicely adapted the support and creating learning environment as well as reported improvements in students' learning outccomes considering the grades and marks secured by the students in unit tests and exams.	Inclusiveness 4 Adaptation Over Time 4

HDFC Bank support has been found very EFFECTIVE, it exceeded 4.5.

Impact

The students are actively participating in smart classes that utilise smart TVs, and this technological support has made a significant impact on their learning experience. However, it has been noted that the most critical challenge remains the inconsistent electricity supply, which can hinder the effective use of this technology. Despite these challenges, access to digital content in smart classes has provided students with enhanced educational opportunities. The teaching through smart TVs allowed students to engage more deeply, facilitating a better understanding of complex topics. As a result, these students have reported an enriched learning experience, showcasing improved retention and application of knowledge. Teachers have observed noticeable benefits for their students, acknowledging that the access to digital content has not only made lessons more dynamic but has also boosted student engagement and participation during class discussions. The assessment team noted that students appeared to be completely at ease, and technology is actively contributing to the learning environment. This indicates that the use of smart TVs is fostering a more interactive and enjoyable educational setting despite the ongoing issues with the electricity supply. Overall, the emphasis on technological enhancements has made a more pronounced difference in student engagement and school reputation.	3.9

Teachers and principals had perception that smart classes have created learning environment, teachers use discussion methods and engage students in the topics related discussion to generate the desired knowledge among them. Students also confirmed that the use of smart classes has been beneficial as they gain knowledge through sound, motion and animation which stays with them for longer duration. Positive changes in terms of gain in knowledge and enhancement in studies among students was seen by the principals and teachers.	Transformational Change 4 Intended Change 4

HDFC Bank's support has shown a moderate impact on students, with teachers and principals recognizing the positive improvements in students' learning outcomes.

Sustainability

All the schools had the resources that will be available for longer time if they retain them functional. They would need support for the maintenance and repairs or replacements.	3.6
Sustainability purely depends on the appropriate use by the teachers. Largely, schools do not have the maintenance provisions and budget for the repairs. Schools expressed the most common response that SMC looks after the schools related matters and will provide support for the repairs and maintenance also.	Sustainability in Strategy 4

Branding

In every school, HDFC Bank branding was highly visible indicating the name "HDFC Bank Parivartan".	Brand Visibility 5

Overall Average Score – 4.38 out of 5