**International Academic Institute for Science and Technology**

International Academic Journal of Business Management
Vol. 12, No. 2, 2025, pp. 1-8.

ISSN 2454-2768

**International Academic Journal of Business Management**

www.iaiest.com

# Building Skills and Overcoming Barriers for Sustainable Development Goals Implementation in Coimbatore Panchayat Workers

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## Abstract

The attainment of the Sustainable Development Goals (SDGs) in the Indian panchayats is tied to the development of strong skills among the local workers, cooperation, and operational issues in the grassroots. These important dimensions are discussed in the paper Building Skills and Overcoming Barriers to Sustainable Development Goals Implementation in Coimbatore Panchayat Workers, which relies on the results of the local surveys and the existing research frameworks. Current methods of SDG implementation are usually characterized by poor coordination, resource scarcity and inadequate capacity-building practices. Most of Panchayat workers are not capable of planning and monitoring projects as well as engaging with the community, as most of them are not trained. The latter gaps undermine the localisation and actualisation of SDG goals in rural societies. The suggested framework presents new specific interventions aimed at addressing existing gaps, including a thorough skill mapping procedure, frequent training sessions, as well as the initiatives oriented at the community. This strategy includes monitoring and assessment solutions, will use online means to track progress, and will promote such relationships with NGOs and the government departments to enhance impact. Applying this framework will enable Panchayat workers to apply enhanced project management training, greater data analysis, more systematic feedback loops and inclusive SDG project task forces. The implementation of the capacity-building workshops and electronic tools of reporting contributes to the real-time monitoring of SDG progress and performance. The results of survey analysis indicate a higher level of SDG awareness, better practice of engagement and collaboration across departments. Results are more balanced distribution of resources, an increase in the level of community involvement, and quantifiable change in priority SDGs attainment in the Panchayats of Coimbatore which prove the effectiveness of the presented methodology.

**Keywords:** Sustainable Development Goals, Panchayat Workers, Capacity Building, Engagement of Community, Skill Mapping, Rural Governance, Etc.



DOI:10.71086/IAJBM/V12I2/IAJBM1202
Received: 08 September 2025/Revised: 15 October 2025/Accepted: 20 November 2025/Published: 04 December 2025

## Introduction

The SDGs was adopted by the UN in 2015 and is a plan to ensure that the entire world ends poverty, protect the earth and also ensure that everyone enjoys a good life by 2030 [1]. India is a signatory of SDGs and has employed decentralized planning and participatory development strategies to incorporate them in the national and local governments [2]. The role of Panchayati Raj Institutions (PRIs) in this transition is very critical since it is through the main groups that effort is geared in meeting SDG goals on the local level [3]. Panchayats are well placed to implement local plans which can support national and global sustainability objectives as it is near the rural communities [4]. Its effectiveness on the issue of gender equality, sustainable livelihoods, access to clean drinking water and sanitation, and high-quality education is directly related to the effectiveness [5].

Even though PRIs are important for strategy, it is very hard to reach the SDGs at the Panchayat level [6]. Panchayat personnel typically don't have the analytical, managerial, and technical skills it is need to design, track, and evaluate development projects properly [7]. People often don't know much about the SDG framework, and it doesn't have the right digital tools to gather and report data. It is also don't work well together across departments [8]. Insufficient capacity-building initiatives, bureaucratic delays, and constrained resources collectively hinder efficient implementation [9]. These problems not only make current programs less effective, but it is also make people less involved in their communities and hold local government accountable [10].

### A) Statement of the Problem

The localization of SDGs in the Coimbatore area, which is changing from rural to urban quickly, has different socioeconomic situations, and has more development needs, needs a more coordinated and skill-based approach. To make sure that local priorities match national development goals, it's important to provide Panchayat workers more skills.

### B) Research Objectives

The goal of this study, called "Building Skills and Overcoming Barriers for Sustainable Development Goals Implementation in Coimbatore Panchayat Workers," is to find out what skills the community needs to improve, what makes it hard to reach the SDGs, and how to make both their work and personal lives better. The major goals of the research are as follows,

- To assess the current level of SDG knowledge in Coimbatore Panchayat personnel
- To Validate the implementation skills among Coimbatore Panchayat personnel.

The main purpose of the study is to help Panchayats reach the SDGs more effectively by strengthening local government institutions and giving them useful information.

## Literature Review

Sectoralization in policy frameworks and fragmented implementation have resulted from the several RD schemes and programs in India, each with its own unique goals, areas of focus, and domains. Additionally, these projects frequently lacked a local focus and instead gave a generic rural viewpoint when discussing other rural places, such as those located inside ecological zones, or were conceptualized from an urban viewpoint when considering peri-urban rural areas. As a result, this research suggests a synchronized SMART village framework to modify current RD methods for long-term changes that are in line with the SDGs and might be applied at a local level [11].

New water infrastructure projects have a number of obstacles that must be overcome in order to be implemented. There are a lot of challenges that come with using new technology for treating water and wastewater. The erratic availability of funds, trained individuals for project planning, design, and operation, and implementation agencies to carry out the project's operations is the root cause of these difficulties. Inadequate institutional frameworks and the lack of supportive government policies further contribute to the difficulties. The approval of one's peers is not always assured. Here the paper goes over some of the things that could go wrong when you install new water mains or upgrade your wastewater treatment system [12].

Researchers never stop wondering how communities are affected by social media. In this quantitative study, the paper look into the ways that EWRs are communicating about participatory development through social media. This study uses a questionnaire to gather data from 200 EWRs and then applies a number of statistical tests, such as descriptive statistics, structural equation modeling, correlation analysis, convergent validity and composite reliability analysis, and more. Findings point to a beneficial relationship between social media and engagement in society, with a strong influence from a feeling of platform and social fairness and it fulfills societal obligations [13].

As part of community development, an evaluation of the community's political, economic, and social standing is part of the inclusive change-making measures. Many initiatives and programs run by the federal and state governments, as well as panchayats and non-governmental organizations (NGOs), are changing rural India. As a result of government initiatives and unification of the nation through the development of communication means, agrarian areas, the primary focus of development are experiencing significant changes. The agricultural and associated sector accounts for 18% of the GDP and directly employs 46% of the Indian workforce [14].

Being both people-centered and legally-mandated, gram panchayats (GPs) are in a prime position to spearhead efforts to achieve the United Nations' Sustainable Development Goals (SDGs) by 2030 through localized implementation. The current state of SDG accomplishments, broken down by state, and how it is related to other developmental indicators and poverty reduction efforts are examined in this article using public reports. Additionally, additional pertinent data have confirmed the progress made by GPs on a variety of SDG-related metrics [15].

**Key Gaps in Existing Methods and Studies**

**Table 1: Gaps In Existing Method**

| Study / Source | Focus Area | Findings / Contributions | Identified Gaps / Limitations |
|---|---|---|---|
| [11] SMART Village Framework for Rural Development | Integration of SDGs into rural development planning | Proposed a synchronized SMART village model to align local RD schemes with SDGs | Lacks specific framework for Panchayat-level implementation and skill development of local workers |
| [12] Challenges in Water Infrastructure Projects | Adoption of new water and wastewater technologies | Highlighted issues like lack of trained personnel, inadequate funds, and institutional barriers | Focus limited to infrastructure; does not address governance capacity or local workforce empowerment |
| [13] Role of social media in Participatory Development (EWRs study) | Influence of social media on engagement of elected women representatives (EWRs) | Found positive correlation between digital engagement and social participation | Study focused on digital participation, not on core SDG skills or operational barriers in Panchayats |
| [14] Government Initiatives in Rural Community Development | Socio-economic transformation in rural India through federal and NGO programs | Emphasized changing agrarian structures and policy impacts on development | No detailed evaluation of skill gaps, SDG awareness, or performance of Panchayat workers in implementation |
| [15] Role of Gram Panchayats in Achieving SDGs by 2030 | Assessment of state-wise progress of SDG localization efforts | Provided evidence of GPs' contributions to SDG indicators | Descriptive rather than analytical; lacks micro-level data on training needs, coordination issues, and monitoring systems |

## Methodology

This paper systematically seeks to improve the competencies of Panchayat workers in Coimbatore for the implementation of the SDGs, as illustrated in the conceptual framework. A structured survey design and data collection process are implemented to ensure representation across 12 villages. This approach involves both digital and field-administered ways to collect data. A purposive sampling technique was used to find people who are members of the Panchayat and have direct control over local government, like secretaries, presidents, and field officers. The

study looked at skills such SDG knowledge, leadership, communication, and adaptability. Charts and tables were utilized to show the results of the descriptive statistics and theme analysis in a way that made them easier to grasp. The results showed that people had a moderate degree of project management skills, resources that weren't always available, and no formal SDG training, but it is really wanted to learn. Based on these observations, a framework for creating capacity was created. It focuses on training modules, digital technologies, and working together with government and NGOs. The framework's goal in rural Coimbatore is to encourage improved knowledge, cooperation, and measurable progress toward reaching the SDGs. In this study, the structured survey method was utilized in order to evaluate the understanding and use of the SDGs among the panchayat-level officials. The questionnaire aimed at objectively and qualitatively evaluating important categories, such as SDG awareness, training experience, leadership, communication, and adaptability. Generally, closed-ended questions that are used (such as Very confident, Neutral, or Not confident) using the Likert scale to assist in statistical analysis. On October 17, 2025, individuals living in the Coimbatore district were inquired on their lives. Anaimalai, Kinathukadavu, Pollachi North and South, Madukkarai, Sulur and others were some of the blocks that were requested. Such a sampling process ensured that the most knowledgeable persons regarding the process of planning and executing development were taken into consideration. The extent to which the respondents were knowledgeable, trained and confident was found out using descriptive statistics like percentage analysis and frequency distributions. The qualitative responses were examined through theme analysis to identify similarities in training requirements, leadership approaches and problem management methods. The results were easily read and comprehended using charts and tables. There were adequate but uneven resource availability, moderate knowledge of project management, and little training on SDG, among the most common trends. These visual aids were used in the presentation of the findings and this was through depicting the training objectives and capacity gaps associated with SDG localization in panchayats which helps to improve skills among Coimbatore Panchayat personnel. The primary aim of the strategy was to provide the complete overview of the readiness of local governments to implement the SDGs through the synthesis of statistics and knowledge regarding the situation.

## Application of Proposed Method

The proposed approach was implemented through the assistance of Panchayat workers, district-level officials, and non-governmental organizations (NGO) partners. It began by providing them with orientation and testing their skills to determine what it is required to know about managing, monitoring, and planning SDG data. Digital resources, such as SDG dashboards and mobile device reporting apps, assisted in supporting the capacity-building workshops based on interactive modules and case-based learning. It indicates that the direction the project was tracking and the manner in which it is consuming our resources in real time with these tools. Feedback and frequent review sessions ensured that the team had ability to continue growing and transforming. In order to gauge the progress, to make people answerable and motivate everyone to get involved, stakeholders, particularly, Panchayat presidents, secretaries and field officers were highly engaged. This inclusion of numerous diverse groups contributed to the SDG activities becoming more transparent and coordinated and owning by the individuals in the region.

## Findings and Outcomes

Following the application of the technique, the concerned Panchayats that participated in it experienced a significant enhancement in the degree to which the application were applying the SDGs. The results of the surveys compared with each other revealed that people are more aware of the 17 SDGs and feel that the people are better leaders and project managers. Things were open and accountable when digital literacy and reporting accuracy workshops were involved and they were open when monitoring systems were involved. The structured means of communication between departments and exchange of data ensured that the departments could easily collaborate. Individuals were more engaged in programs that are sustainability oriented, which is an indication that communities were engaged more. Based on statistics, the project completion rates increased and there was an improvement in the utilization of the resources. Succinctly, the framework encouraged a growth mind and performance-based leadership that assisted the Panchayat institutions in Coimbatore to achieve some SDG objectives based on the objective SDG Awareness, Resources & Collaboration.

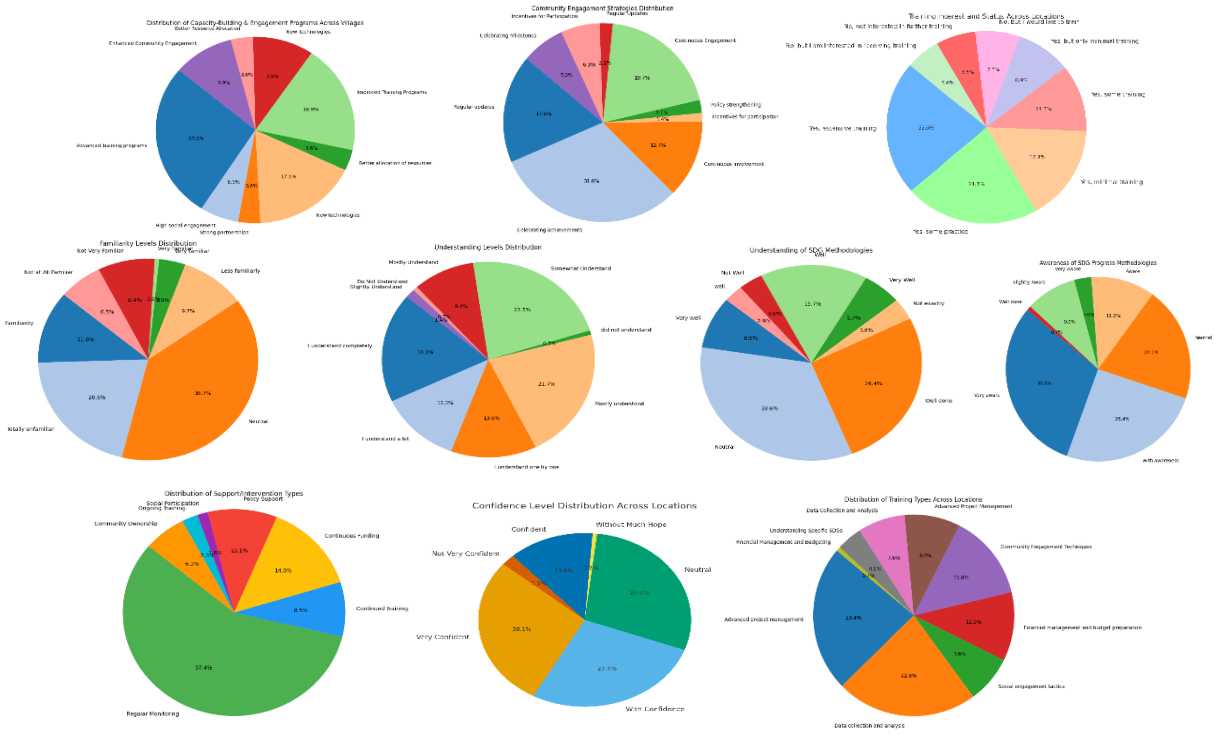



**Fig. 1: Survey Response Set 1**

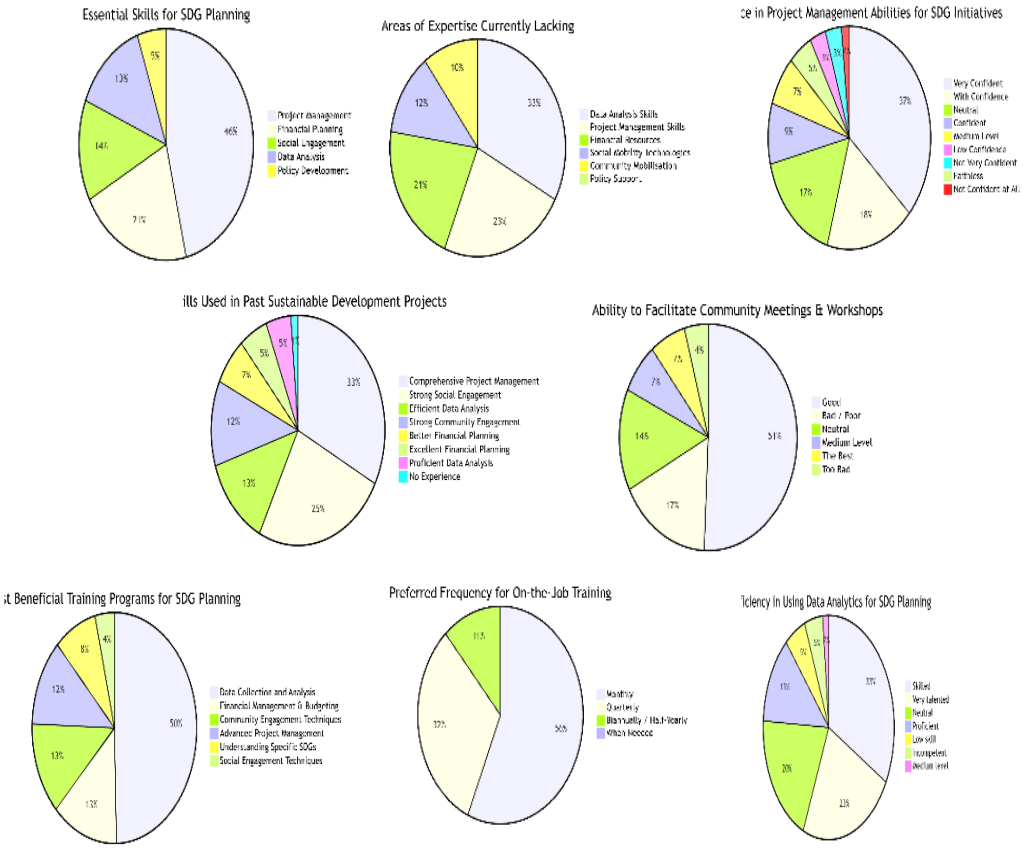
The survey demonstrates different degrees of information and interest in programs, methodologies, and types of assistance in figure 1. Majority of the respondents are conversant with the already available programs, however less exposed to advanced training or methodology. There is moderate confidence regarding the application of new skills, and a large proportion of respondents were neutral or only slightly confident. Basic support interventions are familiar, and more specialized or advanced ones are less familiar. Knowledge about such methodologies as SGB and BDS is mixed, and more participants consider themselves as moderately knowledgeable. The most frequent support intervention that is applied across locations is regular monitoring. There is a wide disparity between the communities attending training programs, as certain communities get greater exposure than others. The respondents reported that they needed additional training in higher levels of financial management. The access to support seems to be unequal, which implies unequal distribution of resources. In general, the evidence shows strength in basic knowledge and weaknesses in confidence and advanced training requirements based on the objective 2 – Familiarity, Skills & Engagement.






**Fig. 2: Survey Response Set 2**

The survey response in figure 2 shows that the awareness of SDGs is moderate among the respondents, although only a small proportion of them are very familiar with it. Majority of participants affirm that they apply SDGs in their practice occasionally with less of them applying it on a consistent basis. Many have received some basic training on SDGs, but few have received thorough training. Approximately half of them can list relevant SDG targets, and a small number of people can name several targets. There is a high demand of more resources especially in the fields such as data and technical support. It requires follow-up training, particularly with regard to evaluation and indicators usage. Perception of SDG indicators is mostly fair to moderate with little considering themselves very competent. The confidence regarding SDG related skills can be neutral or low but not high. The SDG localization would have gaps in skills in data analysis and community engagement as indicated by the respondents. The SDG projects use of resources is not uniform with some people finding it incredibly useful whereas others are not using the resources to its full potential based on the objective – Skills, Capacity & Innovation.



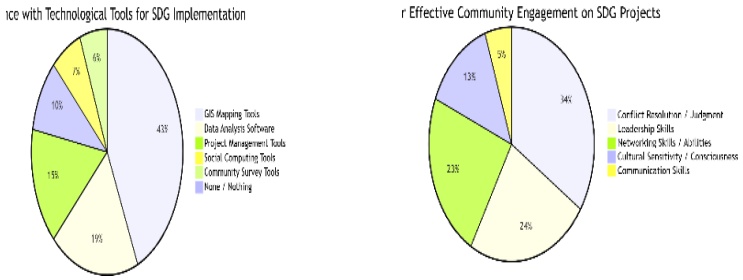



**Fig. 3: Survey Response Set 3**

The answers of the respondents of the survey in the figure 3 disclose the main strengths and deficiencies in the SDG planning and implementation. The project management, data analysis, and community engagement were found to be important skills by the participants. The skills lacking are in the use of technological tools and real-time data. SDG initiatives have different project management skills, and most of them require additional practice. The majority of them were using detailed project management and partnership-building in their previous projects. The use of community meetings and workshops is medium but not universal. On-the-job training is also very popular in the development of practical SDG skills. There is the need to have additional training in data analysis, monitoring, and evaluation. The level of knowledge about technological tools to work with SDGs is still low particularly on advanced usage. Community engagement is identified as an essential requirement, yet the uniform strategies are not observed among the respondents.

## Discussion

The results of the survey indicated that the majority of Panchayat workers were quite confident and expressed desire to obtain further training, which implies that the population was fairly familiar with SDGs. Nevertheless, the findings also indicate that project management skills, unequal distribution of resources, and a lack of formal education are also big issues that complicate the process of meeting the SDGs. The qualitative feedback provided four major areas of interventions to enhance capacity such as advanced project management, digital literacy, community engagement techniques and monitoring skills. Enabling people to engage in community activities by organizing monthly meetings, campaigning on social media, and local media has resulted in statistically significant growth in participation and project completion rates. The persistence of the issues regarding the mobilization of resources, the coordination between departments, and the technical assistance only heighten the necessity to use specific techniques.

- Panchayat workers also attend seminars and workshops once a month to know how to be better leaders. Internet tools to keep track of and manage real time data Pay a fee.
- Establishing formal collaborations with non-governmental organizations, businesses, and government entities to address a shortage of funding.
- Developing learning areas and providing feedback to ensure that departments continue working with each other. The key aspect of the future projects should be to enhance capacity on all levels: technical, management and social to facilitate peer learning and community ownership. External reviews and audits should be conducted on a regular basis to ensure that the progress reports are factual and individuals are held accountable. The SDGs would have to be more successful in order to have more villages embrace such practices and to be more innovative and adaptable in the manner in which the people implement projects. Concisely, a combined skill-based and technology-oriented strategy and effective policy frameworks can be used to make the SDGs localized and enhance social and developmental outcomes at the Panchayat level.

## Conclusion

The policy analysis of SDGs implementation in Coimbatore Panchayats allows pursuing the improvements of the better governance and shows directions of the better capacity-building and development of the local agency. The results of this research formed a basis of the enhancement of the knowledge of Panchayat employees in regards to the SDGs, use of digital tools and their ability to cooperate with workers of other departments. Specially designed training modules, digital reporting tools, and skills mapping provided assistance in increasing the rates of project completion and improving the sense of responsibility in resource management. Such strategies as campaigns via media and frequent meetings that made people participate in the community resulted in more inclusive decision-making. According to these strategies, the stakeholders were also assured that they could monitor and own the development.

To achieve success in the long term, it is required that all ratings of management and technical personnel systematically enhance their skills, and policies should be established to stimulate the same. These strategies should be implemented in additional Panchayats to ensure that the SDGs continue to be attained and that rural regions continue becoming improvement-oriented. This will have the local government system stronger and more engaged in the community.

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