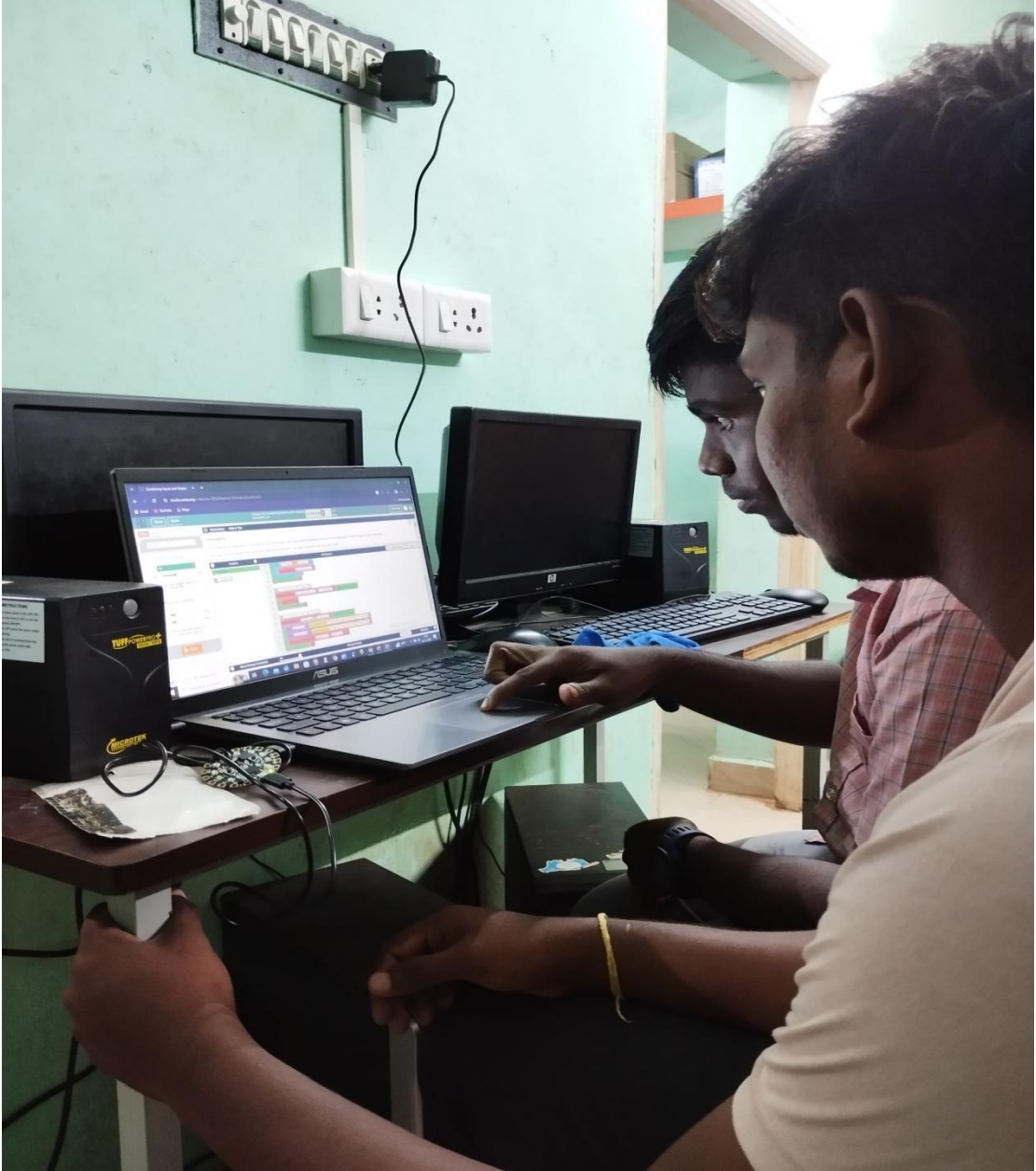


**EVALUATION OF RURAL TECHNOLOGY CENTER
PROJECT IMPLEMENTED BY ASHA TRUST CHENNAI
IN SEETHANJERI, THIRUVALLUR DISTRICT**



PROGRAMME EVALUATION REPORT

EVALUATION OF RURAL TECHNOLOGY CENTER PROJECT IMPLEMENTED BY ASHA TRUST CHENNAI IN SEETHANJERI, THIRUVALLUR DISTRICT

Investigator

SUBASHINI V
Reg. No. P01GX22E001015
M.Ed. (2022-2024)

Under the guidance of
Prof. ANIL KUMAR K
Department of Education (DE)



**DEPARTMENT OF EDUCATION
REGIONAL INSTITUTE OF EDUCATION
(NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING)
MYSORE – 570006**

DECLARATION

I hereby declare that the programme evaluation report entitled “**Evaluation of Rural Technology Center project implemented by Asha Trust Chennai in Seethanjeri, Thiruvallur district**”, explored by me during the academic year 2022-2024, during the degree of Master of Education, University of Mysore, Mysore- 570006.

This programme evaluation report has been prepared by me under the guidance and supervision of **Prof. Anil Kumar K**, Department of Education, Regional Institute of Education(NCERT), Mysuru – 570006.

I also declare that this programme evaluation report has not been previously submitted by me or others either in this or any other University.

Place: **Mysore**

Date:

SUBASHINI V

Reg. No. P01GX22E001015

CERTIFICATE

This is to certify that the programme evaluation report entitled, “**Evaluation of Rural Technology Center project implemented by Asha Trust Chennai in Seethanjeri, Thiruvallur district**” is a record of evaluation report work done by **Ms SUBASHINI V** during the academic year 2022-2024 under my guidance and supervision in University of Mysore and that the programme evaluation report has not been submitted for the award of any other Degree or Diploma.

Place: Mysore

Guide:

Date:

Prof. Anil Kumar K
Department of Education,
Regional Institute of Education (NCERT),
Mysore – 570006

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ACRONYMS

RTC - Rural Technology Centers

MOU- Memorandum Of Understanding

PLM - Programme Logic Model

EXECUTIVE SUMMARY

Asha for Education, Chennai, in partnership with **Pravartak (subsidiary of IIT Madras)** has established Rural Technology Centers (RTCs) in **Thiruvallur District**. RTC Seetanjeri, established in January 2022, is one of the oldest functioning RTC. It focuses on both digital literacy and computational thinking of secondary school students in rural areas. It offers basic digital literacy, basic programming and advanced programming courses for the students. The objectives of the project are:

1. To provide quality basic computer literacy for children from rural areas.
2. To provide world class technology education in programming for the children from remote areas.
3. To improve the computer skills and computational thinking of students of remote areas.

Based on the need of the programme and the expected outcomes, a programme logic model (PLM) and evaluation framework was developed by the investigator. The PLM facilitated formulation of the following major evaluation questions:

- 1. Is the RTC, Seethancheri functioning as intended? If not, why not?**
- 2. To what extent objectives are achieved by the RTC project on improving the digital literacy of the students?**

- a) Has the RTC project addressed the needs of digital literacy of the rural students?
- b) Has the RTC project enhanced the computer skills of the students ?
- c) How many students trained in basic digital literacy, have enrolled for advanced levels (level 2 & 3)? If yes, why? If not, why?
- d) How many students have completed the course and are certified in different levels?

- 3. Are there any unintended outcomes attributed to the RTC project? If yes, what are the positive and negative unintended outcomes?**

An outcome based evaluation was carried by the evaluator to find out if the objectives of the projects are achieved.

METHODS

The evaluation design involves qualitative analyses for answering the evaluation questions. This programme evaluation of RTC, Seethanjeri was undertaken with the help of case study. The criteria for selecting the RTC from 5 functioning RTCs is based on the number of terms completed by RTC. RTC, Seethanjeri is one of the oldest RTC and has completed 3 terms and has started with the fourth term. The used instruments are

Interview schedule, Focus group discussion, Checklist, Observation schedule, School schedule and Document analysis. All these instruments were developed by the investigator.

MAJOR FINDINGS

With regards to the first evaluation question, the RTC is successfully functioning as intended. The objective of providing quality computer education for the rural students has been achieved.

With regards to the second evaluation question, the courses provided in RTC has improved the computer skills of the students. This is evident from the data regarding students participation and the quality of the projects submitted by the students. The number of students completing the courses have also increased. There is an increase in the number of students who continue to learn from RTC. The students who have completed basic skills are willing to enrol themselves for advanced courses. This shows the effectiveness of the training.

With regards to the third evaluation question, the positive unintended outcomes of the project RTC, Seethanjeri are

- Set up of a small library corner in the RTC, Seethanjeri
- Interests developed in primary students
- Improved confidence in students
- Improved communication skills
- RTC as flagship project- MOU with Government of Tamil Nadu.

there were no negative unintended outcomes attributed to the project.

RECOMMENDATIONS

1. The RTC can be provided with few more computers, as the students find it difficult to complete the tasks in the given time, as 2-3 students share a computer.
2. The project can provide a learner module for the courses, which can be used by the students later.
3. The project can also focus on providing career guidance to students regarding the scope of the programming courses. This can help them to choose their higher education courses.
4. The RTC can be provided with a printer and a projector which will be useful for the trainers to explain the tasks in a more effective way.

SECTION 1

INTRODUCTION AND BACKGROUND

INTRODUCTION AND BACKGROUND

1.1 Introduction:

Programme evaluation is a systematic investigation of merit, worth or significance of a programme. It can ensure that the resources are well targeted. It can help identify if programme work, why programme work, and how they work. It can help programme to improve. Evaluation of programmes helps us to understand the effects that programmes have and the extent to which intended objectives are achieved. Evaluation findings not only help with implementation of existing programmes, but they can also help to transform future ones. One of the educational programmes implemented by Asha for education trust in Chennai is being evaluated in this study.

“the systematic assessment of the operation and/or outcomes of a program or policy, compared to a set of explicit or implicit standards as a means of contributing to the improvement of the program or policy...” -Carol Weiss

Asha for education is a registered as a public non- profit charitable trust in India. It is a secular organization dedicated to change in India by focusing on basic education. ‘**Asha**’ means hope — the hope that the organization aims to bring into the lives of these children. Dr. Sandeep Pandey being the founder of this organization, received the Magsaysay Award for emergent learning, bringing worldwide recognition to the organization. Its belief is that, education is a critical requisite for socio-economic change. With this focus, the volunteers are involved with and support projects that are secular and have an education-



Figure 1. Asha for Education Trust

related component to them. There are more than 50 Asha chapters worldwide spread across the US, India, Europe and Canada.

Asha-Chennai is a chapter of 'Asha for Education' based in Chennai, Tamil Nadu. It was started in 2002 in Chennai. It is run entirely by an action group for supporting the education of underprivileged children. It is actively conducting about 15 projects, involving nearly 150 schools, 15000 students and 35 volunteers. Asha works with a variety of project partners and community groups in many educational and development related endeavors. Its mission looks at issues concerning access to education and also to ensure that every child has access to an education that is meaningful. They raise funds from individuals, corporations and other organizations.

Technology has witnessed impressive evolution in the past few decades, transforming our lives and helping us evolve with it. It has contributed more to humankind to live a life of luxury and convenience. It is because of the technology that we know about our world and outer space better. Every field has developed and evolved with technology, thus it has become an important part of our lives. It improves efficiency, enhances communication, provides easier access to information, saves cost and time and also brings people close.

Technology affects almost every aspect of life and is used in all spheres of life in today's world. It has its applications in healthcare, farming, navigation and every other fields making the services easier. Knowing its importance in present day situations, access to quality technical education is very important. But sadly, it is lacking in rural parts of India. Main reason being that the technical resources are expensive and also there is a lack of technical skills in these villages to impart knowledge.

Taking into consideration of the importance of technology, Project Rural Technology Centers is undertaken by Asha. The main goal of this project is to provide world class technology education to children from remote rural areas who do not have access to that kind of education. It focuses on children in classes 6 to 12. As of July 2023, there are 7 functioning RTCs, 5 in Thiruvallur District and 2 in Thoothukudi District. It is expected that this project will be up-scaled over time.

The following study, an outcome based evaluation, has been undertaken to evaluate to the extent to which the project has achieved the objectives. This will help Asha Trust to make worthy decisions about replicating and up-scaling the project.

1.2 Background:

Tamil Nadu has one of the highest literacy rates in the country. There are 58801 schools in Tamil Nadu with a student - teacher ratio of 23:1 (UDISE+ 2021-22). the state also runs several independent schemes like Ennum Ezhuthum, Illam thedi Kalvi, Scholarship programmes for improving the quality of school education. In UDISE+ report 2020-21, it is mentioned that almost 79.1 per cent of government schools in the State have functional computers on their premises and only 18 per cent have internet facilities. This raises the question of the purpose of the computers without internet facility. Though many government schools have computer labs, school principals and teachers often do not allow children to work on the machines fearing the damage of the computers. Even though the state has come up with the scheme of distributing free laptops, without basic computer skills, it is not of any use to the children in higher classes. And also, since most parents and teachers are not aware and comfortable with the use of computers, they will not be in a position to help students when they begin to explore with their laptops. So, fears have been expressed from parent and teacher community , that these distribution of free laptops could lead to students "misusing" computers or being exposed to inappropriate content or being taken for a ride by others on social networking sites. These issues seeks to add a digital empowerment to improve the quality of technical education system with qualified teachers.

1.2.1 Genesis of the project:

Thiruvallur is one of the districts near Chennai. Government schools exists but they function with insufficient facilities. Asha works with about 68 schools in this district to improve the conditions and education at government primary and middle schools. Asha started teaching basic computer skills to the children at the schools it support and also have a lot to



Figure 2.children performing tasks

improve the learning conditions in terms of effectively using the computers for delivering curriculum contents in other subjects.

Asha for Education, Chennai, in partnership with **Pravartak (subsidiary of IIT Madras)** has established Rural Technology Centers in **Thiruvallur District**. Since 2015, Asha has been working with elementary and middle schools to educate students. It focuses on both digital literacy and computational thinking. It intends to use IIT's experience and expertise in quality technical education.

The first two Rural Technology Centers were established in **Kanakamma Chattiram** and **Seethanjeri** in Thiruvallur district in January 2022 and were inaugurated in February 2022.

1.2.2. Rural Technology Centers (RTCs):

Rural Technology Centers is an ongoing project of Asha. It comes under the **working with government** type of project of Asha, which includes government school improvements, educational reform support and government school curriculum interventions. Asha has used advanced block based programming tools like **Scratch** from MIT and **Blockly** from Google to teach programming. These tools are so easy to use that the middle school students have both mastered these in a few short weeks and shown tremendous enthusiasm in learning. Asha expects to build on this expertise by using proven methodologies like the curriculum from **code.org** that have been used and tested in other countries successfully.



Figure 3. RTC Seethanjeri

Asha's program will consist of three parallel strategies.

1. Partner with Govt High/Higher Secondary Schools

In the government schools, Asha teachers will teach introductory digital literacy and programming to children. For students taking Computer Science or Computer Applications in their 11th and 12th std, the current syllabus is very demanding and the schools tend to focus more on theory and less on practical. Unfortunately, when it comes to actual programming or project work, the children are left with no experience. Asha will focus on providing support to the children to learn actual programming with computers and execute projects using that knowledge.

2. Advanced Courses in the Centres

The Rural Technology Center will be located in the same villages. Here too the courses are offered to 9th to 12th standard students. The goal of these centers is to make the children comfortable with the use of technology by providing both digital literacy skills and computational thinking skills. Our foundational coursework will follow the guideline provided by internationally acclaimed code.org curriculum.

3. Serve as a Digital Library / Resource Centre

At times when courses are not going on in the centers, they will serve as a digital library. Children can come there and play educational games, and use the computers in any other way with the supervision of the centre teachers. Asha will also acquire cool tools and provide them in labs to stoke the curiosity in young minds.



Figure 4. Trainer explaining the programming task

1.3 Objectives Of The Project:

The following are the objectives of the Rural Technology Center Project of the Asha Chennai Trust,

- To provide quality basic computer literacy for children from rural areas.
- To provide world class technology education in programming for the children from remote areas.
- To improve the computer skills and computational thinking of students of remote areas.

1.4 Functioning Of RTCs:

ITM Pravartak and Asha launched the first two Rural Technology Centres back in Jan 2022 at Kanakamma Chathram and Seethanjeri in Thiruvallur District. The RTC started their second term and the next two RTCs were launched in July 2022 at Poondi and Kannigaiper. The fifth one opened in Kayathar in Oct 2022. Another RTC at Kalugumalai opened in Feb 2023. **All these 6 RTCs completed the Feb-July 2023 term.** Given the remoteness of the RTCs and given that they have to be open till 7:30 pm, the centers started with 2 teacher RTCs. However, as the teachers started getting comfortable with the RTCs both as a whole and with their specific RTC, teachers became more open to running single teacher RTCs. The RTCs in Thiruvallur are based in smaller and more remote villages. The enrolment is limited in these places. Even the higher secondary schools in these areas have strengths of under 500. The bus facilities are often not available after 6:00 pm. The students come from longer distances to the high/higher secondary schools. So the teachers have not been able to increase the enrolment much beyond about 80 students per term per RTC. At all the Thiruvallur schools, the retention ratio was about 2/3rds. Only about 2/3rds of the students who started the course went on to complete it.

1.5 Implementation:

- In the associated schools, all the students will attend the classes. Students of classes 6-9 are given instructions. They will get the instructions of one hour a week. They will be offered basic digital literacy and basic programming courses.
- RTCs are located either in rented residential or commercial spaces in the vicinity of the school, so as to make it accessible for the students. Here there are offered advanced programming course. Children who are interested in this advanced course can avail this. Children who require basic will also be enrolled.
- On the week days, formal classes will only be from 4:30 to 6:00 or 6:30. From 6:30 to 7:30, the centre will be used by children in the close vicinity of the centre as a general digital library.
- During holidays, RTCs function the whole day.
- The courses are offered semester- wise for a duration of 4.5- 5 months.
- 2/3rd of the course duration is for instructions and 1/3rd of it is for project work.
- The students will be organized as batches. Each batch will get 3 hours a week which may be on two evenings or one half of Saturday.



Figure 5. Trainer explaining the tasks to students



Figure 6.RTC Seethanjeri students and trainers

- The curriculum for basic digital literacy and basic programming courses are developed by Asha. The curriculum for advanced programming is adopted from Code.org. The curriculum is as follows:

Table 1: RTC Courses Curriculum

Basic Digital Literacy	This will teach the children basics of how to use a computer . It will teach them text document, spread-sheet and presentations using LibreOffice . It will teach them how the Window multi-tasking Windowing environment works. It will also teach them the basics of operating systems, files, folders etc. Finally it will also introduce them to the Internet and the various tools available on the Internet like web browsing, search, Wikipedia, emails, social media etc.
Basics of Programming	It will teach them programming through unplugged activities as well as on the computer. On computer it will introduce them to the idea through Blockly games and take that further with various programming exercises with Code.org tools as well as Scratch.
Web Development	This course will empower the students to create and share their own content using code.org’s Web Lab platform . They engage in problem solving as it relates to programming, as they learn valuable skills such as debugging, commenting, and structure of language.

- At the end of the course, to get the certificate of completion the students registered for the classes need to have an attendance of 75%, complete a one-month long project and also get a passing mark in the final assessment.
- A presentation competition (RTC IMPRESSION) is also conducted for different courses, best project works will be presented and will be appreciated for the efforts.



Figure 7. Student Certificate

1.6 Funding And Budget:

The project is funded both by Asha and IITM. It was supported by Syrma - a corporate for a year. CAMS is continuing the support. The project has an annual budget of 50 lakh for catering all the RTCs.

1.7 Rationale Of The Study:

Out of Tamil Nadu's entire population, 48.40% reside in urban regions, and about 51.60% do so in rural villages. Most rural areas are isolated from the benefits of economic progress. Only a smaller share of students currently enrolled in Tamil Nadu has access to a computer with internet or computer or internet (14%, 19%, and 23%, respectively). The sharp difference in the share of students having access to a

computer with internet in rural and urban Tamil Nadu (9% and 20%, respectively) demonstrates the nature of the digital divide in the state (Reddy et al. 2020). If it is used for education, health care, citizen services, financial services, or any other basic need, technology and connectivity, it can make a huge difference to the socio-economic levels of a community, and ultimately to the country, since true progress comes from inclusive growth.

In this context, Asha has come up with the Rural Technology Centers for providing basic digital literacy for students of rural areas. Thus, evaluating this project will help us understand the merit and the worth of the project in empowering the children digitally. Its findings can be used by the trust for making worthy decisions regarding the project continuation and modification and also for Asha to extend the service throughout the state.



Figure 8. RTC Seethanjeri Library corner

1.8 Programme Logic Model:

The Programme Logic Model, also called as “Road Map” of the programme, is a systematic representation of logical sequence of a programme. It is a condensed and clear graphical representation of a programme. It provides directions based on some assumptions. It outlines the relationships of various components, like, resources, outputs and outcomes of the programme. It describes the logic or rationale behind a programme and how it is expected to achieve its desired outcomes. The PLM are being used mostly by programme evaluation communities for planning scientific and systematic evaluation. The detailed investigation of each dimension of the PLM helps

in understanding the programme and to conduct evaluation based on evidences. It gives the outline of the program. It also gives a basis for formulating the evaluation questions. The programme logic model provides a overall picture of the Rural Technology center project. (*Appendix A*)

1.9 Evaluation Questions:

The following are the evaluation questions for the Rural Technology Center project:

- 1. Is the RTC, Seethanjeri functioning as intended? If not, why not?**
- 2. To what extent objectives are achieved by the RTC project on improving the digital literacy of the students?**
 - a) Has the RTC project addressed the needs of digital literacy of the rural students?
 - b) Has the RTC project enhanced the computer skills of the students ?
 - c) How many students trained in basic digital literacy, have enrolled for advanced levels (level 2 & 3)? If yes, why? If not, why?
 - d) How many students have completed the course and are certified in different levels?
- 3. Are there any unintended outcomes attributed to the RTC project? If yes, what are the positive and negative unintended outcomes?**

The next section highlights about the evaluation framework, design, instruments and samples for the study.

SECTION 2

METHODS

METHODS

This section discusses about evaluation framework, evaluation design, population and study, instruments, data collection plan and procedure, data analysis and limitations of the evaluation.

2.1 Evaluation Framework:

For each of the three evaluation questions, relevant, appropriate and measurable indicators were identified, in order to effectively evaluate the programme. This process facilitated the identification of suitable data sources that would yield maximum information and provide necessary evidence which was accurate and reliable for answering each of the evaluation questions. The methods or techniques for eliciting the responses were also identified that will support and guide programme evaluation. (*Appendix B*)

2.2 Evaluation Design:

The present evaluation study tries to understand the worth of the RTC and its digital education training for rural students. Based on the programme logic model and the evaluation questions framed, the study aims to find answers to the questions and impact of the project.

Case study will be suitable for the study, as this will give us a deeper understanding of the project and its impact. A case study, as defined by Merriam (2009), —is an in-depth description and analysis of a bounded system|| (p. 40) with the aim of uncovering —the interaction of significant factors characteristic of the phenomenon|| (p. 43). Choosing a case study method provided readers with a “rich and holistic” account of each individual (Merriam, 2009, p. 51). Case studies are used to discover the how and why of an implementation process (Yin, 2014).

Using various tools and techniques, the evaluator will be able to gather the useful data. The gathered qualitative data supported by some quantitative data will help the evaluator to understand why the project has worked well and why not and

also to understand the impact of the project. The evaluator will also be able to find out the unintended outcomes attributed to the project.

2.3 Population And Sample:

Rural Technology Centers are established in 7 places in Tamil Nadu. These are included in the population for the study.

One of these 7 centers are taken as the case for the evaluation study. This will help us to understand about the case in a deeper way. The criteria for selection of the case are based on number of training sessions provided by the center and also based on the convenience of the evaluator.

The present study considers **Rural Technology Center, Seethanjeri** as the case, as this is one of the oldest RTC established and also it has completed three training sessions. It is expected that this center gives an overall understanding of the project and the immediate impact of the project.

2.4 Instruments

Investigating evaluation questions requires collection of relevant data from various sources through different types of instruments. As mentioned in the evaluation framework, the study uses the following tools for eliciting the answers from the data source.

2.4.1 Focus group discussion with students

Focus group discussion will be conducted with currently enrolled students of different levels to gather information about how they feel about the training in RTC, how is the training helpful to them, etc.

2.4.2.1. Interview schedule for passed out students

Interview with the passed out students will give information about the implementation, challenges faced by them, benefits of the courses and the certificates and also suggestions that would help the RTC to function better etc.

2.4.2.2. Interview schedule for trainers

Interview with the trainers will give information about their perceptions of the project and this will also help us understand the challenges faced by them in implementing the programme.

2.4.2.3. Interview schedule for parents/ community

Interview of parents will show their awareness about the need and significance of digital literacy and also the usefulness of RTC for their children.

2.4.2.4. Interview schedule for Asha manager/ project coordinator

Interview of project manager will give us detailed information about the implementation and impact of the programme.

2.4.3 Observation schedule for the center

Observation of the center will give us an idea about the physical facilities, availability of material resources, training sessions, student interaction and participation in the training sessions, etc.

2.4.4 Schedule for Document analysis

Data analysis of the previous reports, like annual report of Asha, field visit reports, student achievement record will be analyzed and interpreted which will give us information about how the project has improved over the three training sessions. It is expected that this will also provide us information about the unintended outcomes of the project. This will also be used for triangulation of data.

2.5 Data Collection Procedure

This programme evaluation was scheduled to be carried out in the month of November 2023, for a span of 7 days. After getting permission from the project coordinator, Asha Chennai, the evaluator started visiting the center to meet the data sources and to get the required information about the project. Data was collected using the developed instruments for Project coordinator, pass out students, students, trainers and parents. Along with these, available documents were also reviewed.

2.6 Data Analysis

The qualitative responses are collected and recorded by the evaluator. This data was translated, transcribed and analysed. Common recurring themes were identified under

each evaluation and sub evaluation question. These identified themes were further analysed with the data collected from the various sources.

2.7 Limitations

The current study has been conducted only in RTC, Seethanjeri according to the convenience of the evaluator.

The next section highlights the results of the three evaluation questions and discusses the key findings of the evaluation.

SECTION 3

RESULTS

RESULTS

This section presents the qualitative analysis of data and the results drawn for each of the evaluation questions of the present study. Results of three evaluation questions and the evaluation questions are presented in this section under 3.1, 3.2 and 3.3. Key findings are discussed at the end of this section.

3.1 Is the RTC, Seethanjeri functioning as intended? If not, why not?

In order to answer this question, the following indicators were used

- No. of students trained
- Attendance of teachers and students
- No. of training sessions
- Training materials

Through its efforts, Asha has provided widespread support for government schools since 2002. Asha Trust realized the need for digital education in rural areas. Asha Chennai planned to develop courses like Makerghat, a model of advanced tinkering labs, developed by Asha Mumbai. But later adapted basic programming and digital library. Learning programming helps the children to shine in their academics which is a research based practice. It helps in improving the computational thinking, overall thinking abilities, progressive breakdown of tasks, etc.

RTC was initially intended to expand the higher secondary level digital education courses offered in schools. A pair of models were tested and assessed.

1. The advanced tinkering lab model was dismissed.
2. The digital library model and computer science courses were thought to be reasonably priced.

Owing to different school-imposed restrictions, an independent centre was created and is currently operational. Since RTC, Seethanjeri opened, the number of students enrolled has increased. Experts in Asha's RightStart project train the trainers using a cascade model. Both the trainers and the students attend the classes regularly.

Students who are unable to attend class will still receive instruction in the specific task they missed before beginning.

In collaboration with section 8 company IITM Pravartak, Asha Trust established RTCs. Although there were plenty of finances available previously, Asha is currently working to raise money and is making every effort to operate all of the RTCs with what is available. The Ford Corporation is also contributing to the endeavour by issuing its used computers to the RTCs. The project coordinator also conducts recurring field visits to verify the RTC is operating as intended.

Classroom resources	8 desktops, 4 laptops
Student teacher ratio	30 : 2 (per day)
Classroom environment	Conducive , active
Teaching methodology	Individual attention, task based learning , learning by doing, goal driven method
Student participation	Active participation in completing tasks
Assessment	Continuous
Peer learning	For doubt clarification

Table 2:RTC Seethanjeri

Thus, it is evident that the RTC, Seethanjeri is functioning as intended.

3.2 To what extent objectives are achieved by the RTC project on improving the digital literacy of the students?

To evaluate this question, the evaluator has used the following indicators:

- Students' performance
- Achievement of learning outcomes of the training
- Students' enrolment
- Number of students certified

In order to answer the above major question, students, parents, trainers and the project co-ordinator were asked few questions.

3.2.1.Has the RTC project addressed the needs of digital literacy of the rural students?

Yes. The project has addressed the needs of digital literacy of the rural students.

Parents stated that,

“few of the families do not have access to smart phones and Internet connections at their homes. In RTC our children are learning about computer free of cost. We are happy that our children are learning computer. We are pleased that our kids are acquiring computer abilities on par with other city students. We are also proud that they are taken to some great institutions like IIT Madras and they are presenting there...”

Higher secondary school students who have opted for Computer science are taught theory- based curriculum in their schools. Among them, practical skills are given less attention. RTC provides the resources necessary for these kids to acquire computer education in a more hands-on manner. As a result, computer education now involves less rote memorization.

3.2.2 Has the RTC project enhanced the computer skills of the students?

Yes. Students' computer abilities have improved significantly as a result of the training they received at RTC. Basic digital literacy instruction was already provided to few children in schools. They were enrolled in advanced courses straight away. Students are free to select the degree of instruction. There were fewer projects chosen for the RTC Impression competition in prior batches. Both the quality and quantity of the student projects that were entered into the competition have now risen. Additionally, the students do well on the final evaluation of the course. They can complete the tasks that the trainers offer them. The pupils feel competent when utilising the computer and completing the assignments. These skills are also used by the students in their schools, they are also able to help the teachers who are not so

confident in handling computers. A small percentage of students have also learned how to troubleshoot computers. When it comes to their proficiency with computers, RTC pupils excel beyond those of private schools. This is evident from the success of students in Kalai Thiruvizha , a district level competition conducted by Government of Tamil Nadu.

Trainer stated,

“ one of the students, is not good at studies in school. But he is very good at computer skills, he has also got selected for RTC Impression competition and was given prize for presenting the best project.”

3.2.3 How many students trained in basic digital literacy, have enrolled for advanced levels (level 2 & 3)? If yes, why? If not, why?

Most of the students belonging to Seethanjeri Government schools are trained in Basic digital literacy in schools. Asha has appointed teachers in these areas with the permission of the school headmasters, for providing basic digital literacy in these schools. So students belonging to Class 8 and on are directly enrolling for programming courses in the RTC. Students who need basic digital skills are also enrolled. The number of students enrolled in each term is mentioned in the table given below:

RTC	Digital Literacy			Programming			Web Development			Total		
	Started	Completed	Projects Selected	Started	Completed	Projects Selected	Started	Completed	Projects Selected	Started	Completed	Projects Selected
Jan - Jul 2022	21	14		13	11					34	25	
Aug-Jan 2023	50	33	2	13	12	2	5	3	0	68	48	4
Feb-July 2023	50	37	3	34	17	3	9	6	1	93	60	7
Aug 2023	39			27			7			80		

Table 3: Number of Enrolment, completion and selected projects

The number of students enrolling in different courses has increased since the RTC's establishment. The majority of students who have finished programming level courses are now enrolled in advanced level courses. This is because of students' interest and motivation. They want to become more proficient with computers. Students are showing up to class on a regular basis now that they are aware of the requirements for receiving the certifications. Individuals who lack confidence in their ability to attend classes consistently have stopped going.

3.2.4. How many students have completed the course and are certified in different levels?

The number of students receiving certification is significantly rising, as seen in the table above, with each passing term. The amount of students becoming certified keeps rising even though the number of enrolled students and the number of certified students diverge. Transportation issues are the cause of the discrepancy between the number of registered students and the number of students certified. A small number of families that live farther away from the RTC are reluctant to bring their children there at night, particularly when the children are girls.

Thus, RTC, Seethanjeri has achieved the objectives of improving the computer skills and digital literacy of the students to a large extent.

3.3. Are there any unintended outcomes attributed to the RTC project? If yes, what are the positive and negative unintended outcomes?

An unintended outcome is defined as the outcome that is not foreseen while planning the programme. In most educational initiatives, in addition to the intended outcomes, some unintended outcomes are also observed. These unintended outcomes can be positive or negative that can be attributed to the programme.

From the data collected from trainers, parents, pass out students and students following themes emerged as positive and/or negative unintended outcomes that are attributable to the RTC. They were asked to describe "other benefits of the project" and "negative effects of the project". They were also asked if they would like to share anything more about the project, in order to get information which was not derived from the interview questions.

Positive outcomes

1. Set up of library

In addition to acting as a digital resource center for children, RTC Seethanjeri has also got a few collection of books, which acts as a library. The students from the surrounding, belonging to different levels of education, sit together to read stories, play some education games, share educational information every evening. A staff is also allotted to monitor these students. In addition to these activities, the female staff also talks with the girl children to know if they have any issues in attending the school, about their personal hygiene etc.

2. Interest developed in primary students

RTC project initially focussed on training secondary level students. But the awareness about RTC in its surrounding has influenced even the primary students to learn basics of computer. The RTC is open till 7:30 p.m. so that even these students can explore computer and learn some basic computer skills.

3. Improved confidence in children

Seethanjeri is one of the rural areas in the district. Most of the students do not even have the access for smart phones. But, because of the training given in RTC, the students are more confidence in using the technology and they are planning to take up computer education for their higher studies. Even parents are willing to send their children for completing more such courses and they are willing to buy their wards laptops.

4. Improved communication skills

Since students participate in RTC Impression presentation competition, some students also told that their communication skills have improved. Before joining RTC, they were not so confident to speak in front of crowd, now they are able to present effectively in public.

5. RTC project as flagship programme

Asha Chennai has been teaching Computer Science to children through various initiatives.

“Asha Chennai has entered into an MOU with the education department of Govt of Tamilnadu on 22nd Sept 2023 to work with 50 teachers in 50 government

schools to facilitate a one year computer science curriculum to any one class of students from 6th to 9th standards. The project will be funded by Amazon under its Amazon Future Engineer program. The project will serve as a pilot to take computer science education to all children in Tamilnadu.”

The MOU also authorizes Asha to continue delivering computer science education through a more detailed curriculum for classes 1 to 8, provide a flavour of computer science to class 6 to 9 students through a set of curated one hour activities and to provide a more detailed CS education to children in classes 6 to 9 to then enable them to take more advanced courses in our centres for free. It provides for training 50 to 60 government teachers working in as many schools to teach a one year Computer Science curriculum to students in any one class between 6th and 9th standards.

Tamilnadu Government has recognised the importance of children learning computer science. One basic lesson in computer science has also been included in every term as part of their Science curriculum for classes 6 and above. However there is a need to introduce a practically oriented curriculum to provide deeper exposure to both digital literacy and programming. That is where this pilot program implemented by Asha comes in. A good practically oriented curriculum that can be executed by motivated teachers without a degree in Computer Science and where the children demonstrate a strong knowledge of Computer Science at the end will be a very good program to introduce to all of Tamilnadu’s students. This is precisely what Asha aims to demonstrate through this pilot program at 50 schools.

Learnings from RTC project has in a way given Asha Chennai an opportunity to reach all the students of the state and to provide them quality computer education .

Negative outcomes

From the data collected from trainers, parents and the project coordinator, no negative unintended outcomes are attributed to the project.

RTC Seethanjeri has, to a large extent contributed to both intended and positive unintended outcomes in students.

SECTION 4

FINDINGS AND RECOMMENDATIONS

FINDINGS AND RECOMMENDATIONS

This section briefly highlights the key findings of the study, discussion of the findings and recommendations. The key findings are discussed for each of the evaluation questions and recommendations based on the findings are offered.

4.1 KEY FINDINGS

4.1.1 Functioning Of RTC Seethanjeri

The evidence reveals that the RTC in Seethanjeri is functioning as intended. This is supported by the data collected from various stakeholders. The training provided by the RTC is yielding the desired outcomes. It has improved the computer skills of the students. The trainers are also continuously trained in order to provide advanced computer courses. Students' interest and participation also gives evidence for successful functioning of the the RTC. The enrolment and number of students being certified has also increased. This is a positive impact of the project RTC.

4.1.2 Attainment Of Objectives Of RTC Project

The data suggests that the objectives of RTC project are attained to a large extent. This is supported by the information regarding the number of students trained and certified in RTC , Seethanjeri .

Some of the barriers for complete attainment of retention are

- Lack of enough number of computers.
- Lack of transport for students
- Parental support
- Lack of guidance for students regarding computer education.

4.1.3 Unintended Outcomes

The positive unintended outcomes attributed to the programme are:

- Apart from the courses, the center has set up of a small library corner, in which children from the surroundings, share some stories, read story books and also play educational games.

- Interests developed in primary students- The project was primary focussed on computer education for secondary school children. But primary school children have also developed interests. They are allowed to learn and play educational games after the completion of tasks by the enrolled children.
- Improved confidence in students- Students who have enrolled have developed confidence in using the computers and also in presenting their projects.
- In addition to the computer skills of the students, their communication skills have also improved.
- Asha Trust Chennai has also signed a MOU with Government of Tamil Nadu, for supporting computer education in government schools.

4.2 Recommendations

- The RTC can be provided with few more computers, as the students find it difficult to complete the tasks in the given time, as 2-3 students share a computer.
- The project can provide a learner module for the courses, which can be used by the students later.
- The project can also focus on providing career guidance to students regarding the scope of the programming courses. This can help them to choose their higher education courses.
- The RTC can be provided with a printer and a projector which will be useful for the trainers to explain the tasks in a more effective way.

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REFERENCES

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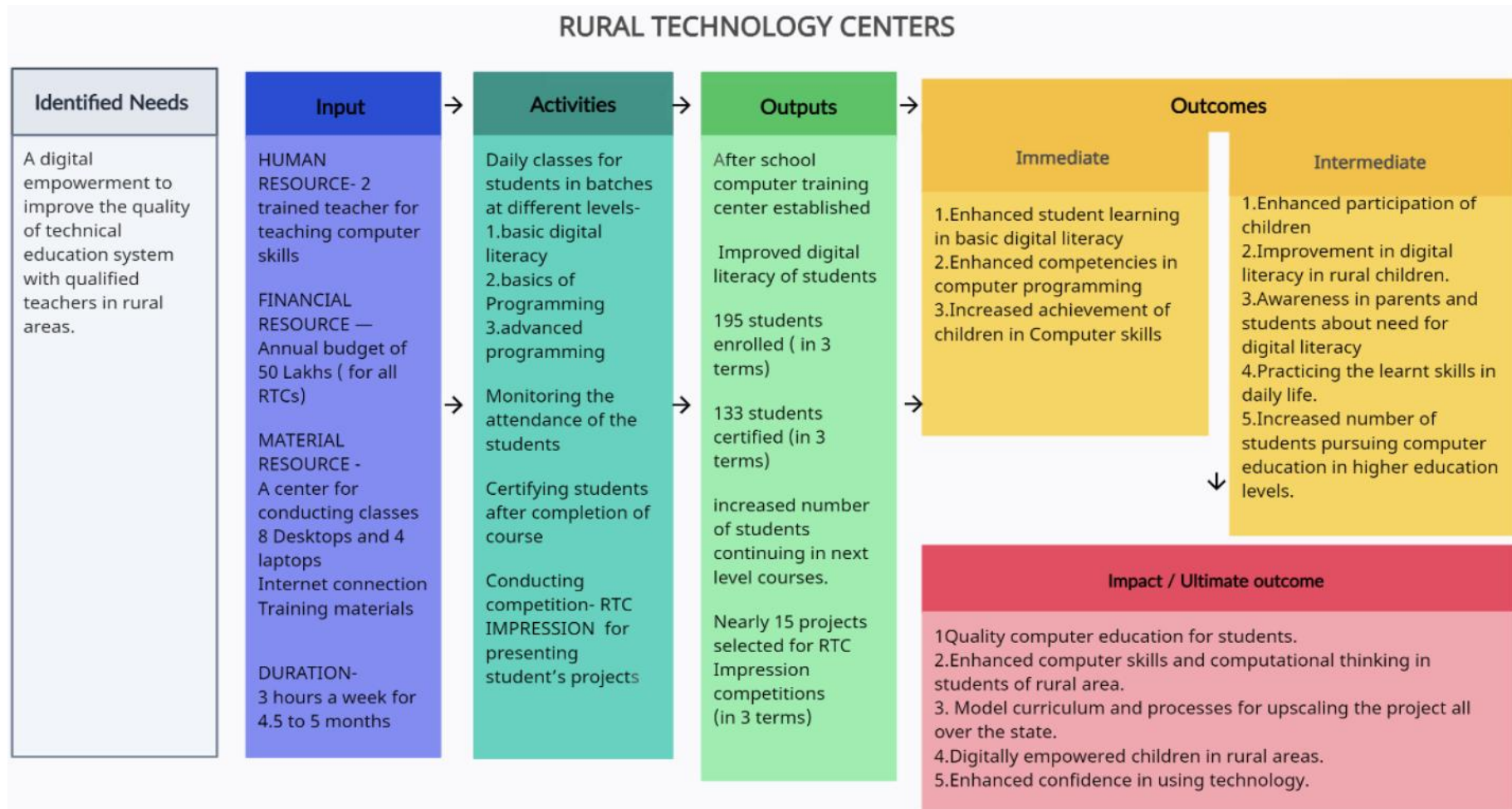
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APPENDICES

APPENDIX A: PROGRAMME LOGIC MODEL



APPENDIX B: EVALUATION FRAMEWORK

EVALUATION QUESTION	INDICATOR	DATA SOURCES	METHODS/ TECHNIQUES
<p>1. Is the RTC functioning as intended? If not, why not?</p>	<ul style="list-style-type: none"> ✓ No. of students trained ✓ Attendance of teachers and students ✓ No. of training sessions ✓ Training materials 	<ul style="list-style-type: none"> ✓ Student records ✓ Students ✓ Trainers ✓ Asha manager 	<p>Case study method</p> <ul style="list-style-type: none"> ✓ Document analysis ✓ Focus group discussion of the Students ✓ Interview of trainer(s) ✓ Interview of Asha manager ✓ Observation of the RTC
<p>2. To what extent objectives are achieved by the RTC project on improving the digital literacy of the students?</p>			
<p>a.Has the RTC project addressed the needs of digital literacy of the</p>	<ul style="list-style-type: none"> ✓ No of students enrolled in the RTC 	<ul style="list-style-type: none"> ✓ Students ✓ Parents 	<ul style="list-style-type: none"> ✓ Interview of parents ✓ Focus group discussion of

rural students?	<ul style="list-style-type: none"> ✓ Awareness in the community ✓ Retention of students in the RTC 	<ul style="list-style-type: none"> ✓ Community ✓ Student records 	<ul style="list-style-type: none"> students ✓ Document analysis
b.Has the RTC project enhanced the computer skills of the students ?	<ul style="list-style-type: none"> ✓ computer skills ✓ Achievement of learning outcomes of the training ✓ Student’s awareness of technology ✓ Test scores of the students ✓ Project completion by the students ✓ Participation in RTC Impression Programme 	<ul style="list-style-type: none"> ✓ Students ✓ Trainers ✓ Parents ✓ Student records 	<ul style="list-style-type: none"> ✓ Focus group discussion of students ✓ Interview of trainers ✓ Interview of parents ✓ Document analysis
e) C.How many students trained in basic digital literacy, have enrolled for advanced levels (level 2 & 3)? If	<ul style="list-style-type: none"> ✓ Re- enrolment of students for successive levels ✓ Student interest 	<ul style="list-style-type: none"> ✓ Passed out students ✓ Student records ✓ Trainers 	<ul style="list-style-type: none"> ✓ Interview of passed out students ✓ Interview of enrolled students ✓ Interview of trainers

yes, why? If not, why?			
f) d.How many students have completed the course and are certified in different levels?	<ul style="list-style-type: none"> ✓ enrolment of students ✓ No. of students being certified ✓ Students' interest and motivation. 	<ul style="list-style-type: none"> ✓ Students ✓ Trainers ✓ Asha manager 	<ul style="list-style-type: none"> ✓ Interview of passed out students ✓ Interview of trainers ✓ Interview of Asha manager
3. Are there any unintended outcomes attributed to the RTC project? If yes, what are the positive and negative unintended outcomes?	All the outcomes which have impacted other than those specified in the programme objectives	<ul style="list-style-type: none"> ✓ Students ✓ Trainers ✓ Asha manager ✓ Parents/community ✓ Student records 	<ul style="list-style-type: none"> ✓ Focus group discussion of students ✓ Document analysis ✓ Interview of parents/ community/ passed out students, trainers and Asha manager ✓ Observation of RTC

