Impact Assessment:

Foundational Learning: School Education Infrastructure

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LIST OF ABBREVIATIONS

Abbreviations	Full Form
ATM	Automated Teller Machine
BCC	Behaviour Change Communication
BDC	Bio Discovery Centre
CSR	Corporate Social Responsibility
CWSN	Children With Special Needs
DNA	Deoxy Ribo-Nucleic acid
FGD	Focus Group Discussion
FY	Financial Year
GoI	Government of India
HDFC	Housing Development Finance Corporation
HTPF	H T Parekh Foundation
HM	Headmaster
HS	High School
KII	Key Informant's Interview
MDM	Mid-Day Meal
MHM	Menstrual Hygiene Management
MIS	Management Information System
MTU	Mobile Septage Treatment Unit
NGO	Non-Government Organization
NPSSE	National Program on School Standards and Evaluation
O&M	Operation and Maintenance
OECD	Organization for Economic Cooperation and Development
PS	Primary School
RO	Reverse Osmosis
RTI	Research Triangle Institute
SMC	School Management Committee
SSEF	School Standards and Evaluation Framework
TLM	Teaching Learning Materials
UPS	Upper Primary School
WASH	Water Sanitation and Hygiene
WATSAN	Water and Sanitation
WinS	WASH-in-School

1. INTRODUCTION

1.1. Background

Total Grant Support:
₹ 14.91 Crore
Project Duration:
2017 - 2022
Focus States:
Andhra Pradesh, Gujarat, Himachal Pradesh, , Manipur, Sikkim, Tamil Nadu, and West Bengal

Children up to the age of 18 spend a major portion of their day at school. Often referred to as a second home, an educational institute serves many purposes in a child's life. From apprising them with technical knowledge to socializing and teamwork, schools and education centers play a vital role in shaping a child's personality and perception. HDFC CSR has supported five implementation partners across India to enhance education infrastructure and create a safe, healthy, and favorable environment for students.

The need for effective schools and improved school performance is increasingly felt in the Indian education system to provide quality education for all children. The quality initiatives in the school education sector, thus, necessitate focusing on school, its performance, and improvement. Therefore, a growing emphasis is being placed upon developing a comprehensive and holistic school evaluation system as central to school improvement.

HDFC CSR supports education initiatives that prioritize improving learning outcomes, creating knowledge on pedagogical practices, working to bring about systemic changes within the government education system, and supporting institutes of excellence that can be a 'lighthouse' for other educational institutions. The program also focusses on building collaborations that are aligned towards strengthening the education ecosystem in India. Between 2017 and 2022, HDFC, as part of its' CSR program, has funded around INR 14.92 crore, across 7 states (Andhra Pradesh, Gujarat, Himachal Pradesh, Manipur, Sikkim, Tamil Nadu, and West Bengal) through 5 partners (Agastya International, Sunbird Trust, 17000ft Foundation, WASH Institute, and Yuva Unstoppable) for creating an enabling learning environment for children in 162 institutions. The program is completely aligned towards some of the key components of the 'Shaala Siddhi' Framework of Govt. of India, especially the 12 core standards associated with school infrastructure. The program has impacted the schooling and learning experience of more than 4 lakh children during the 5 years of its execution.

HDFC has engaged RTI International to do an impact evaluation of the Education Infrastructure Project covering a sample of 17 institutions (16 schools and the Bio Discovery Centre). These schools were randomly selected from the list of schools provided by the partners. The spread of the partner-wise schools evaluated is given below:

- **17000 ft Foundation:** Five schools out of 10 in Sikkim
- **Sunbird Trust:** One school in Manipur
- **Yuva Unstoppable:** Five schools out of 70 in Ahmedabad
- **WASH Institute:** Five schools out of 10 in Tamil Nadu
- **Agastya Foundation:** The Bio Discovery Centre in Andhra Pradesh

The evaluations were primarily a qualitative evaluation, using Key Informants Interviews (KIIs) and Focus Group Discussions (FGDs) as the two key tools for capturing stakeholder's perspectives. Besides KIIs and FGDs, physical observation was also used to assess the condition of the infrastructures built under the program. The key stakeholders with whom the evaluation team engaged included – HTPF program team, partner organization representatives, headmaster, teachers, children, and school management committees. The evaluation focused around 4 aspects –

- Condition of the infrastructure,
- Access to the facilities (in terms of its optimum use by the children),
- Quality of work done, and
- Management or institutional mechanisms.

1.2. Evaluation Methodology

- **Nature of study:** Qualitative
- **Primary data collection:** A total of 16 schools and the Bio Discovery Centre (BDC) were selected to ensure that all partners and all types of interventions are covered. States were selected to ensure that all regions of the country get represented appropriately.

1.3. Data Collection

Two types of data collection tools were used during the study:

- Key Informant's Interviews (KII)
- Focus Group Discussions (FGD)

The stakeholders with whom interactions were done during the study, have been summarized in the below, i.e., Table 3.2.

Table 3.2: List of Stakeholders

S. N.	Stakeholders	No. per institution	No. of interactions	Tool used
1.	Headmaster or Principal	1 per school	16	KII
2.	Teachers (only for BDC)	1 per institution	01	FGD
3.	Children	1 per school	17	FGD

S. N.	Stakeholders	No. per institution	No. of interactions	Tool used
4.	School Management Committee (SMC)	1 per school	16	FGD
5.	NGO representative	1 per NGO	04	KII

Additionally, physical structures were evaluated through observation by the RTI team in each of the institutions. These were:

- SMART classes and DIGI Labs
- Classroom infrastructure and WASH infrastructure
- Other infrastructures supported by HDFC CSR (like - library, dining hall, MDM sheds, playground, etc.)

2. 17000 FT FOUNDATION

17000 ft Foundation was founded in 2012. Operating in the high-altitude areas of the Himalayan range in India, the organization seeks to transform the government school education system in the difficult terrain. Currently working in Ladakh and Sikkim, the organization is planning to expand its operations in other hilly states in the Himalayan region. 17000ft Foundation is trying to impact the high-altitude frontier communities at scale by adopting a two-pronged approach in the education sector i.e., improving the school infrastructure and education system strengthening. The current outreach is in more than 450 government schools across Ladakh and Sikkim.

The project comprises of an intervention package, encompassing three key components which have the potential to transform the education system in the state. They are – DigiLabs, Active library, and Playing area (or Park). With support from HDFC CSR program, 17000ft Foundation has implemented this project (called the School Transformation Project), in 10 schools of Sikkim impacting around 250 children.

17000ft Foundation has implemented the School Transformation Project in 10 schools of Sikkim impacting around 250 children.

Out of the 10 schools where 17000ft is involved, the evaluation was done in 5 schools of Sikkim covering approximately 150 children (82 boys and 68 girls).

The most critical component of the project is the Digi-Labs, which is a unique solar-powered offline digital learning solution called the Digi-Lab, using Raspberry Pi, which ensures access to digital learning to areas which are truly off-grid and have neither electricity nor mobile connectivity. Digital Content is customized to enable each child's individual learning journey with technology enabled Data Analytics, stored in the server to drive real-time monitoring and actions. Each in-School system is connected to a cloud via a last mile "Connector or Facilitator App" which is managed by 17000ft facilitators who travel periodically to schools, conduct workshops and training sessions, and gather data to be synced to the cloud when in connectivity.

The intervention was found to have transformed the environment of these schools, especially for children coming from socially excluded communities who do not have a smart phone at home. During the evaluation, a high degree of adoption was observed amongst all children. The intervention has made learning fun for children and ensured digital literacy.

Digi-lab live sessions were observed during the evaluation study. It was observed that children were quite conversant with the Digi-lab platform and were using it with ease. They were enjoying the learning and almost everyone unanimously said that they love Digi-lab sessions more than anything else in the school. Children said that they can understand concepts better after the deployment of Digi-Labs compared to the pre-project situation.

The school authorities and the SMCs in all the schools evaluated have given highly positive feedback about the concept of Digi-labs.

Figure 2.1: 17000ft installed Digi-Labs in the North Sikkim Schools

Figure 2.2: Libraries in the North Sikkim School by 17000Ft Foundation

The library and the park created as part of the project have created additional pull-factor in these schools. School authorities stated that prior to this project, enrolment, attendance, and retention of children were a challenge. All the parks were found to be operational and well maintained, which was the biggest attraction for children, especially for those belonging to junior classes. In summary it may be stated that, presence of the park has contributed positively towards improving attendance and retention in these schools. There was significant community contribution in setting up these parks and therefore there was a lot of community ownership towards it. The library consists of an average of 400 to 500 books in different languages, across different genres and levels of reading. Each book is coded for the ease of borrowing and for better monitoring of reading habits. Library Racks are designed to showcase the books and ensures that the books are within easy reach of students. The library was found to be operational in all the schools evaluated. However, use of the library can be further improved through reading workshops and dedicated library period at the school level. Overall, these three interventions have contributed towards creating an enabling learning environment in the schools.

Figure 2.3: 17000ft installed Playing Area (Children's Park) in the North Sikkim Schools

3. SUNBIRD TRUST

Sunbird Trust was founded in 2014. The organization is working in the North-Eastern States of India in pockets which are severely affected by insurgency. The organization is working in the remotest regions of Manipur, Nagaland, and Assam.

North-East is a mountainous terrain having small and scattered hamlets. Sunbird Trust is primarily targeting such private schools in some of the remotest of locations which are catering to a significantly large population of children but struggling due to financial resources., Sunbird Trust representatives selects such institutions (schools) through a standard rigorous screening process and make them a part of a larger community of such institutions, called the '***Friendship Schools***'.

With support from HDFC CSR program, Sunbird Trust is working with a community managed school (which is called the Paangkriang Friendship School), for ensuring access to quality education to children whose education was severely affected by the dual burden of insurgency and poor quality of education in government schools. HDFC has worked with Sunbird Trust to improve access to education by supporting the community school in Paangkriang, Noney on 4 key components: Sponsorship support, Training center-cum-meeting office, Dining hall with furniture, and Operational cost of a mentoring team for capacity building of the teachers. The project has impacted around 400 children from some of the most economically backward and geographically remote communities of Manipur.

The project implemented by Sunbird Trust has impacted around 400 children from some of the most economically backward and geographically remote communities of Manipur.

The dining hall is of great utility for the children and the school authorities. Before the project children used to cook their own food in shabby and unhygienic wooden sheds. But now, the dining hall has provided them with a hygienic space for their meals. Additionally, the facility is also being used by the school authorities for large workshops. Everyone (school principal, school founders, students, SMC, and Sunbird representatives) unanimously stated that the hall is a very relevant infrastructure in terms of usage. Sunbird is using this as a multi-purpose facility.

The program also involves training for teachers and to this end a training-cum-meeting facility was created under the project. During the evaluation, the dining hall and the training facility were found to be operational and well maintained. Overall, these three interventions have had a positive impact on the drop-out rate and left-out rate in the area.

Figure 3.1: Pre-project situation in Paangkriang Friendship School where children used to cook their own food in such a deplorable situation

Figure 3.2: Post project situation - Dining hall in school being used for dining for children and Training of teachers.

4. WASH INSTITUTE

Water Sanitation and Hygiene Institute (WASHi) was established in Kodaikanal, Tamil Nadu, India in the year 2008 and is dedicated towards providing practical solutions to a wide range of water, sanitation, hygiene, and environmental issues. WASHi is a registered non-profit organization that provides technical, training, research, and development services to a wide range of stakeholders - Governments, Industry, philanthropic organizations, and other NGOs.

Supported by the HDFC CSR program, WASHi has created WASH interventions in 40 government schools in Tamil Nadu and West Bengal impacting around 32,000 children. The intervention includes both hardware and software components. Hardware components include renovation or construction of new sanitation units, safe drinking water facilities, and handwashing units. Software components include hygiene education and strengthening operation and maintenance of WASH facilities.

Under this program, WASHi created WASH interventions (hardware and software) in 40 government schools in Tamil Nadu and West Bengal impacting around 32,000 children

Out of the 40 schools where WASHi is involved, the evaluation was done in 5 schools of Tamil Nadu covering approximately 3,250 children (1,219 boys and 2029 girls). The sanitation and handwashing component has been relatively more impactful compared to drinking water interventions. Though WASHi had installed a piped water supply system, access to safe drinking water could not be ensured in four out of five schools due to source water quality concerns. On the other hand, the sanitation units were found to be operational and well maintained (clean, free of odor, with a running water supply) was found that except in one school, sanitation units were functional and in use in all the other four. In three girl's school, toilets built or renovated by WASHi were being used only by the senior students. While use of these facilities by senior students ensures responsible use, school authorities must reconsider optimum use of the facilities by junior students as well to inculcate positive behaviour even within the children of the junior section. As far as the hand washing facilities were concerned, waterlogging due to clogging of the drain with food waste was reported in three out of the five schools evaluated. On a positive note, WASHi has been successful in inculcating positive handwashing behaviour within children with regular hygiene education. All the schools evaluated had in place an active School Management Committee (SMC) and a Water & Sanitation (WATSAN) committee.

WASHi has been implementing a standard model of software activities on WASH-in-School. WASHi has created an O&M bank (voluntary cash contribution by students, teachers, and visitors) and Soap bank (voluntary contribution by students on their birthdays) in every school where they are working to promote handwashing practices in school. The presence of dedicated sweepers or cleaning staff (appointed by the government) helps in the maintenance of the sanitation units. In every school, a lot of wall-writing and wall paintings have been done to deliver key messages on WASH. A host of creative and engaging hygiene education materials and games are used by WASHi instructors for imparting hygiene education sessions. Campaigns and events during international observances like the Global Handwashing Day, World Toilet Day, World Water Day, etc. help in building momentum of the project and helped the school authorities create a buzz around the WASH issues. In most of

the schools, the SMC is very active and monitors the attendance of the enrolled students. Overall, these interventions have contributed towards creating a WASH secure environment in the schools.

Figure 4.1: Pre and Post project situation of the sanitation unit site, Govt. ADW Boys HSS, Kannigapuram

Figure 4.2: Pre & Post scenario of the sanitation unit, Govt. ADW Girls HSS, Kannigapuram

Figure 4.3: New handwashing station built by WASHi at Govt. ADW Girls HSS, Kannigapuram

5. YUVA UNSTOPPABLE

Yuva Unstoppable is a non-profit organization established in 2005. It is based out of Ahmedabad. Yuva Unstoppable is working with youth volunteers to bring about a positive change in society. The organization is primarily working on health, sanitation, and educational development through schools. Since its inception in 2005, YUVA has launched several programs – School Transformation Program (WASH facilities), Education Scholarship Scheme (Udaan), Digital Smart Classrooms, YUVA Ambassadors, Flood Relief Initiatives (in Assam), COVID Relief Initiatives and several other community-based programs.

There us a lot of similarities between the project design of Yuva Unstoppable ('Yuva') and WASHi. Like WASHi, Yuva Unstoppable is also trying to create WASH secure schools. Supported by HDFC CSR program, Yuva is working in 110 government schools impacting over 28,000 children, spread across Gujarat, Maharashtra, and Himachal Pradesh. Yuva has also executed a combination of hardware and software interventions in these schools. Under the hardware components, the project has successfully installed safe drinking water facilities, handwashing facilities, and renovation of the existing sanitation blocks.

Under this program, Yuva Unstoppable created WASH interventions (hardware and software) in 110 government schools in Gujarat, and Himachal Pradesh impacting over 28,000 children

The software component executed by Yuva is interesting and well structured. Yuva has implemented a standard communication model with children in all the schools where they intervene. This model is a mix of hygiene education, morality, and ethical development. It constitutes of 5 modules, they are – (a) rapport building and introduction with the children; (b) Daily routine and personal hygiene; (c) handwashing practices (theory and demonstration); (d) gratitude and self-belief for developing ownership for their school and recognizing other's help; and (e) Menstrual Hygiene Management (the science behind it and the recommended practices on MHM). One of the interesting innovations is the 'Gratitude Box' introduced in these schools. This is a strategy to promote the feeling of gratitude towards the surroundings including teachers, students, or even the benefits that a school provides.

Out of the 110 schools where Yuva is involved, the evaluation was done in 5 schools of Gujarat covering approximately 1870 children (934 boys and 936 girls). Yuva has been working towards improving the access to safe drinking water for children in school. Prior to this project, most of the schools were storing drinking water in drums, which were not cleaned regularly. The poor hygiene practices associated with storage and handling of drinking water raised serious health concerns. The piped water supply installed by Yuva has helped them to overcome this problem entirely. All the schools had sanitation blocks even before the project. The problem the project addressed was inadequacy. With increasing enrolments in the last few years, the existing units were proving to be insufficient for the user base. To solve this problem, Yuva has constructed additional units of toilets and urinals by expanding the existing infrastructure. During the evaluation, all the toilets were found functional and in use (except for the western toilets in two schools where the adoption rate was low). One additional intervention which Yuva incorporated into their hardware package was the Mid-Day Meal (MDM) sheds. The objective of this intervention was to provide a hygienic space for children in these schools for their mid-day meal. Though all the sheds established under the project

were well-constructed and maintained, the size of the sheds was found to be smaller compared to the number of children in these schools. Despite that the children and the school authorities were very happy with this component. Handwashing facilities implemented in all the schools were functional and in use (except for few broken taps). Availability of soap was reported was as a concern in most of the schools. Most of the schools evaluated had in place an active school management committee (SMC). Child committees were constituted in most of the schools to ensure child participation, as the child cabinets mandated under Sarva Siksha Abhiyan was practically defunct.

Figure 5.1: Pre and Post project situation of the toilet in Vadodara Primary School

Figure 5.2: Drinking water station (Right) and handwashing station (Left) in Vadodara School

Figure 5.3: Pre and Post project situation of the sanitation unit in Kalesar Primary School

Figure 5.4: MDM sheds constructed by Yuva at Kalesar Primary School (left) and Pankornaka Primary School (right)

6. AGASTYA INTERNATIONAL

Supported by HDFC CSR program, the experiential learning program of Agastya is targeting government schools in its catchment area. The program has reached out to over 3.30 lakh children between 2016 and 2022. Bio Discovery Centre (BDC), under HCFC's CSR program, has supported Agastya in establishing the BDC, which is divided into 7 thematic areas. These are – Sensorium, DNA Lab, Biology Lab, Let's investigate Lab, AV room, Neuroscience Lab, and Evolution Lab.

Supported by HDFC, the experiential learning program of Agastya International has benefitted over 3.3 lakh children from Government schools between 2016 and 2022

The curriculum in Biology and Environment Education followed by BDC, has been developed by educational experts aligned with the government school syllabus. The curriculum has been developed by educational experts (in-house as well as external resource persons) and are aligned to the government school syllabus. Thus, the curriculum followed at BDC is relevant and has the potential to improve learning outcomes on concepts of Biology covered in the school syllabus.

Though English is the primary language of instruction, instructors at BDC are also providing instructions in the local language (Telegu, Tamil, and Kannada) to make it easier for the students to comprehend. This approach helps in addressing the language barrier and contributes towards improving the 'relevance' dimension of the program. The New Education Policy of India has emphasized the need to promote interactive, experiential, and practical learning along with the use of mother-tongue for improving learning outcome in school education. Agastya's BDC approach is completely aligned with this policy environment. During the evaluation it was clear that the sessions were highly interactive, engaging, and a fun experience for the children. Almost every learner (who participated in the FGD) unanimously stated that they have enjoyed the sessions and would love to come back again for more sessions. During the evaluation, the infrastructures along with the models developed under the project were found to be operational and well maintained. All rooms are well-lit and ventilated maximizing the use of natural lighting and ventilation wherever possible.

The learning process was found to be executed in two different modalities – (i) repeat sessions; (ii) campus visit. Under the repeat sessions a batch of students from a school makes 8 visits during a year. Every time they visit, they spend 5-6 hours at the BDC. During this one-day visit they dig deep into one of the modules and go through a comprehensive learning of a few concepts. They generally come back for a repeat visit to BDC after a month to attend the next module. Thus, these children go through a structured learning process and are exposed to all aspects of Biology covered at the BDC. Under the campus visit modality, a batch of students experience all the dimensions covered by Agastya in that campus, i.e., not just the BDC. This includes Physics, Chemistry, Biology, Media, etc. In both the modalities the batch size is approximately 30-35 children. Thus, there are two modalities – light touch and in-depth learning ensures that the resources (physical infrastructure and the human resource) are optimally utilized.

One of the biggest positives of this program is its focus on Government schools or Government-aided schools. Agastya presents a plan every year to the education department and based on this plan the department gives them the approval to engage with children in these schools. Though the feedback from the children clearly reflects that they are enjoying the sessions and learning concepts better, impact on academic results could not be verified, as it is not tracked.

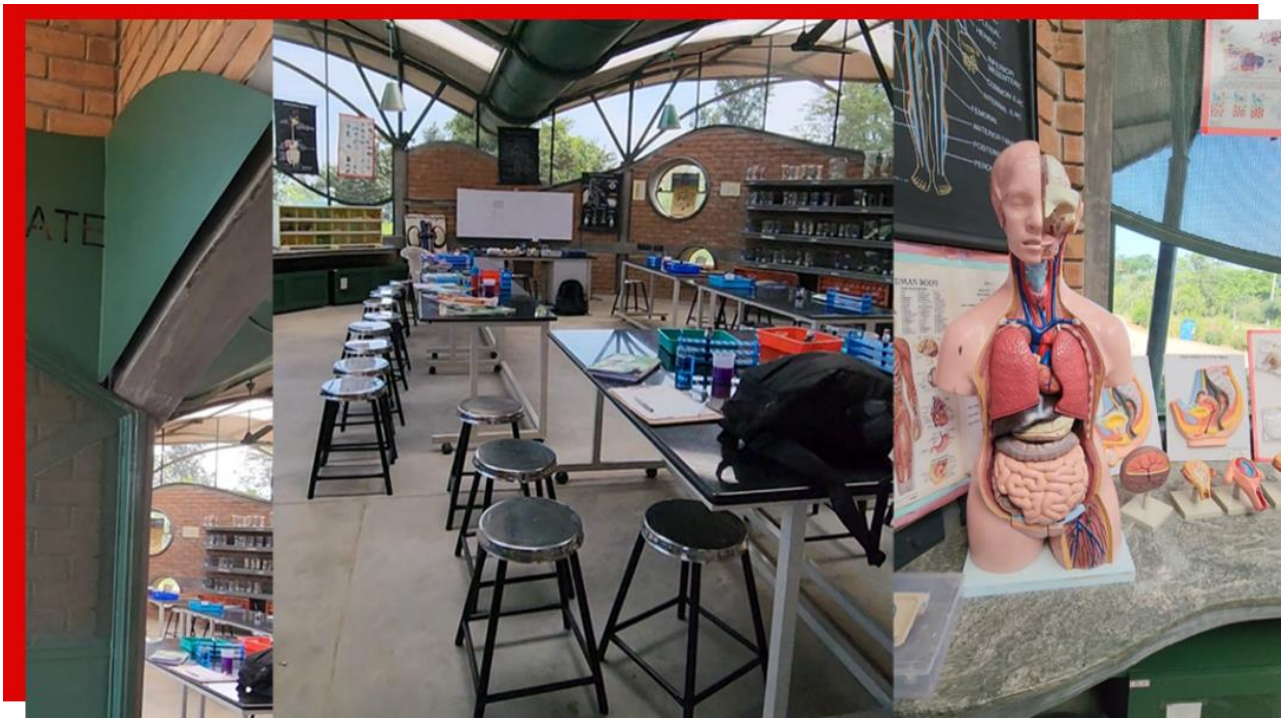

Figure 6.1: Let's Investigate Lab at Agatsya BDC

Figure 6.2: Children at BDC who participated in the FGD

7. CONCLUSION

The education program of HDFC CSR addresses a diverse range of educational needs of the children and the school. In Manipur, the project is trying to address the basic need or access to quality education by supporting private charitable schools. In Tamil Nadu and Gujarat, the efforts are primarily directed towards addressing the WASH needs of the school. In Sikkim, the project is trying to improve the learning environment in the school through a digital platform and a library. In all the scenarios, the focus is on making the school environment more enabling for children. All these needs address one or the other needs of the children and thus can be categorized as relevant. The stakeholders interviewed in all these project areas have stated their satisfaction with the intervention undertaken by the respective partners.

The model adopted by Sunbird trust in Manipur has ensured that children in such conflict zones also have the Right to Education. The interactions with children clearly reflected their joy and happiness to get a school like the Paangkriang Friendship School. The residential facility in this school has made all the difference in ensuring retention, attendance, and above all a feeling of belongingness and ownership despite recurrent conflicts between communities and armed forces. However, it would be challenging to scale-up this model of supporting private charitable schools for making transformative impact state-wide. The infrastructural facilities stated by 17000 ft. ensure better learning and contentment within children and simultaneously improving retention and attendance in these schools. The headmaster and the SMCs in these schools have articulated that these facilities will attract students at the private schools and thus there could be movement from private schools to Government school by the next academic year. The WASH facilities created by Yuva and WASHi have been effective for all children, especially girls.

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