International Journal of Human Research and Social Science Studies

ISSN(p): 3050-547X, ISSN(e): 3050-5488

Volume 02 Issue 07 July, 2025

DOI: https://doi.org/10.55677/ijhrsss/02-2025-Vol02I7

Page No : 428-434

Sustainable Management of School Development Projects: Benefits and Constraints in Public Secondary Schools in Sumbawanga Municipality, Tanzania

Jordan Nicholaus Haule*[1], Prof. Daniel Mkude[2], Dr. Eugenia Wandela[3]

[1,2,3]Jordan University College,

P.O Box 1878, Morogoro-Tanzania

ABSTRACT: This study explored the benefits and constraints of sustainable management of school projects in public secondary schools within Sumbawanga Municipality, Tanzania. Employing a convergent mixed methods approach, the study collected both quantitative and qualitative data from a sample of 253 respondents, including 234 teachers selected through simple random sampling and 19 purposively selected heads of schools. Data collection tools included questionnaires, semi-structured interviews, and direct observations, while analysis involved descriptive statistics and thematic content analysis. Findings revealed that sustainable management of school projects leads to significant benefits, such as reduced reconstruction costs, longer-lasting infrastructure, and improved efficiency in the provision of quality education. Teachers' active involvement in project oversight emerged as a critical factor in maintaining the usability and impact of these facilities. However, several constraints were identified, including inadequate and delayed funding, low community participation, teacher workload, and a lack of technical expertise in schools. These challenges undermine the long-term sustainability and effectiveness of school infrastructure. It recommends increased budgetary support, community sensitization, capacity building for teachers, and provision of technical personnel as strategies for improving the sustainability of school projects. These findings offer important implications for policymakers and education stakeholders in optimizing infrastructure investments to support long-term educational development.

Corresponding Author:
Jordan Nicholaus Haule

KEYWORDS:
Education Infrastructure, Teacher Motivation, Sustainability, Public Secondary Schools, Project Management, and School Projects.

1. INTRODUCTION

Education is widely acknowledged as a cornerstone of individual empowerment and national development, playing a critical role in driving social, economic, political, and cultural transformation (World Bank Group, 2023). Globally, initiatives such as the Education for All (EFA) movement, launched in 1990 by UNESCO, UNDP, UNFPA, UNICEF, and the World Bank, reflect a shared commitment to ensuring access to quality basic education for all. In Tanzania, education is not only a fundamental right but also a national development priority aimed at improving literacy, reducing poverty, and promoting sustainable growth (Guilherme, 2016).

The implementation of free education policies in Tanzania has significantly increased enrollment in public secondary schools, particularly in underserved regions like Sumbawanga Municipality. This surge has created an urgent need for improved school infrastructure, including classrooms, laboratories, libraries, and dormitories, to support growing student populations (Mwakisambwe & Msoka, 2024; Zickafoose et al., 2024). In response, the Tanzanian government has made substantial investments in educational infrastructure. For example, in the 2021–2022 fiscal year alone, public schools received TZS 152.1 billion for classroom construction, TZS 17.5 billion for laboratories, and TZS 8.8 billion for dormitories (UNESCO, 2022).

While these investments have alleviated some infrastructure challenges, ensuring the sustainable management of these projects remains a critical concern. Sustainability refers not just to the completion of construction but to the ongoing use, maintenance, and community ownership of educational facilities. Study by Steinhoff (2024) highlights that sustainability is heavily influenced by stakeholder engagement, particularly that of teachers who are directly involved in the day-to-day operations of schools. However,

low teacher motivation, driven by factors such as poor working conditions, heavy workloads, inadequate compensation, and limited participation in school decision-making, poses a substantial challenge to effective project management and long-term sustainability (Mnjokava, 2024; Swai, 2022).

Although previous studies such as Mathew (2017) and Mnjokava (2024) in Tanzania have explored the relationship between teacher motivation and academic performance, there remains limited empirical focus on how motivation influences teachers' roles in managing and sustaining school projects. This gap is particularly relevant in the context of Sumbawanga Municipality, where systemic and environmental challenges may further affect sustainability outcomes.

This article therefore aims to examine the benefits and constraints associated with the sustainable management of school projects in public secondary schools in Sumbawanga Municipality.

1.1 Objectives of the Study

i. To examine the benefits associated with sustainable management of school projects in enhancing educational infrastructure and service delivery in public secondary schools.
ii. To identify key constraints hindering the effective and sustainable management of school projects in public secondary schools.

2. LITERATURE REVIEW

Sustainable management of school projects in developing regions has garnered growing scholarly interest due to its critical role in securing the long-term benefits of public educational investments. Research across various contexts highlights key factors influencing the success of community-based initiatives, including stakeholder participation, resource management, and oversight mechanisms. This review focuses on empirical studies conducted in rural Tanzania to shed light on how these dynamics shape project outcomes in educational settings.

Mrangu (2018) conducted a study in Bagamoyo District, Tanzania, to identify the key factors influencing the sustainability of Community-Based Projects (CBPs) in rural areas. The results showed that community involvement (Beta = .12, p = .04), monitoring and evaluation (Beta = .18, p = .05), and financial management (Beta = .05, p = .04) together accounted for 55% of the variance in CBP sustainability. A statistically significant relationship was found between these variables and project sustainability ($F(3,146) = 2.72$, p = .04). The study concluded that many CBPs in the area fail to achieve their intended outcomes due to weak community participation, inadequate monitoring systems, and delayed or mismanaged funds.

Similarly, Maige (2023) examined CBP sustainability in Kilosa District and reported comparable findings. The study confirmed that community involvement, effective monitoring, and financial factors significantly contributed to 55% of the variation in project sustainability. Persistent challenges, including poor community engagement, weak oversight, and financial inefficiencies, were noted as recurring obstacles in rural project implementation.

Building on this discussion, Mwakasangula (2023) investigated community engagement in education projects within Changarawe Village, Morogoro. The study found that local leaders played a pivotal role in promoting community participation, which was closely linked to how the community perceived the relevance of the projects. Engagement strategies identified included public meetings, social events such as sports and games, use of social media, mobile communication, and door-to-door outreach.

Together, these studies underscore the importance of community participation, effective monitoring, and sound financial management in promoting the sustainability of development initiatives. While each study offers valuable insights, they collectively reveal a gap in understanding how these factors specifically influence the long-term management of school projects in public secondary education. Addressing this gap is essential for informing policy and practice aimed at improving the sustainability of educational infrastructure and outcomes in rural Tanzanian settings.

3. METHODOLOGY

3.1 Research Approach

This study used mixed research approach basing on convergent mixed method design. The convergent mixed method research design is a type of research method in which it involves collecting and analyzing both qualitative and quantitative data simultaneously (Taherdoost, 2022). In this design collection and analysis of quantitative data is done first and then follow the results up with qualitative phase to explain initial quantitative results in more depth. Therefore, the survey design was used to collect both types of data, which helped to answer the research questions.

3.2 Targeted Population

The target population of the study was 582 respondents. This constitutes all 19 head of schools and 563 teachers from public secondary schools in Sumbawanga Municipality.

3.2 Sample Size and Sampling Techniques

The sample size for this study was 253 respondents (19 heads of schools and 234 teachers). All 19 heads of schools were used as a sample size. In context of teachers, the sample size for teachers was computed by the proposed formula of Yamane (1967) as presented below:

$n = N / [1+N (e)^2]$

Where: n = Sample Size;

N = Target Population; and

e = Level of Precision (0.05 / 5%)

Simple random sampling was used to select teachers as to ensure that every teacher in the target population had an equal chance of being included in the study. This technique was preferred since it reduces selection bias and enhances the findings' generalizability. In contrast, purposive sampling was employed to select Heads of Schools. This technique was preferred since Heads of Schools possess unique insights and specific knowledge regarding the management and sustainability of school projects, making them key informants essential for addressing the study's objectives.

3.3 Data Collection Instruments

Data collection involves gathering information to support or refute specific facts (Taherdoost, 2021). This study used questionnaires, semi-structured interviews and observation for data collection. Questionnaires with closed-ended questions were utilized for teachers to gather uniform and quantifiable data efficiently. Semi-structured interviews were conducted with Heads of Schools to obtain in-depth insights. Additionally, observation enabled the researcher to assess ongoing and completed school projects in Sumbawanga Municipality. The use of multiple methods ensured comprehensive and reliable findings.

3.4 Data Analysis

Kumar and Praveenakumar (2025) defines data analysis as a process involving a series of related operations aimed at summarizing and organizing collected data to answer research questions. In this study, data were systematically organized using the Statistical Package for the Social Scientists (SPSS), which facilitated data organization and simplified the presentation of results through charts and graphs. Following the convergent mixed research design, data analysis began with qualitative data, followed by quantitative data. Quantitative data were analyzed and coded using descriptive statistics, with findings presented in tables and percentages. For qualitative data, content analysis was employed, where data were coded, grouped into common themes, and broken down into meaningful portions for deeper insight.

4. RESULTS AND DISCUSSIONS

4.1 Benefits of Sustainable Management of School Projects

This objective sought in examining the benefits associated with sustainable management of school projects in enhancing educational infrastructure and service delivery in public secondary schools in Sumbawanga Municipality. Findings of this objective is presented below:

4.1.1 Minimal Budget of School Project Reconstruction

Table 1: Minimal budget of school project reconstruction

Items	Frequency	Percentage (%)
Agree	133	56.8
Strongly Agree	83	35.5
Disagree	9	3.8
Strongly Disagree	9	3.8
Total	**234**	**100.0**

Source: Field Data (2024)

The findings indicate that a majority of the respondents, comprising 56.8% of the total, agreed that the school projects in Sumbawanga public secondary schools were being sustainably managed such that it can lead to small budget in reconstructing the construction projects like classroom, latrines, dormitories as well as teacher's houses. Additionally, 35.5% of the respondents strongly agreed with the minimal budget of school project reconstruction. Together, these two categories represent a significant proportion of the surveyed population, totaling 92.3%. On the other hand, a small proportion of respondents, 3.8% each, expressed disagreement or strong disagreement with the minimal budget of the school project reconstruction.

The implications of these findings are highly positive and suggest that the minimal budget of school project reconstruction is perceived by a large majority of the respondents. The high percentage of agreement and strong agreement indicates that the efforts made in managing the projects have been effective in ensuring their long-term viability and impact.

Data from interview revealed that, since sustainable management of projects encompasses various aspects, such as planning, resource allocation, monitoring, and community involvement. The positive response from the respondents suggests that these elements have likely been addressed well, contributing to the overall success, continuation of the projects and small budget to reconstruct the project after a long period of using them. As explained by one interviewee that," *Sustainable management of these projects can help the government to allocate small budget of reconstruction since teachers will use their fully energy in managing the projects"*

Another interviewee explained that. "*I think sustainable management of school projects is beneficial to the government and school administration, because teacher's eyes, ears and brain will oversee the uses of the projects and when renovation of these projects is needed only minimal budget will be used to renovate the project."*

Furthermore, another respondent from School added that, *"Not only minimal budget is beneficial for government when renovating these projects but also the time renovate these projects will be very short since projects were well managed by the teachers."*

From the above explanation, it vividly revealed that, teachers can play a great role in managing the school projects in good manner such that, its uses are basic sustainably for the betterment of existing and coming generation. The government can invest a lot in school infrastructure but without teacher's involvement in management of these projects, their maintenance is very hard to maintain.

4.1.2 Last Longer of the School Projects

Table 2: Lasting Longer of the Projects

Items	Frequency	Percentage (%)
Agree	88	37.6
Strongly Agree	90	38.5
Disagree	28	12.0
Strongly Disagree	28	12.0
Total	**234**	**100.0**

Source: Field Data (2024)

The findings indicate that a substantial proportion of the respondents, comprising 37.6% of the total, agreed that the sustainable management results in the lasting longer of school projects in Sumbawanga public secondary schools. Additionally, 38.5% of the respondents strongly agreed with this statement. Together, these two categories represent a significant portion of the surveyed population, totaling 76.1%. On the other hand, an equal proportion of respondents, 12.0% each, expressed disagreement or strong disagreement with the idea that sustainable management leads to the lasting longer of projects. The study concurs with a study by Ngussa and Twarira (2020) in Arusha City who established a significant positive relationship between the quality of food provision and pupils' engagement, between the quality of food provision and teachers' involvement.

The implications of these findings suggest that the involvement of effective teachers is considered important for the sustainability and longevity of school projects in Sumbawanga public secondary schools. The high percentage of agreement and strong agreement indicates that the respondents recognize the crucial role of sustainable management in ensuring the projects' continued success and impact over time.

Data from the interview with an interviewee revealed that, anything that is luck to be kept and well managed, always has long usability. Number of years can pass without renovating the projects. As reported by one respondent who said that,

> *"Lasting longer of the projects depends much on the management of the projects, however we cannot ignore the whole process of projects planning, organizing, implementing and evaluating the projects. If the projects were well implemented then, its management will enable the using the projects for long time. I, take example of church and mosques that were built during colonial era, I can see, are well managed and in good status update such that the coming generation will come and use it"*

Another respondent added that,

> *"Sustainable management of classroom, dormitories, toilets, teacher's houses, dining halls, school furniture as well as water facilities, firstly enable the provision of good education to our children such that learners feel comfortable when attending schools. Therefore, when teachers see the improvement of learning environment and manage it sustainably then the constructed projects will last longer for future use too."*

Moreover, another respondent added that, *"It is very important to manage school projects sustainably to ensure its usability for a long time. This will help the government to allocate resources areas that are critically need improvement."*

From the above views, it indicates that, there is importance of managing school projects sustainably to maintain and enable the lasting longer of the projects. Once a project is well managing, it become beneficial to all user starting from the government, school authority, teachers themselves as well as the students who the ones who need to acquire better education. These findings highlight the importance of adopting a comprehensive approach to project sustainability, which encompasses various elements beyond the involvement of effective teachers alone.

4.1.3 Increased Efficiency in Provision of Quality Education

Table 3: Increased Efficiency in Provision of Quality Education

Items	Frequency	Percentage (%)
Agree	90	39.6
Strongly Agree	90	40.5
Disagree	26	10.0
Strongly Disagree	26	10.0
Total	**234**	**100.0**

The findings indicate that a majority of the respondents, comprising 39.6 of the totals, agreed that the school projects in Sumbawanga public secondary schools were being sustainably managed such that it can lead to Increased Efficiency in Provision of Quality Education. Additionally, 40.5% of the respondents strongly agreed with the Increased Efficiency in Provision of Quality Education when school projects are managed sustainably. Together, these two categories represent a significant proportion of the surveyed population, totaling 80%. On the other hand, a small proportion of respondents, 20% expressed disagreement or strong disagreement with the increased efficiency in provision of quality education.

The findings of the study revealed that, sustainable management of the school projects convincingly results to increase efficiency in provision of quality education since projects can help teachers and students to comfortably carry their school activities in conducive learning environment.

Data from interview pinpoint that, schools which receive projects like classroom, toilets, dormitories, dining hall and others, are likely to perform schools' activities comfortably than schools with no enough classroom, desk, water and dining hall. As explained by one respondent who said that, *"Here at our school, we have new six classrooms that are currently used to accommodate students and reduce overcrowded, this enables students to feel comfortable when learning than before"*

Another respondent added that," *Now a day, teachers concentrate more in fulfilling school responsibilities than before, where most of time, teachers had to oversee school has water to be used in whole day. This made teachers to lose some of their period."*

Moreover, another respondent said that, "*We thank the government for completing all these stalls projects in our school, today; there is no student who has no table or chair in our school."*

From the view above, it was revealed that, school projects are very important in developing our schools. The government should not be tired to support schools in building schools' infrastructures that are needed to provide quality education which is key for the 21th century.

4.2 Constraints to Effective and Sustainable Management of School Projects

This objective sought in identifying key constraints hindering the effective and sustainable management of school projects in public secondary schools in Sumbawanga Municipality. Findings of this objective is presented below:

4.2.1 Inadequate Budget Allocation and Funding Fluctuations

One of the most prominent challenges reported by respondents was the issue of insufficient and irregular funding. Although sustainable management practices are cost-effective in the long run, the lack of initial budgetary support undermines project implementation and maintenance.

A head of school remarked: *"Sometimes we receive money very late or in small amounts, and by the time we want to renovate or maintain the structures, they are already worn out."*. Another head of school r added: *"There is no special budget for maintenance of these projects. We just rely on capitation grants which are not even enough for teaching and learning materials."*

These findings reflect what De Grauwe (2005) observed in Sub-Saharan African schools, limited and inconsistent funding restricts the ability of school leaders to implement sustainable practices, often resulting in project deterioration. Similarly, UNESCO (2016) emphasized that underfunding of school infrastructure weakens the quality of education and hinders the achievement of SDG 4, especially in low-income contexts.

4.2.2 Limited Community Involvement and Awareness

Sustainable school project management also suffers from minimal community participation. Many community members do not perceive themselves as stakeholders in project sustainability, leading to poor support and even negligence.

One head of school expressed: *"The community thinks that once the government constructs a project, it is no longer their concern to maintain it."* . Another head of school also shared: *"We try to involve parents in meetings, but very few show up. Most think it's the school's job to take care of everything."*

This lack of ownership echoes the findings of Valli et al. (2018), who argued that community involvement in school management is critical for the sustainability of educational infrastructure. When local stakeholders are not meaningfully engaged, infrastructure is more likely to be misused or ignored.

4.2.3 Teacher Workload and Limited Capacity

Teachers in Sumbawanga face overwhelming responsibilities, often juggling teaching, administrative duties, and the management of school projects. This overburdening not only affects project outcomes but also leads to demotivation and inefficiency.

As one head of school noted: *"We are expected to teach full-time and also supervise building projects, monitor water systems, and manage furniture, this is too much for any teacher."*. Another head of school added: *"There's no training offered on project management. We do what we can based on common sense, not because we have the skills."*

These observations resonate with the findings of Lange et al. (2021), who stated that in many African contexts, teachers are overextended and receive little professional support, which compromises their ability to contribute to school development initiatives. Without structured capacity-building programs, teachers remain underprepared for the complex tasks of infrastructure management.

4.2.4 Lack of Technical Expertise

Sustainable project management often requires specialized knowledge, particularly for ICT labs, science facilities, and water systems. Unfortunately, most secondary schools in Sumbawanga lack the technical personnel to maintain these assets.

One school head of school explained: *"We have a laboratory and computer room, but we don't have a lab technician or ICT expert. When machines break down, they stay broken for a long time."*

This aligns with findings by Crossouard et al. (2021), who highlighted that many schools in sub-Saharan Africa suffer from poor technical support, leading to equipment breakdowns and underutilization. As a result, potentially transformative infrastructure fails to make a long-term impact.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study concludes that sustainable management of school projects in public secondary schools in Sumbawanga Municipality yields significant benefits, including reduced reconstruction costs, prolonged lifespan of infrastructure, and enhanced quality of education. The involvement of teachers in project oversight plays a critical role in ensuring responsible use and maintenance of school facilities. However, challenges such as inadequate funding, low community engagement, teacher workload, and lack of technical expertise hinder full realization of these benefits. Addressing these constraints is essential to enhance the long-term impact of educational infrastructure investments.

5.2 Recommendations

To improve sustainable project management, it is recommended that the government increase and timely release maintenance funds, strengthen community engagement through awareness and inclusive planning, and reduce teacher workload by delegating non-instructional duties. Additionally, schools should receive technical support and training in project maintenance and adopt monitoring frameworks for continuous evaluation. National education policies should also integrate clear guidelines on infrastructure sustainability to ensure that school projects deliver lasting value for students and the broader community.

REFERENCES

1. Creagh, S., Thompson, G., Mockler, N., Stacey, M., & Hogan, A. (2023). Workload, work intensification and time poverty for teachers and school leaders: A systematic research synthesis. *Educational Review*, 1-20.
2. Crossouard, B., Dunne, M., & Szyp, C. (2021). The social landscape of education and work in rural sub-Saharan Africa. In *Youth and the rural economy in Africa: hard work and hazard* (pp. 125-140). Wallingford UK: CABI.
3. Guilherme, A. (2016). Education for sustainable development and global citizenship: The critical role of education. Routledge.
4. Kumar, A., & Praveenakumar, S. G. (2025). Research methodology. Click Publishing.
5. Lange, M. F., Lauwerier, T., & Locatelli, R. (2021). The impact of privatisation on teachers in Francophone sub-Saharan African Countries. Background paper prepared for the Global Education Monitoring Report. Université de Genève. https://unesdoc. unesco. org/ark:/48223/pf0000380072.
6. Maige, R. M. (2023). Factors Affecting Sustainability of Community-Based Projects in Rural Areas: A Case of Kilosa District in Morogoro (Doctoral dissertation, The Open University of Tanzania).
7. Mnjokava, C. E. (2024). The influence of school heads' motivation strategies on teachers' performance in public secondary schools in Arusha Region, Tanzania. Journal of Research Innovation and Implications in Education, 8(1), 179 -189.
8. Mrangu, R. G. (2018). Assessment of the Factors Affecting Sustainability of Community Based Projects in Rural Areas: A Case of Bagamoyo District, Tanzania (Doctoral dissertation, The Open University of Tanzania).
9. Mwakasangula, E. (2023). Assessment of Community Engagement and Success of Education Projects in Tanzania: A Case of Changarawe Village, Morogoro. Social Sciences, Humanities and Education Journal (SHE Journal), 4(1), 60-72.
10. Mwakisambwe, F. & Msoka, E. (2024). Approaches used by advanced-level secondary schools to overcome the challenges of the fee-free secondary education policy in Tanzania. Journal of Research Innovation and Implications in Education, 8(4), 422–433.
11. Steinhoff, L. (2024). Exploring the Role of Intrinsic Motivation in Elementary Public-School Educators' Willingness to Remain in Teaching (Doctoral dissertation, Walden University).

12. Steinhoff, T. (2024). Motivational barriers in low-resource school settings. Journal of Comparative Education, 20(1), 33–49.
13. Swai, D. L. (2022). The Role of Teacher Motivation on Student Academic Performance in Public Secondary Schools in Ilala Municipality (Doctoral dissertation, The Open University of Tanzania).
14. Taherdoost, H. (2021). Data collection methods and tools for research; a step-by-step guide to choose data collection technique for academic and business research projects. International Journal of Academic Research in Management (IJARM), 10(1), 10-38.
15. UNESCO. (2016). Global Education Monitoring Report 2016: Education for People and Planet. Paris: UNESCO.
16. UNESCO. (2022). Education sector performance report: Tanzania. Paris: UNESCO.
17. Valli, L., Stefanski, A., & Jacobson, R. (2018). School-community partnership models: Implications for leadership. International Journal of Leadership in Education, 21(1), 31-49.
18. World Bank Group. (2023). World development report: Education and learning for all. Washington, DC: The World Bank.
19. Yamane, Y. (1967). Mathematical formulae for sample size determination. J. Mathemetics, 1, 1-29.
20. Zickafoose, A., Ilesanmi, O., Diaz-Manrique, M., Adeyemi, A. E., Walumbe, B., Strong, R., ... & Dooley, K. (2024). Barriers and Challenges Affecting Quality Education (Sustainable Development Goal# 4) in Sub-Saharan Africa by 2030. Sustainability, 16(7), 2657.