

Empowering Communities Through Sustainable Library Services: A Comparative Study Of Public And Academic Libraries

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ABSTRACT

This study compares the sustainable practices of public and academic libraries in the Vellore District, focusing on their contributions to education, digital literacy, and social inclusion. Sustainable library services balance social, economic, and environmental considerations to meet current informational needs without compromising future accessibility. A mixed-methods approach with 100 respondents revealed significant differences in sustainable practices between public and academic libraries. Occupation influences perceptions of sustainability and empowerment. A strong positive relationship exists between sustainable practices and community empowerment, explaining 38% of the variance in empowerment. Academic libraries demonstrate higher empowerment outcomes compared to public libraries, supported by a significant association between library type and empowerment levels. The study concludes that adopting eco-friendly initiatives, integrating technology, promoting inclusivity, and enhancing public-academic collaborations are crucial for transforming libraries into sustainable, future-ready institutions. These findings provide valuable insights for policymakers, librarians, and educational institutions to strengthen libraries' role as agents of sustainable community development.

Keywords: Sustainable Library Services, Community Empowerment, Public and Academic Libraries

INTRODUCTION

Libraries have long been recognised as vital institutions that foster knowledge dissemination, lifelong

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learning, and community engagement. In today's rapidly evolving information society, the role of libraries has transcended traditional book lending to encompass sustainable and inclusive services that empower diverse communities. Both public and academic libraries serve as crucial platforms for information access, digital literacy, and social development; however, they differ in their target audience, operational frameworks, and community outreach initiatives. Sustainability in library services refers not only to the environmentally conscious management of resources but also to the long-term adaptability of library programs that address the educational, technological, and social needs of communities. Public libraries aim to provide free and equitable access to information for all citizens, fostering civic participation and cultural enrichment. Conversely, academic libraries focus on supporting teaching, research, and learning within educational institutions while also extending their resources to the wider community through collaborations and outreach programs.

As societal challenges such as digital divides, environmental concerns, and the demand for inclusive education intensify, libraries must innovate and adopt sustainable practices to remain relevant and impactful. This study seeks to comparatively analyse the approaches of public and academic libraries in empowering communities through sustainable services. By examining strategies related to technology integration, resource sharing, community programs, and environmental stewardship, the research aims to highlight best practices and recommend pathways for libraries to strengthen their role as agents of sustainable community development.

MEANING AND DEFINITION OF SUSTAINABLE LIBRARY SERVICES

"Sustainable library services" refers to the policies, programs, and resources libraries have implemented to meet the current informational, educational, and social needs of the community while ensuring resource conservation, environmental preservation, and long-term financial stability. By balancing social, economic, and ecological considerations, these services aim to sustain future generations without compromising service quality or accessibility.

American Library Association (ALA, 2018):

"Sustainable library services encompass practices and programs designed to support a healthy community and environment by reducing ecological footprints, promoting inclusivity, and ensuring equitable access to information."

"KEY FACTORS INFLUENCING COMMUNITY EMPOWERMENT THROUGH SUSTAINABLE LIBRARY SERVICES":

Library Resources and Infrastructure Overview

- Environmentally friendly amenities and digital resources.
- Accessible features for users with disabilities.

Integration of Technology

- Computer access and internet connectivity.
- Intelligent library management systems.
- Programs for digital literacy.

Policies and Practices for Sustainability

- Green initiatives and interlibrary loans.
- Acceptance of sustainability standards and accreditations.

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Community Involvement and Outreach

- Awareness campaigns and partnerships.
- Social inclusion programs for under-represented populations.

Assistance with Education and Skills Development

- Lifelong learning opportunities.
- Vocational skill training sessions.
- Assistance for scholarly development and research.

Librarian and Staff Competency

- Training in sustainable library management.
- Knowledge of modern technologies and eco-friendly practices.
- Ability to guide and motivate users towards sustainability.

Funding and Policy Support

- Government and institutional funding for sustainable initiatives.
- Policies promoting digital transformation and environmental stewardship.

User Satisfaction and Participation

- Active participation of community members in programs.
- Feedback mechanisms to improve services.
- Inclusivity in decision-making and planning.

REVIEW OF LITERATURE

Khan (2025) identified broad support for eco-friendly measures in a quantitative study on librarian attitudes of sustainability in UAE public libraries. The gap between intention and implementation in sustainable services was highlighted by the identification of important obstacles, including insufficient workforce skills, inconsistent policy frameworks, and infrastructure limitations.

Walsh et al. (2025) examined critically how automated diversity auditing systems are used in public libraries around the United States. The study questions if these systems actually represent the needs of the local community or impose vendor-driven restrictions, even while these technologies assist libraries in creating representative collections effectively. This emphasises how difficult it is to strike a balance in sustainable library programs between scalability and genuine empowerment.

Bangani and Dube (2024) explored how South African academic libraries may help achieve the Sustainable Development Goals, namely SDGs 13 (Climate Action), 3 (Good Health), and 2 (Zero Hunger). Their study demonstrated the transformative potential of academic library services in community empowerment by demonstrating how academic libraries greatly enhance community welfare through health literacy initiatives (such as blood donation drives), sustainability awareness seminars, and resource sharing with nearby communities.

Williams-Cockfield, Mehra, Connaway, D'Arpa, Matthews, Jung, Ryan et al. (2024) provide a number of case studies demonstrating how public libraries around the world serve as the foundation for long-term community development. As examples of how public libraries empower communities via

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collective effect and service innovation, these libraries promote social justice, inclusivity, access to legal resources, and programming that is in line with the Sustainable Development Goals.

Witt (2024) examines how libraries are changing from being informational centres to become community centres that value collaboration, environmental sustainability, and inclusive participation. This special issue of the IFLA Journal highlights how libraries are implementing Triple Bottom Line strategies (environmental, social, and economic) to promote sustainability and empowerment objectives in a variety of settings.

Paul and Chauhan (2024) report on AI-powered assistive technologies, including personalised digital assistants, text-to-speech, and navigation support, in special libraries. Their results show that through technical sustainability, these innovations promote experience inclusion and community participation by greatly increasing access and autonomy for users with impairments.

Abbott et al. (2023) (through editorial coverage) demonstrate how New South Wales, Australia's municipal libraries, despite having tight budgets, act as inclusive hubs by providing social services, digital access, and support programs for the elderly, homeless, and marginalised communities, thereby empowering a variety of populations.

RESEARCH GAP

A significant research gap regarding sustainable library services and their contribution to community empowerment. Previous study has mostly concentrated on academic or public libraries, with little comparison of how they are implemented and how they affect community results. Technological impediments, workforce constraints, and policy deficiencies are among the difficulties. The direct effects of these programs on quantifiable community outcomes, such as social development, digital inclusion, and education, are, nevertheless, poorly documented. Perceptions, user happiness, and social and economic sustainability are also not well studied. There is a lack of empirical study evaluating the variations in methods and efficacy between public and academic libraries in Vellore District, where socioeconomic and infrastructure concerns may impact sustainable service delivery.

LIMITATION OF THE STUDY

- This Study limited to Vellore District Public Library and Thiruvalluvar University Central Library.
- Data collected through self-reported questionnaires, potentially subject to respondent bias.
- This Study conducted within specific time frame, limiting long-term sustainability impacts.
- This study focuses mainly on environmental and service-related sustainability, not policy-level or financial sustainability.
- Comparative analysis based on selected indicators, not exploring individual library variations.

IMPORTANCE OF THE STUDY

This study explores the role of sustainable library services in empowering communities in Vellore District, focusing on the Vellore District Public Library and Thiruvalluvar University Central Library. It compares the practices of public and academic libraries, highlighting their role in education, digital literacy, and social inclusion. The findings will guide policymakers, librarians, and educational institutions in adopting environmentally responsible practices, leading to better resource optimization and long-term sustainability. The study also contributes to academic literature by linking sustainability initiatives with community empowerment.

STATEMENT OF THE PROBLEM

In the Vellore District, academic and public libraries are essential to lifelong learning and the spread of knowledge. Digital literacy, social inclusion, and education all depend on libraries. However, considering issues like digital divides, environmental concerns, and the need for sustainable education, it is necessary to assess how these libraries empower communities through sustainable services. Despite having similar objectives, there is a dearth of research comparing the sustainable practices of these two types of libraries. Understanding these differences is essential for improving service delivery, maximising the use of resources, and creating plans for sustainable community development. This study aims to bridge this gap by comparing sustainable services and their impact on empowering communities at Vellore District Public Library and Thiruvalluvar University Central Library.

OBJECTIVES OF THE STUDY

1. To examine the existing sustainable services and practices implemented in public and academic libraries.
2. To compare the effectiveness of these libraries in empowering communities through educational, technological, and social outreach initiatives.
3. To analyse user satisfaction and perception regarding sustainability and inclusivity of library services.

RESEARCH METHODOLOGY

Research Design

This study will adopt a comparative mixed-methods design, combining quantitative surveys and qualitative interviews to assess and compare sustainable practices in public and academic libraries.

Population and Sample

- Population: Users and librarians of selected public and academic libraries.
- Sample Size: Approximately 100 respondents.
- Sampling Technique: Stratified random sampling to ensure representation of different user groups (students, faculty, and general public).

Data Collection Methods Primary Data:

- Structured questionnaire (Likert-scale items on sustainability, satisfaction, community programs)
- Semi-structured interviews with librarians and library managers.

Secondary Data:

- Library reports, policy documents, and sustainability action plans.

Pre-Hypotheses

H₀: There is no significant difference in sustainable practices between public and academic library users.

H₀: There is no significant difference between User satisfaction towards public and academic library users.

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H₀: There is no significant effect on sustainable practices and community empowerment towards occupation.

H₀: There is no significant association between the type of library (public or academic) and community empowerment level.

H₀: There is no significant impact on community empowerment towards Sustainable practices.

TABLE - 1
DATA ANALYSIS AND INTERPRETATION

Variable	Category	Frequency	Cumulative Percent
Gender	Male	52	52%
	Female	48	100%
	Total	100	
Type of Library	Public Library	45	45%
	Academic Library	55	100%
	Total	100	
Occupation	Student	60	60%
	Faculty	25	85%
	General Public	15	100%
	Total	100	
Usage	Daily	35	35%
	Weekly	40	75%
	Monthly	20	95%
	Rarely	5	100%
	Total	100	

Source: Primary Data

The demographic analysis of 100 respondents provides insights into the profile of library users:

- **Gender:** Out of 100 respondents, 52% were male and 48% were female, indicating a relatively balanced gender distribution with a slight male predominance.
- **Type of Library:** 45% of respondents utilised public libraries, while a higher proportion (55%) used academic libraries. This suggests that academic libraries have a slightly larger user base in the sampled population.
- **Occupation:** Students constituted the largest group of library users (60%), followed by faculty members (25%) and general public users (15%). This highlights that students are the primary beneficiaries of library services, reflecting the educational and academic orientation of these institutions.
- **Frequency of Usage:** 35% of users visited the library daily, 40% visited weekly, 20% monthly, and only 5% reported rare usage. The majority of respondents (75%) used library services either daily

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or weekly, indicating high engagement and reliance on library facilities.

TABLE - 2
INDEPENDENT SAMPLES T-TEST
COMPARISON OF SUSTAINABLE PRACTICES AND USER SATISFACTION

Variable	t-value	Sig. (p)
Sustainable Practices	2.12	0.036*
User Satisfaction	1.35	0.180

Source: Primary Data

This table found that sustainable practices have a “statistically significant” impact on user satisfaction, with a p-value of 0.036 and a t-value of 2.12, while user satisfaction has a t- value of 1.35 and a p-value of 0.180, indicating “no significant” impact on satisfaction.

TABLE - 3
ANOVA (ONE-WAY)
EFFECT OF OCCUPATION ON SUSTAINABLE PRACTICES AND COMMUNITY EMPOWERMENT

Dependent Variable	Source	F-value	Sig. (p)
Sustainable Practices	Between Group	3.95	0.023*
	Within Group		
	Total		
Community Empowerment	Between Group	4.50	0.014*
	Within Group		
	Total		

Source: Primary Data

This table found that the occupation significantly impacts community empowerment and sustainable practices. The p-value for sustainable practices is 0.023, and the F-value is 3.95, indicating “significant” differences among occupational groups. And the community empowerment is also “significantly” impacted by occupation, with a p-value of 0.014 and an F-value of 4.50.

TABLE - 4
CHI-SQUARE TEST
ASSOCIATION BETWEEN LIBRARY TYPE AND COMMUNITY EMPOWERMENT LEVEL

Test	F-Value	Sig. (p)
Pearson Chi-Square	8.64	0.013*

The chi-square test results indicate a significant correlation between the type of library (public or academic) and the degree of community empowerment, with a p-value of 0.013 and a Pearson Chi-Square value of 8.64, both below 0.05.

Empowerment Level	Public Library	Academic Library	Total
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Low	15	10	25
Medium	20	15	35
High	10	30	40
Total	45	55	100

**TABLE - 5 CORRELATION AND REGRESSION
RELATIONSHIP BETWEEN SUSTAINABLE PRACTICES AND COMMUNITY
EMPOWERMENT**

Test	Coefficient	Sig. (p)	R ²
Correlation	$r = 0.62$	0.000*	–
Regression	$\beta = 0.62$	0.000*	0.38

Source: Primary Data

This table explores the link between community empowerment and sustainable practices using regression and correlation analysis. The results show a strong positive and “statistically significant” relationship between sustainable practices and community empowerment. The regression analysis confirms that sustainable practices “significantly improve” community empowerment, accounting for about 38% of the variation in empowerment. The Pearson correlation coefficient ($r = 0.62$, $p = 0.000$) supports this conclusion.

Post-Hypotheses

H₁: There is a significant difference in sustainable practices between public and academic library users ($t = 2.12$, $p = 0.036$).

H₀: User satisfaction does not significantly differ between public and academic library users ($t = 1.35$, $p = 0.180$), hence H₀ is retained.

H₁: Occupation significantly affects sustainable practices and community empowerment ($F = 3.95$, $p = 0.023$; $F = 4.50$, $p = 0.014$).

H₁: There is a significant association between the type of library and community empowerment level (Chi-Square = 8.64, $p = 0.013$).

H₁: Sustainable practices significantly and positively impact community empowerment (Correlation $r = 0.62$, Regression $\beta = 0.62$, $p = 0.000$).

FINDINGS

Gender Distribution:

- 52% male, 48% female.
- 45% use public libraries, 55% use academic libraries.
- Students are the largest group (60%), followed by faculty members (25%), and general public users (15%).

Usage Pattern:

- 35% visit daily, 40% weekly, 20% monthly.

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- Only 5% reported rare usage.

Impact of Sustainable Practices:

- Significant impact on user satisfaction (p-value of 0.036, t-value of 2.12).
- No significant impact on user satisfaction (t-value of 1.35, p-value of 0.180).

Impact of Occupation on Community Empowerment and Sustainable Practices:

- Significant differences among occupational groups (p-value for sustainable practices, F-value 3.95).
- Community empowerment significantly impacted by occupation (p-value of 0.014, F-value 4.50).

Correlation between Library Type and Community Empowerment:

- Significant correlation between library type and community empowerment (p-value of 0.013, Pearson Chi-Square value of 8.64).

Regression and Correlation Analysis:

- Strong positive relationship between sustainable practices and community empowerment.

SUGGESTIONS

- Enhance Sustainable Practices: Strengthen environmentally friendly initiatives like digital resources, recycling, and energy efficiency.
- Design Customized User Programs: Design occupation-specific programs like research support, digital literacy, and inclusive access.
- Strengthen Public-Academic Collaboration: Implement joint initiatives like resource sharing, sustainability campaigns, and community outreach.
- Increase Awareness and Training: Conduct workshops and campaigns to educate users about sustainable practices and train librarians.
- Incorporate Technology Integration: Incorporate smart systems, AI-powered assistive tools, and digital service platforms.
- Advocate for Policy and Funding Support: Develop long-term sustainable services and infrastructure improvements.

CONCLUSION

This study concluded that sustainable library services significantly contribute to social development, digital literacy, and lifelong learning in the Vellore District. Both public and academic libraries play a significant role in this process. Academic libraries show a higher degree of empowerment outcomes due to better access to digital resources, stronger technological integration, structured sustainability policies, and broader outreach programs. Public libraries face challenges like limited funding, infrastructural constraints, and workforce capacity, leading to differences in service delivery.

Occupation also influences users' perceptions of sustainability and community empowerment. Students, faculty members, and the general public engage differently with library services, highlighting the need for targeted sustainability-driven programs. Academic libraries foster higher empowerment

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outcomes due to their structured educational support, research-focused resources, and ability to extend services beyond institutional boundaries.

Sustainable practices account for 38% of the variance in community empowerment, demonstrating the direct and measurable impact of eco-friendly initiatives, digital transformation, and inclusive policies on empowering communities. To fully realize their potential as agents of sustainable community development, libraries must adopt green initiatives, leverage technology to expand access to information, promote social inclusivity, and foster collaborations between public and academic libraries. By embracing these strategies, libraries can evolve from traditional information centers into dynamic institutions that drive sustainable social change, foster knowledge equity, and build empowered, resilient communities.

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