



## Impact Assessment Report

To Upgrade / Install of computers, set up of Smart classrooms, Installation of solar plants and other allied equipment for 3 schools managed by RKM Villupuram, Tamil Nadu

Implementing Partner: Ramakrishna Mission Villupuram

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# 01. EXECUTIVE SUMMARY

## Project Background

The Ramakrishna Mission, with support from BPCL, has successfully completed a significant project to support the upgrade and installation of computers, the establishment of smart classrooms, the installation of solar plants, and other peripherals in three schools managed by Ramakrishna Mission in Villupuram, Tamil Nadu. This initiative is designed to enhance the quality of education by providing efficient teaching-learning facilities for teachers and students, such as smart classrooms and computers. The installation of on-grid solar plants (40KVA) will reduce electricity usage charges, promote green energy production, lower carbon emissions, and require minimal maintenance.

### Project Details



#### Implementation year

FY 2022-23



#### Assessment year

FY 2024-25



#### Implementing Partner

Ramakrishna Mission Villupuram (RKM)



#### Project Budget as per MOU

₹1,77,00,000/-



#### Cumulative Project Expenditure

₹1,76,29,200/-



#### Total Beneficiaries

4520 Students



#### Project Location

Dist- Villupuram, State- Tamil Nadu



#### Sample Size

150



### SDG Goals



### Project Activities



Setting Up Computer Labs.



Installation of UPS Systems for all three school campuses to ensure uninterrupted power supply.



Installation of CCTV.



Establishment of Smart Classrooms.



Installation of Solar Plants.

# Key Outcomes



**84.7%**

of students have computers as one of the main subjects.



**93.3%**

of students reported sufficient computers in the class.



**94.7%**

of students are very satisfied with the amount of time for using the computer.



**92.7%**

of students learned computer practicals better now.



**70.0%**

of students discuss real-world applications of concepts in smart classroom lessons.



**45.3%**

of students found Science (All/ Physics/Chemistry) most effectively taught using smart classroom technology.



**90.7%**

of students increased interest in all subjects due to smart classroom technology.



**74.0%**

of students experienced a great increase in engagement in lessons due to smart classroom activities.



**70.0%**

of students viewed smart classrooms as having a very positive impact on their learning experience.



**78.7%**

of students expressed their overall smart classroom experience as excellent.

# Key Impacts



**99.3%**

of students improved ability to understand difficult concepts.



**97.3%**

of students enhanced digital literacy (ability to use digital tools).



**96.7%**

of students improved ability to complete assignments and projects on time.



**97.3%**

of students experienced overall improvement in academic performance.



**64.0%**

of students were very satisfied with the integration of smart classroom technology in the school.



**90.7%**

of students experienced an improved understanding of subjects.



**61.3%**

of students achieved better grades due to smart classrooms.



**62.7%**

of students strongly agreed that smart classrooms helped retain information more effectively compared to traditional classrooms.



**78.7%**

of students expressed that the overall smart classroom experience was excellent.

## OVERVIEW OF THE PROJECT



*Interaction with Students in the computer lab*

### PROJECT BACKGROUND

The Ramakrishna Mission, with financial support from BPCL, is undertaking a significant initiative to upgrade and enhance the educational infrastructure across three schools in Villupuram, Tamil Nadu. The project aims to establish state-of-the-art teaching and learning facilities by setting up computer labs and smart classrooms and installing solar plants. Initiative includes the installation of computers, UPS systems and

CCTV installations to ensure a secure and uninterrupted learning environment. The project also focuses on creating smart classrooms to facilitate modern teaching methods and installing solar plants to reduce electricity costs and promote green energy.

## ABOUT BHARAT PETROLEUM CORPORATION LTD. (BPCL)

Bharat Petroleum Corporation Ltd. (BPCL) is a leading integrated oil and gas company in India, engaged in the entire spectrum of activities from exploration and production of oil and natural gas to refining crude oil and distributing petroleum products. Headquartered in Mumbai, Maharashtra, BPCL operates refineries across Maharashtra, Kerala, and Madhya Pradesh. The company's diverse portfolio includes a focus on renewable energy alongside its production of oil products such as light and middle distillates. BPCL markets its products through a vast network of retail outlets, dealers, and distributors under well-known brands like Mak, Speed, and Bharat Gas. Additionally, BPCL plays a crucial role in supplying fuel to both domestic and international airlines, contributing significantly to India's energy sector and economy.

## ABOUT NGO RAMKRISHNA MISSION ASHRAM

Ramakrishna Mission is a global, non-political, non-sectarian spiritual organization that has been engaged in various forms of humanitarian and social service activities for more than a century. Inspired by the ideals of renunciation and service, the monks and lay devotees of the Math and Mission serve millions of men, women, and children without any distinction of caste, religion, or race because they see the living God in them. Ramakrishna Mission Villupuram, located in Tamil Nadu, is a renowned educational institution committed to providing quality education and holistic development for students. The mission operates multiple schools catering to a broad spectrum of educational needs. With a focus on fostering academic excellence and extracurricular activities, Ramakrishna Mission Villupuram plays a pivotal role in shaping the future of students.



**MEETING WITH THE PRINCIPAL RKM- VILLUPURAM**

## CHAPTER 3

### STUDY APPROACH AND DESIGN

#### OBJECTIVES OF THE STUDY

The primary objective of this study is to comprehensively evaluate the immediate and long-term impacts of the toilet construction project on public health, sanitation practices, and overall community development in Balangir District. Specifically, the research seeks to analyse the effectiveness of improved sanitation facilities in reducing waterborne diseases, enhancing public hygiene, and improving the quality of life for beneficiaries.

#### RESEARCH DESIGN

This study employs a Mixed-Method Approach, integrating both quantitative and qualitative techniques to provide a comprehensive understanding of the project's outcomes. This approach allows for a balanced exploration of the project's impact from various perspectives, including beneficiaries, community leaders, and health officials.

#### APPLICATION OF QUANTITATIVE TECHNIQUES

Quantitative methodologies involve structured surveys administered to the beneficiaries, selected through simple random sampling. This method ensures representative data collection and facilitates statistical analysis to measure the project's effectiveness in improving sanitation and hygiene practices in Balangir District.

#### APPLICATION OF QUALITATIVE TECHNIQUES

Qualitative methods include in-depth interviews conducted with two key stakeholders, including community leaders and project administrators. These interviews aim to gather detailed insights into the project's implementation process, community perceptions, and the socio-economic impact on local residents.

#### ENSURING TRIANGULATION

To enhance the reliability and validity of research findings, triangulation is employed by integrating data from both quantitative surveys and qualitative interviews. This approach ensures comprehensive validation of findings and provides a robust assessment of the toilet construction project's impact in Balangir District.

#### STUDY LOCATIONS

Villupuram

#### SAMPLING FRAMEWORK

The study included interviews with 150 students using simple random sampling to ensure a complete representation of the target population and two in-depth interviews with parents, principal, teaching and non-teaching staff. This sampling strategy is designed to capture a diverse range of perspectives.

#### DATA COLLECTION

Primary data collection was performed through in-depth interviews, focus group discussions, and structured surveys using a mobile application platform created by SoulAce. This platform facilitated real-time data entry and GPS tagging of responses, ensuring efficient and precise data collection.

## STAKEHOLDERS

Key stakeholders involved in the study include Ramkrishna Mission project staff, teaching staff, non-teaching staff and students. Their participation and perspectives are crucial to understanding the project's effectiveness and identifying areas for improvement.

## COMMITMENT TO RESEARCH ETHICS

The research team followed strict ethical guidelines throughout the study, ensuring participants' confidentiality, safety, transparency, anonymity, and informed consent. Open communication and ethical behaviour were essential to maintaining the integrity and validity of the research.



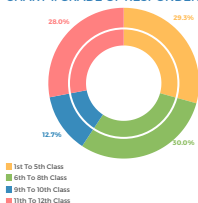
## INTERACTION WITH THE STUDENTS



## CHAPTER 4

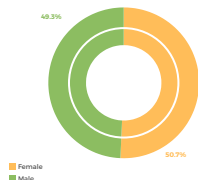
### KEY FINDINGS

CHART 1: GRADE OF RESPONDENTS



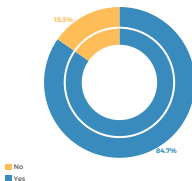
The study primarily covered students of 6th to 8th grades, closely followed by students from the 1st to 5th grades. The remaining respondents are split between 11th to 12th grades and 9th to 10th grades, with the latter group being the smallest. This distribution indicates a balanced representation across different educational stages, though middle school students form the largest group.

CHART 2: GENDER OF THE RESPONDENTS



The study includes an equal number of male and female students to get a holistic overview of the project intervention.

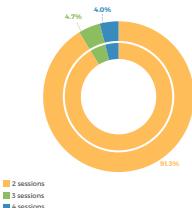
CHART 3: WHETHER HAVE COMPUTERS AS ONE OF THE MAIN SUBJECTS



A significant majority of the respondents indicated that they have Computers as one of their main subjects. This highlights the importance of computer education in the curriculum, reflecting its relevance and integration into the school's academic program.

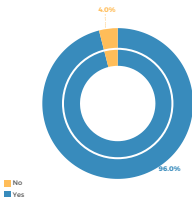


**CHART 4: NO. OF SESSIONS OF COMPUTERS THE RESPONDENTS HAVE IN A WEEK**



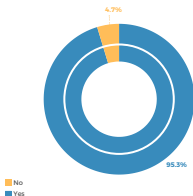
The majority of respondents reported having two computer sessions per week, indicating that the school's computer education is structured to provide regular, consistent exposure. Only a small number have more than two sessions, suggesting limited variability in the frequency of computer classes.

**CHART 5: WHETHER THE COMPUTER LAB HAS ADEQUATE SPACE TO ACCOMMODATE THE CLASS STUDENTS**



Nearly all respondents reported that the computer lab has enough space to accommodate the entire class, indicating that the facility is well-designed to handle the number of students using it. Only a few respondents feel that the space is inadequate, suggesting that, overall, the lab meets the students' needs.

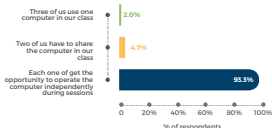
**CHART 6: WHETHER THE COMPUTER LAB HAS ADEQUATE SEATING ARRANGEMENTS FOR ALL STUDENTS TO DO PRACTICAL SESSIONS INDEPENDENTLY**



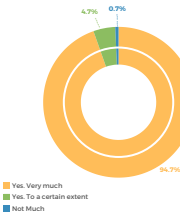
The majority of respondents indicated that the computer lab has adequate seating arrangements for all students to conduct practical sessions independently. A small percentage reported otherwise. This suggests that the majority of students feel supported in their ability to perform practical tasks in the computer lab.



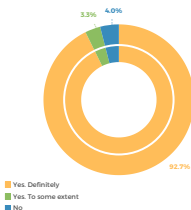
**INTERACTION WITH THE STUDENTS**

**CHART 7: SUFFICIENCY OF COMPUTERS IN THE CLASS**

The majority of respondents indicated that each student has the opportunity to operate a computer independently during sessions in their class. Some students reported sharing computers, with a smaller percentage indicating that more than one student uses a single computer.

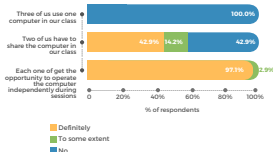
**CHART 8: LEVEL OF SATISFACTION WITH THE AMOUNT OF TIME SPENT USING THE COMPUTER**

A significant proportion indicated very high satisfaction, while a smaller group reported satisfaction to a certain extent. A minimal percentage expressed dissatisfaction with the allotted time. This indicates generally positive feedback regarding the time available for computer usage among the respondents.

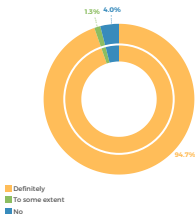
**CHART 9(A): WHETHER ABLE TO LEARN COMPUTER PRACTICALS BETTER NOW**

The majority of respondents indicated that they feel they are able to learn computer practicals better now. A smaller group mentioned experiencing some improvement, while a minority reported no change in their learning experience. This suggests that there is generally positive feedback regarding the effectiveness of current methods or resources for computer practicals learning among the respondents.



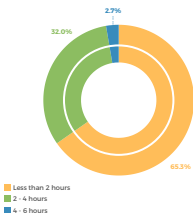
**CHART 9(B): SUFFICIENCY OF COMPUTERS IN THE CLASS**

The study finds that students who have the opportunity to operate computers independently during sessions overwhelmingly reported feeling that they are better able to learn computer practicals. In contrast, students who share computers either in pairs or groups of three showed more varied responses, with some indicating improvement but others reporting mixed results or no improvement. This states the importance of individual access to computers in enhancing practical learning experiences among students.

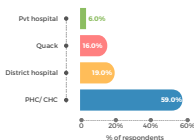
**CHART 10: THE EXTENT TO WHICH MOTIVATION FOR STUDYING COMPUTER SCIENCE HAS INCREASED**

The majority of respondents indicated a definite increase in their motivation for studying computer science. A smaller group mentioned experiencing some increase in motivation, while a minority reported no change in their motivation levels. This indicates a generally positive impact on motivation among the respondents, reflecting a favourable attitude towards the subject and its importance in their educational journey.



**CHART 11: NO. OF HOURS IN A WEEK ATTENDING THE SMART CLASSROOMS**

A significant majority of respondents attend smart classrooms for less than 2 hours per week. A notable proportion attends for 2 to 4 hours weekly, while a small percentage attends for 4 to 6 hours weekly. This distribution indicates varied levels of exposure to smart classrooms among respondents, potentially influencing their familiarity and utilization of these technological resources in their learning experiences.

**CHART 12: SUBJECT MATTERS MOST FREQUENTLY COVERED USING SMART CLASSROOM TECHNOLOGY**

The respondents reported that science subjects, including physics and chemistry, are the most frequently covered topics using smart classroom technology. Mathematics and English Language follow, with Social Studies and other subjects being less frequently covered. This distribution highlights educational priorities and emphasis on curriculum in these areas.

**SMART CLASSROOM AT RKM - VILLUPURAM**



### Case Study 1

**Devi**, a student in the 12th grade at Ramakrishna Mission Vidyalaya, enthusiastically engages with the opportunities provided by smart classroom technology and computer education. With computers as a key subject and participating in three sessions weekly, she benefits from spacious lab facilities and adequate seating, allowing her to independently conduct practical sessions. Devi expresses high satisfaction with the amount of time allocated for computer use, and she has notably enhanced her skills in learning practical computer applications.

She finds that chemistry is the subject most frequently covered using this innovative technology, with occasional discussions on real-world applications. Engaging in interactive quizzes and using digital textbooks has heightened her interest in subjects such as physics, significantly improving her overall engagement and understanding.

Devi rates her smart classroom experience as excellent, highlighting substantial improvements in her academic performance and digital literacy. She firmly believes that smart classrooms facilitate better comprehension of complex concepts, effective retention of information, and enhanced performance in assessments. Confident in using digital tools, she finds herself more interested in subjects that previously posed challenges. Devi's narrative reflects the transformative impact of well-maintained smart classroom infrastructure in improving educational engagement and preparing students like her for a digitally integrated learning environment.





## Case Study 2

**Anantha Ramakrishnan**, first grade student, actively participates in smart classroom activities where English Language Arts is a central focus. Attending two sessions per week, he finds the computer lab well-equipped for independent practical sessions, enhancing his understanding of subjects. Anantha greatly enjoys interactive quizzes and multimedia resources like videos and animations, which have significantly increased his engagement in lessons and overall interest in various subjects.

Anantha consistently discusses real-world applications of concepts, particularly in English Language Arts. He strongly agrees that smart classrooms help him understand difficult concepts better, perform well in assessments, and improve his digital literacy. Anantha rates his experience with smart classrooms very positively, highlighting how they have significantly improved his academic performance and overall learning experience.





### Case Study 3

**Sinmaya**, an enthusiastic 8th-grade student at RKM, eagerly participates in smart classroom sessions twice a week. With Social Studies as her main focus, she appreciates the opportunity to independently operate computers during sessions, enhancing her practical skills. Sinmaya actively engages in group projects and enjoys using animations in lessons, which has notably increased her interest in all subjects, particularly Mathematics.

Spending 2-4 hours weekly in smart classrooms, Sinmaya consistently discusses real-world applications of science concepts, reflecting her strong interest in these topics. She agrees that smart classrooms help her understand difficult concepts better and improve her academic performance. Sinmaya finds the use of smart classroom technology positively impacts her engagement in lessons and digital literacy, contributing significantly to her overall satisfaction with learning at RKM.







#### **Case Study 4** **Interview with Teacher**

**Girija N,** , a dedicated teacher handling classes from 1st to 8th, emphasizes the importance of computers in modern education. She believes that the addition of more computers has greatly benefited the students, providing them with valuable learning and practice opportunities. This technological upgrade has not only improved student engagement but also enriched their overall learning experience. The continuous power supply provided by the new UPS system ensures that these learning sessions are never interrupted, allowing for consistent and effective education.

The installation of CCTV cameras has significantly enhanced the safety and security within the school premises, which is highly appreciated by both the staff and the community. Girija notes that these infrastructure improvements have been well-received by the community, establishing a positive reputation for the school. The combination of technological advancements and enhanced security measures has contributed to a more conducive learning environment, contributing to goodwill and trust among parents and students alike.





### **Case Study 5** **Interview with Parent**

**P. Banupriya**, a parent, has observed the recent infrastructure changes in the school with great appreciation. She believes that the introduction of computers and smart classrooms will help students acquire digital skills at an early stage, preparing them for the future. Banupriya is also aware of the school's efforts in raising awareness about energy conservation among students, particularly through the use of solar power. She sees the installation of solar panels as a significant step towards teaching students the importance of sustainable practices.

Banupriya feels that these improvements have positively impacted the school's reputation and gained goodwill in the community. She appreciates the addition of CCTV cameras for enhanced safety and the UPS system for ensuring continuous learning without power interruptions. In her view, these developments demonstrate the school's commitment to providing a secure and modern learning environment which benefits both the students and the wider community.



## CHAPTER 5

# SUGGESTIONS / RECOMMENDATIONS



### EXPAND ACCESS AND COVERAGE

- Ensure all grades have equal access to smart classrooms to benefit from digital learning.
- Increase coverage of subjects beyond Science and Mathematics to include more diverse topics like Social Studies and Languages.



### SUPPORT TEACHERS AND STUDENTS

- Provide continuous training for teachers to effectively use smart classroom technology in their teaching methods.
- Offer support and guidance to students to improve digital literacy and maximize their learning potential.

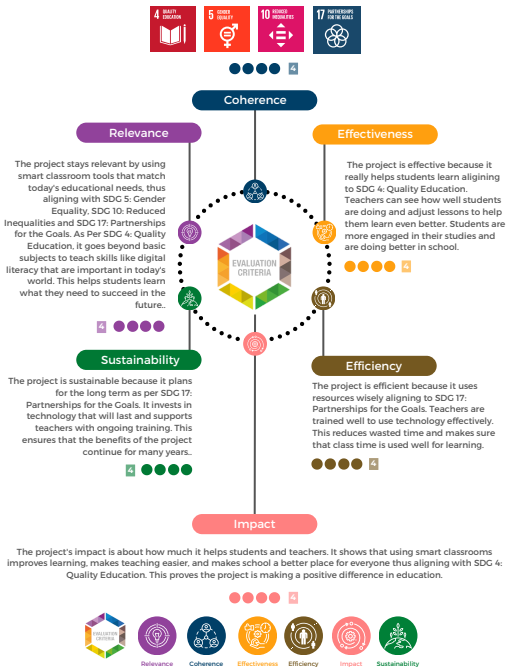


### MONITOR AND EVALUATE IMPACT

- Regularly assess the impact of smart classrooms through student and teacher feedback surveys.
- Use feedback to adapt and refine the implementation of smart classroom strategies for better outcomes.
- Regular maintenance checks are essential to ensure optimal functionality and minimal repairs, maintaining high-quality standards for effective use of installed infrastructure.

## 06. OECD FRAMEWORK

The project aligns to SDG 4: Quality Education where technology use with educational goals for all grades and subjects. This means teachers use technology in ways that help students learn better and meet their educational needs.



## CHAPTER 7

# CONCLUSION

The project has shown significant benefits in enhancing student engagement and learning experience. It has effectively improved learning outcomes by providing better access to digital tools and interactive learning tools. The high satisfaction rates among students and teachers indicate that smart classrooms have made learning more enjoyable and effective.

Also, the project highlights the importance of integrating technology into education in a meaningful way. By focusing on subjects like Science and Mathematics and expanding to include digital literacy skills, the project has equipped students with essential knowledge for the modern world. This approach not only improves academic performance but also prepares students for future challenges in the digital age. Overall, the smart classroom initiative has proven to be a valuable investment in enhancing educational quality and preparing students for success beyond the classroom.

The installation of solar plants not only supports sustainable energy practices but also reduces operational costs, contributing to long-term financial sustainability for the schools.

Program states the importance of investing in modern educational infrastructure to enhance teaching methodologies, improve learning outcomes, and promote sustainability in educational practices. As a result, students, and teachers alike benefit from a more conducive and technologically advanced learning environment, preparing them better for future academic and professional challenges.

## STUDY TOOLS

### TOOLS FOR THE STAKEHOLDERS

#### BENEFICIARY TOOL FOR RKM, VILLUPURAM (FOR STUDENTS IN COMPUTER LAB AND SMART CLASSROOMS)

Name of the respondent	
Class studying	
Gender	
Name of the school	
<b>Questions on Computer Lab</b>	
Do you have Computers as one of your main subjects?	A. Yes B. No
How many sessions of Computers do you have in a week?	A. 2 sessions. B. 3 sessions. C. 4 sessions. D. 5 sessions
Does the computer lab have adequate space to accommodate your class students?	A. Yes B. No
Does the computer lab have adequate seating arrangements for all students to do practical sessions independently?	A. Yes B. No
Which of the following statements regarding the use of computers is correct?	A. Each one of them gets the opportunity to operate the computer independently during sessions. B. Two of us have to share the computer in our class. C. Three of us use one computer in our class.
Are you satisfied with the amount of time you get to use the computer?	A. Yes. Very much. B. Yes. To a certain extent. C. Not Much
Are you able to learn computer practicals better now?	A. Yes. Definitely. B. Yes. To some extent. C. No
Has your motivation for studying computer science increased?	A. Yes. Definitely. B. Yes. To some extent. C. No

Questions on Smart Classroom	
How many hours in a week do you attend smart classrooms?	A. Less than 2 hours B. 24 hours C. 4-6 hours D. More than 6 hours
Which subject matters are most frequently covered using smart classroom technology?	A. Mathematics B. Science C. English Language Arts D. Social Studies E. Other (please specify)
How often are real-world applications of concepts discussed in your smart classroom lessons?	A. Always B. Often C. Sometimes D. Rarely E. Never
Which subjects do you feel are most effectively taught using smart classroom technology?	A. Mathematics B. Science C. English Language Arts D. Social Studies E. Other (please specify)
How has the use of smart classroom technology impacted your interest in the following subjects?	A. Increased interest in all subjects B. Increased interest in some subjects (please note down separately) C. No change in interest D. Decreased interest in some subjects (please note down separately)
Which activities do you most frequently participate in during smart classroom sessions?	A. Interactive quizzes B. Group projects C. Multimedia presentations D. Virtual labs or simulations E. Other (please specify)
How often do you participate in collaborative activities using smart classroom tools?	A. Always B. Often C. Sometimes D. Rarely E. Never
What types of multimedia resources are most commonly used in your smart classroom?	A. Videos B. Interactive simulations C. Animations D. Digital textbooks E. Other (please specify)
How do smart classroom activities impact your engagement in lessons?	A. Greatly increase engagement B. Increase engagement C. No change in engagement D. Decrease engagement E. Greatly decrease engagement
Do you feel that the activities conducted in smart classrooms help you better retain the information taught?	

How do you feel smart classrooms have impacted your learning experience?	A. Very positively B. Positively C. Neutral D. Negatively E. Very negatively
Do you find lessons more engaging with the use of smart classroom technology?	A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree
How has smart classroom technology affected your ability to understand difficult concepts?	A. Greatly improved B. Improved C. No change D. Worsened E. Greatly worsened
Do you believe that smart classrooms have helped you perform better in assessments?	A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree
How has using smart classroom technology impacted your digital literacy (ability to use digital tools)?	A. Greatly improved B. Improved C. No change D. Worsened E. Greatly worsened
Do you feel more confident in presenting projects or assignments using digital tools provided in smart classrooms?	A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree
Has the use of smart classroom technology made you more interested in subjects you previously found uninteresting?	A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree
How satisfied are you with the integration of smart classroom technology in your school?	A. Very satisfied B. Satisfied C. Neutral D. Dissatisfied E. Very dissatisfied
What is the biggest benefit you have experienced from using smart classrooms?	A. Improved understanding of subjects B. Increased engagement and interest C. Better performance in assessments D. Enhanced digital skills E. Other (please specify)
How has the use of smart classrooms affected your overall academic performance?	A. Significantly improved B. Improved C. No change D. Worsened E. Significantly worsened



To what extent do you feel smart classrooms have helped you achieve better grades?	A. A great deal B. A lot C. A moderate amount D. A little E. Not at all
Do you find that smart classrooms help you retain information more effectively compared to traditional classrooms?	A. Strongly agree B. Agree C. Neutral D. Disagree E. Strongly disagree
How has the use of smart classrooms impacted your ability to complete assignments and projects on time?	A. Greatly improved B. Improved C. No change D. Worsened E. Greatly worsened
What is your overall rating of the smart classroom experience?	A. Excellent B. Good C. Fair D. Poor E. Very poor
<b>Interview with the Principal and/or Head Teacher of RKM, Villupuram.</b>	
Name	
Educational Qualification	
Years of experience	
Name of the school	
Grades in the school	
Total Strength	
No. of boys No. of girls	

Questions regarding CCTV cameras		
1	Can you give a brief about the school and its evolution over the years?	
2	Why was the need for CCTVs felt on the school premises? Were there any CCTV cameras that were installed before the support of BPCL?	
3	How many cameras have been procured?	
4	How has the presence of CCTV cameras helped the school in surveillance?	
5	What is the backup capacity of the cameras, and how often are the cameras observed?	
6	Are the Cameras installed in all the vital locations?	
7	What is the feedback of parents towards the installation of CCTV cameras?	
8	What is the teacher's feedback on the installation of CCTV cameras?	
9	Have you received any feedback from the education authorities?	
10	In general, has the installation of CCTV cameras instilled a sense of security in students among school authorities?	
Questions regarding Online UPS		
1	Why was the need felt for UPS in the school? What are the major purposes for which UPS is needed for the school?	
2	How prominent was the issue of power cuts in the school?	
3	Prior to the installation of UPS through BPCL's support, was there an UPS available for the school?	
4	If so, what was the capacity of the previous UPS?	
5	What are the facilities in the school which have a UPS connection? (like particular blocks, the connection of Fans, and lights in classrooms)	
6	Is there a Seamless power transition happening during times of power cuts?	
7	How has this change been perceived by the staff of the school?	
8	In what way has the presence of UPS impacted the school functioning?	

Questions on Solar Power		
1	Why was the need for solar power felt in the school? What are the major purposes for which Solar power is needed for the school?	
2	What are the facilities in the school that are run on solar power?	
3	To what extent has it reduced the EB Bills of the school? How much money would be saved in a year from the installation of solar power on EB bills?	
4	Has the installation of solar power in the school created an awareness on energy conservation among the students?	
Impact of the CSR Support		
	Has all this infrastructural development let to	1. More student enrolment? If so, how many students were enrolled in the school after the Intervention?
		2. Has it resulted in a reduction in drop out from the school?
		3. Has it resulted in more parents in the community preferring to admit their children in RKM in comparison with other private schools in the locality.
		4. Has all these developments resulted in a conducive learning environment and experience for the students?
	Any Suggestion	

## Interviews with the SMC members

1	Name	
2	Parent/ Teacher/ Community member	
3	Are you aware of the recent infrastructural developments in the school?	
4	Were these planned developments discussed in the SMC before the intervention?	
5	How do you see the availability of more computers in the school now? What would be the implications of it, to the student's learning experience?	
6	Are you aware of the Smart Classrooms? Have you heard of feedback from the students about the learning experience in the smart classrooms?	
7	How has the availability of Solar power impacted the school's power consumption? Do you think, it can raise student's awareness on energy conservation?	
8	How do you see the installation of CCTV cameras? Has it instilled a sense of safety and security in children among the parents?	
9	Is the provision of UPS leading to seamless power connection to the school throughout the day?	
10	Has the goodwill of the community towards the school been positively impacted by the developments in the school?	

**Interviews with Teachers of RKM**

1	Name	
2	Educational qualification	
3	Classes handled	
4	Subjects handled	
5	How do you see the availability of more computers in the school now? What would be the implications of it, to the student's learning experience?	
6	Has the availability of more computers helped in better planning and scheduling of computer practical sessions for students?	
7	Do students get more opportunities to work on computers independently than before?	
8	In what way does the availability of smart classrooms help the teaching process?	
9	Is it helping in bringing more student engagement to the classes?	
10	How is the availability of UPS helpful to the school? Which particular facilities are in critical need of a UPS connection?	
11	Has the provision of UPS led to seamless power connection to the school throughout the day?	
12	How has the availability of Solar power impacted the school's power consumption? Do you think it can raise student's awareness of energy conservation?	
13	How do you see the installation of CCTV cameras? Has it instilled a sense of safety and security in children among the parents?	
14	Has the goodwill of the community towards the school been positively impacted by the developments in the school?	

## ANNEXURES

### LIST OF FIGURES

Chart 1: Grade of respondents

Chart 2: Gender of the respondents

Chart 3: Whether have Computers as one of the main subjects

Chart 4: No. of sessions of computers the respondents have in a week

Chart 5: Whether the computer lab has adequate space to accommodate the class students

Chart 6: Whether the computer lab has adequate seating arrangements for all students to do practical sessions independently

Chart 7: Sufficiency of computers in the class

Chart 8: Level of satisfaction with the amount of time spent using the computer

Chart 9a: Whether able to learn computer practicals better now

Chart 9b: Sufficiency of computers in the class

Chart 10: The extent to which motivation for studying computer science has increased

Chart 11: No. of hours in a week attending the smart classrooms

Chart 12: Subject matters most frequently covered using smart classroom technology

Chart 13: Frequency of discussion about real-world applications of concepts in the smart classroom lessons

Chart 14: Subjects most effectively taught using smart classroom technology

Chart 15: Ways in which the use of smart classroom technology impacted the interest in various subjects

Chart 16: Subjects in which interest has increased

Chart 17: Activities most frequently participated in during smart classroom sessions

Chart 18: Frequency of participation in collaborative activities using smart classroom tools

Chart 19: Types of multimedia resources most commonly used in the smart classroom

Chart 20: The extent to which smart classroom activities impacted engagement in lessons

Chart 21: Level of the impact of smart classrooms on the learning experience

Chart 22a: Opinion on the impact of smart classrooms on lesson engagement, interest in learning, confidence level and performance in assessments

Chart 22b: Level of improvement in various learning abilities and overall academic performance

Chart 23: Level of satisfaction with the integration of smart classroom technology in the school

Chart 24: Biggest benefit experienced from using smart classrooms

Chart 25: The extent to which smart classrooms have helped in achieving better grades

Chart 26: Whether the smart classrooms helped to retain information more effectively compared to traditional classrooms

Chart 27: Overall rating of the smart classroom experience

### LIST OF EQUIPMENT PROVIDED

Campus Particulars	Equipment Provided
Ramakrishna Mission Vidyalaya Matriculation Higher Secondary School	Computer lab (100 nos.), UPS, CCTV and smart class (6 nos.)
Ramakrishna Mission Vidyalaya High School	Computer lab (50 nos.), UPS, CCTV, smart class (3 nos.) and solar plant (1)
Ramakrishna Mission Nursery and Primary School	Computer lab (50 nos.), UPS, smart class (3 nos.) and solar plant (1)

## ABBREVIATIONS

<b>SDGs</b>	Sustainable Development Goals
<b>NGO</b>	Non-Governmental Organization
<b>BPCL</b>	Bharat Petroleum Corporation Limited
<b>RKM</b>	Ramkrishna Mission Ashram
<b>CSR</b>	Corporate Social Responsibility
<b>FY</b>	Financial Year