

# African Journal of Education and Practice (AJEP)

**Effects of Community Participation on School Infrastructure  
Development in Rural Uganda**

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## Effects of Community Participation on School Infrastructure Development in Rural Uganda



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### Article History

*Received 17<sup>th</sup> March 2024*

*Received in Revised Form 12<sup>th</sup> March 2024*

*Accepted 9<sup>th</sup> April 2024*

### How to Cite

Ngwama, C. . (2024). Effects of Community Participation on School Infrastructure Development in Rural Uganda . *African Journal of Education and Practice*, 9(2), 1 – 12.  
<https://doi.org/10.47604/ajep.2520>

### Abstract

**Purpose:** The aim of the study was to investigate the effects of community participation on school infrastructure development in rural Uganda.

**Methodology:** This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

**Findings:** Community participation in rural Uganda positively impacts school infrastructure development by fostering ownership and ensuring cultural relevance. Local contributions reduce costs and speed up construction, though variable participation and limited skills can pose challenges. Strong community engagement is essential for the success and sustainability of these projects.

**Unique Contribution to Theory, Practice and Policy:** Social capital theory, stakeholder theory & asset-based community development (ABCD) theory may be used to anchor future studies on the effects of community participation on school infrastructure development in rural Uganda. Establish regular feedback mechanisms through community meetings, surveys, and online platforms. Governments and educational authorities should formulate policies that support and mandate community involvement in all phases of school infrastructure development.

**Keywords:** *Community Participation School Infrastructure Development*

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## INTRODUCTION

The quality and quantity of school infrastructure in developed economies like the USA, Japan, and the UK are generally high, reflecting substantial investments in education. In these countries, school facilities often include well-equipped classrooms, advanced laboratories, and extensive libraries, which are seen as critical to enhancing educational outcomes. For example, in Japan, the government has systematically upgraded school infrastructures to integrate technology effectively, with statistics indicating that 99% of schools have internet access, and computer to student ratios are continually improving (Tanaka, 2020). In the UK, recent educational policies have led to the Building Schools for the Future program, which aimed to rebuild or renew nearly every secondary school in England, greatly improving the quality and sustainability of educational facilities. However, there remains a discrepancy between different regions, indicating that even within developed economies, challenges in infrastructure quality and accessibility persist.

In the USA, there has been a significant focus on modernizing outdated school facilities, which has been essential for accommodating growing student populations and technological advancements. Statistics from the National Center for Education Statistics show that over \$50 billion is spent annually on school construction, significantly enhancing the quality and capacity of educational infrastructures across various states (Smith, 2019). Despite these improvements, issues such as aging buildings in older urban districts continue to challenge the equity of educational infrastructure. The commitment to high-quality infrastructure is evident in these economies' understanding that the learning environment is pivotal for academic success and student well-being.

In contrast to developed nations, many developing economies face substantial challenges in school infrastructure, which significantly impacts educational quality and access. Limited financial resources, higher population growth, and administrative inefficiencies often lead to inadequate educational facilities characterized by overcrowded classrooms, lack of basic sanitary facilities, and insufficient learning materials. For example, in India, while there is a significant push towards educational infrastructure development, many rural schools still lack access to electricity and proper sanitary facilities, which affects student attendance and learning outcomes (Kumar, 2018). Similarly, in Brazil, despite progress in educational enrollment rates, the quality of school infrastructure remains a critical issue, with many schools lacking adequate libraries and scientific laboratories.

These infrastructural deficiencies are not merely physical but also impact the quality of education and the effectiveness of teaching. Research indicates that in many parts of developing countries, the lack of basic infrastructure such as clean water and functional classrooms significantly hampers the ability of schools to retain students and achieve satisfactory academic outcomes (Lopez & Moore, 2021). Efforts to improve this situation include international aid and development programs focusing on educational infrastructure, but the pace of improvement remains slow. The disparity in school infrastructure quality between urban and rural areas further exacerbates educational inequalities in these regions.

School infrastructure in Sub-Saharan African economies typically faces even more pronounced challenges. Many schools in this region struggle with severely limited resources, affecting both

the quality and quantity of educational facilities. In countries like Nigeria, it is not uncommon for students to learn in overcrowded classrooms or temporary structures lacking electricity and proper sanitation (Adeyemi, 2019). The situation in rural areas is particularly dire, with a significant number of schools having inadequate roofing, which exposes students to environmental elements.

Statistically, these infrastructural deficits directly correlate with lower educational outcomes and higher dropout rates in Sub-Saharan Africa. For example, in Tanzania, studies have shown that the lack of basic infrastructure such as desks and textbooks significantly lowers student performance and school attendance rates (Mkumbo, 2021). Despite these challenges, there are ongoing efforts by governments and NGOs to improve school infrastructures, such as the East African Development Bank's initiatives to fund educational projects. However, the scale of the need is vast, and progress is often slow and uneven across different countries and regions.

School infrastructure in other developing countries often shares similar deficiencies with those seen in India and Brazil, including inadequate facilities and resources that impact educational quality. Many schools in these countries face shortages of basic infrastructural elements such as reliable buildings, sanitary facilities, and essential learning materials, which are fundamental to effective teaching and learning. In countries like Indonesia, despite economic growth, the disparity in school infrastructure between urban and rural areas remains stark. Urban schools often feature relatively modern facilities, while rural schools may lack even the most basic amenities. For example, a significant percentage of schools in rural Indonesia do not have access to safe drinking water, and many operate in dilapidated buildings (Hartono, 2022). This lack of infrastructure not only affects student attendance but also impacts teacher retention and the overall quality of education provided.

In Africa, outside of Sub-Saharan regions, countries like Egypt face challenges with overcrowded classrooms and outdated teaching resources. The Egyptian government has initiated several reforms aimed at improving infrastructure, such as building new schools and renovating old ones, but progress is slow, and many areas still lack essential facilities (El-Sayed, 2021). Moreover, the issue of maintenance of existing school facilities is a continuous challenge, affecting the sustainability of any improvements made. Latin America shows a varied picture, with some countries like Chile and Uruguay making significant strides in improving their educational infrastructure, while others like Guatemala and Nicaragua lag behind. In Guatemala, for instance, many schools are built from makeshift materials that do not provide a conducive learning environment, and the availability of technology and learning aids is minimal (Vásquez, 2020). These infrastructural deficiencies are linked to lower educational outcomes and higher dropout rates, especially among indigenous populations. The situation in South Asia is also concerning, with countries like Bangladesh and Nepal grappling with the impacts of natural disasters on school infrastructure. Many schools in these regions are not built to withstand earthquakes and floods, leading to frequent disruptions in education (Khan, 2019). Efforts to rebuild and fortify school buildings are ongoing, but funding and logistical challenges often delay progress.

Exploring school infrastructure in other regions of developing countries reveals an even broader range of challenges and initiatives aimed at improving educational environments. For instance, in the Philippines, a significant number of schools suffer from chronic underfunding, leading to issues such as overcrowded classrooms and inadequate sanitary facilities. The Philippine government has

launched various programs aimed at reducing these deficits, but many schools, especially in remote areas, still operate in suboptimal conditions (Santos, 2022). The resilience of school infrastructure against natural disasters like typhoons and earthquakes is also a pressing concern, as many school buildings are not built to modern safety standards. In the Middle East, countries like Jordan face unique challenges due to the influx of refugee populations, which has placed additional strain on the existing educational infrastructure. Schools in refugee-heavy areas are often severely overcrowded, with two or even three shifts of students per day, which compromises the quality of education each child receives (Al-Hussein, 2021). Despite international aid and government efforts to accommodate these needs, the demand far outpaces the current supply and capabilities of educational facilities. In Africa, beyond the previously discussed regions, countries like Kenya and Ghana are making concerted efforts to improve their educational infrastructure.

In Kenya, the government has increased its investment in digital learning tools and classroom construction to address the high student-to-teacher ratios and to enhance learning through technology (Mwangi, 2020). However, the distribution of these resources often remains uneven, with rural areas lagging behind urban centers. Similarly, in Ghana, while there have been improvements in school infrastructure, many schools outside of major cities still lack basic amenities like toilets and potable water, which significantly impacts student health and attendance (Agyemang, 2021). In South America, Colombia has undertaken extensive reforms in school infrastructure to support peace and development in regions previously affected by conflict. These reforms include not only the construction of new schools but also the provision of psychosocial support facilities and community integration spaces within educational complexes (Gomez, 2021). This holistic approach recognizes the role of education in broader social recovery and development.

Community participation in educational infrastructure projects can be categorized into four primary levels: funding, labor contribution, decision-making involvement, and evaluative participation. Funding involves community members contributing financially to the project, which can enhance the quality and scope of infrastructure, such as building new classrooms or enhancing library resources. Labor contribution sees community members physically participating in construction or renovation, potentially reducing costs and fostering a sense of ownership among participants. Decision-making involvement includes community input on the types of infrastructure needed, ensuring that the facilities meet the local educational demands and preferences, such as the need for science laboratories versus computer rooms. Lastly, evaluative participation allows the community to assess the utility and quality of the infrastructure post-completion, ensuring long-term maintenance and relevance Smith (2021)

Linking these levels of participation to the quality and quantity of school infrastructure reveals a pattern of enhanced outcomes with increased community involvement. Schools with high levels of community funding and labor tend to have better-equipped and maintained facilities due to the direct financial and physical investment made by the community (Smith, 2021). Furthermore, when communities are involved in decision-making, the infrastructure more accurately reflects the educational needs and aspirations of the community, which can lead to higher utilization and satisfaction (Johnson, 2020). Evaluative participation ensures ongoing quality control and relevance, providing a feedback loop that helps maintain and improve educational facilities over

time (Chen, 2019). These interconnected levels of participation not only support the initial creation of educational infrastructure but also its sustained effectiveness and adaptability to changing educational needs (Rodriguez, 2018).

### **Problem Statement**

Despite significant governmental and non-governmental efforts to enhance educational infrastructure in rural Uganda, persistent disparities in the quality and quantity of educational facilities continue to undermine student outcomes and community satisfaction. These disparities are often linked to varying degrees of community participation in the planning, funding, construction, and maintenance phases of school infrastructure projects. While existing literature suggests that community involvement in school projects can lead to more sustainable and tailored educational environments (Smith, 2021; Johnson, 2020), comprehensive analysis focusing on rural Ugandan communities is limited. This study aims to investigate the effects of community participation on school infrastructure development in these areas, analyzing how different levels of engagement—financial, labor, decision-making, and evaluative—affect both the process and the product of infrastructure projects. By examining these dynamics, this research seeks to provide actionable insights that could improve policy strategies and project implementations in similar contexts (Chen, 2019; Rodriguez, 2018).

### **Theoretical Framework**

#### **Social Capital Theory**

Originated by Pierre Bourdieu and further developed by James Coleman, this theory emphasizes the value of social networks and the benefits these networks provide to their members, such as trust, reciprocity, and mutual aid (Coleman, 1988). Social capital is crucial for collective action and cooperation within communities, particularly in resource-limited settings. In the context of rural Uganda, this theory is relevant as it can explain how strong community ties and cooperative norms enhance the efficiency and effectiveness of community-led school infrastructure projects by pooling local resources and knowledge.

#### **Stakeholder Theory**

Developed by R. Edward Freeman in the 1980s, this theory posits that organizations can thrive by considering the interests and impacts of all stakeholders, not just shareholders (Freeman, 1984). For school infrastructure development in rural Uganda, this theory underscores the importance of involving various community stakeholders (parents, teachers, local leaders) in decision-making processes. This inclusion helps ensure that the infrastructure meets the actual needs of the community, leading to better educational outcomes and greater community satisfaction with the projects.

#### **Asset-Based Community Development (ABCD) Theory**

John McKnight and John Kretzmann formulated this approach, which focuses on leveraging the existing strengths and capacities of a community rather than focusing on its needs and deficiencies (Kretzmann & McKnight, 1993). The theory is relevant for rural Ugandan communities as it encourages the utilization of local assets (e.g., local labor, materials, knowledge) in developing

school infrastructure, promoting sustainability and local empowerment by valuing and utilizing the intrinsic resources of the community.

### **Empirical Review**

Mugisha (2018) undertook a comprehensive analysis to determine the impact of community financial contributions on the quality and maintenance of school infrastructure in rural Uganda. Utilizing a quantitative methodology, they surveyed 200 households across several villages to gather data on the amount and frequency of financial contributions made towards school projects. Their correlational analysis revealed a clear positive link between the level of financial input from the community and the structural integrity and aesthetic quality of the school facilities. The study emphasized that community financial engagement not only improves the physical environment of schools but also boosts community morale and commitment to the educational success of their children. Based on these findings, Mugisha and colleagues proposed the development of formal community funding programs that could include matching funds from local governments or NGOs to amplify the community's financial contributions. They stressed the importance of transparency and accountability in handling these funds to maintain community trust and participation (Mugisha, 2018).

Kasozi and Tumwebaze (2019) delved into the role of labor contributions by parents in the construction of primary schools in Eastern Uganda. By integrating a mixed-methods approach that combined interviews with direct observations and site inspections, they provided a holistic view of how community labor affects project costs and outcomes. Their findings highlighted significant cost reductions and enhanced community engagement resulting from direct labor contributions. The study also found that such community-driven construction projects tend to incorporate more culturally appropriate design features and materials, which further aligns the infrastructure with community identities and values. Kasozi and Tumwebaze thus advocated for the institutionalization of policies that encourage and facilitate parental and community involvement in school construction, suggesting that such engagement fosters a profound sense of ownership and responsibility towards the educational facilities (Kasozi & Tumwebaze, 2019).

Nabwire and Onyango (2020) examined the decision-making involvement of community members in planning school infrastructure. Their qualitative research utilized focus groups and participatory workshops to gather insights from community members, school staff, and local government officials. The study identified that when communities are actively involved in the decision-making process, the projects not only meet functional educational needs but also embody community aspirations and expectations, leading to greater satisfaction and better maintenance of the facilities. Nabwire and Onyango pointed out that such participatory planning processes help to build a shared vision for education within the community, which can be crucial for the sustainability of the infrastructure. They recommended enhancing community capacity in project planning and management through targeted training and support, emphasizing the long-term benefits of such empowerment (Nabwire & Onyango, 2020).

Chebet (2021) explored the impact of evaluative participation—where the community assesses the quality and utility of school infrastructure post-construction. This longitudinal study monitored several school projects over three years to observe how infrastructures maintained their quality

and adapted to evolving educational needs. The research underscored the importance of ongoing community involvement in the post-construction phase, noting that active evaluative committees were pivotal in ensuring that schools continued to serve their intended purposes effectively. Chebet and colleagues suggested that these committees could play a critical role in identifying and addressing maintenance needs promptly, thereby extending the lifespan of the infrastructure. They called for the establishment of structured evaluative frameworks that could be integrated into school management practices to foster continuous community engagement and feedback (Chebet, 2021).

Amin and Kyobe (2022) analyzed the influence of community feedback mechanisms on adapting school infrastructures to changing educational demands. This case study focused on how schools in northern Uganda used community input to modify and enhance their facilities to align with modern educational standards, particularly in terms of integrating technology in teaching. The study concluded that effective feedback systems are essential for schools to remain relevant and responsive to new educational trends and challenges. Amin and Kyobe recommended the widespread adoption of robust community feedback mechanisms, which could include regular community meetings and online platforms for feedback collection, to ensure that schools can adapt quickly and efficiently to new educational requirements (Amin & Kyobe, 2022).

Luwaga and Kintu (2023) investigated the effects of community engagement on the provision and quality of technological facilities in schools, specifically in southwestern Uganda. Their study utilized quantitative methods to analyze the correlation between community engagement levels and the quality of computer laboratories in schools. The findings indicated a direct relationship between active community involvement and the advanced provisioning of technological equipment, which significantly enhances students' learning experiences. Luwaga and Kintu recommended strengthening community-school partnerships to ensure that schools are equipped to meet the technological demands of modern education, and they suggested further research to explore how these improvements impact student performance and digital literacy (Luwaga & Kintu, 2023).

Mutumba (2023) assessed the impact of community resource mobilization on the development and maintenance of school libraries. By employing both qualitative and quantitative research methods, they evaluated ten rural schools to understand how community involvement influences the stocking and updating of library resources. The study found that schools with high levels of community participation had libraries that were not only better stocked but also more frequently updated with new materials, which contributed to a richer educational environment. Mutumba and colleagues suggested that community training programs focused on effective resource mobilization and library management could greatly enhance the educational resources available to students. They also recommended that schools establish regular communication channels with the community to keep them engaged and informed about library needs and updates (Mutumba, 2023).

## **METHODOLOGY**

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into



already published studies and reports as the data was easily accessed through online journals and libraries.

## FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

**Conceptual Gaps:** While studies like those by Chebet (2021) and Mugisha (2018) examine immediate and medium-term effects of community participation, there is a gap in research exploring the long-term impacts, such as the generational educational outcomes and community development over decades. This would help in understanding the sustainability and enduring benefits of such participatory approaches. Current research primarily focuses on specific types of community participation (financial, labor, decision-making, evaluative). There's a need for more integrated models that consider the interplay and cumulative effects of these different types of participation on school infrastructure quality and educational outcomes.

**Contextual Gaps:** Studies like those by Amin and Kyobe (2022) and Luwaga and Kintu (2023) address specific aspects of technology and feedback mechanisms but lack a broader understanding of how different community characteristics (e.g., socio-economic status, cultural norms, historical engagement with education) influence the forms and effectiveness of participation. Research could explore how varying community contexts affect the strategies and success of participation in school infrastructure development. There is a noticeable absence of research examining how existing policies and institutional frameworks facilitate or hinder community participation in educational infrastructure projects. Insights into these areas could inform policy adjustments to better support community-driven initiatives.

**Geographical Gaps:** Research like that by Kasozi and Tumwebaze (2019) focuses on specific regions like Eastern Uganda. There is a gap in studies that compare different regions within Uganda or extend to other countries with similar socio-economic contexts. Such comparative research could highlight unique regional challenges and opportunities in community participation. Most studies focus exclusively on rural Uganda, with limited insights into how community participation might play out in peri-urban or urban settings where dynamics and resources differ significantly. Expanding the geographical scope would provide a more comprehensive understanding of the scalability and adaptability of successful rural models.

## CONCLUSION AND RECOMMENDATIONS

### Conclusions

The empirical studies reviewed collectively underscore the significant positive effects of community participation on school infrastructure development in rural Uganda. Community engagement in various forms—financial contributions, labor provision, decision-making, and evaluative participation—has proven to enhance not only the physical quality of school infrastructures but also their alignment with the educational needs and cultural values of the communities they serve. Financial contributions from the community lead to better-resourced and maintained facilities, demonstrating a direct correlation between community investment and the quality of educational environments. Labor contributions not only help reduce costs but also foster

a deep sense of ownership and pride among community members, which is crucial for the sustainability of the infrastructure. Involvement in decision-making ensures that the infrastructure fulfills local educational priorities and enhances community satisfaction, leading to facilities that are more likely to be maintained and cherished over time. Moreover, evaluative participation by the community helps in the timely identification and resolution of issues, which contributes to the long-term functionality and relevance of the educational facilities.

In conclusion, enhancing community participation in school infrastructure projects is essential for achieving sustainable development and effective educational outcomes in rural Uganda. It encourages a sense of ownership, aligns school facilities with community needs, and ensures better maintenance and utilization of educational infrastructure. Policymakers and educational planners should therefore prioritize and facilitate broader and more structured community involvement in all phases of school infrastructure development, from planning and construction to evaluation and maintenance. This approach not only enriches the educational landscape but also strengthens the community's capacity to support and advance its own educational aspirations.

## **Recommendations**

### **Theory**

Future theoretical research should aim to refine and expand models that define and measure the impact of community participation on educational outcomes. This involves developing frameworks that can quantitatively assess the return on investment from community contributions in terms of educational quality and sustainability. Such theoretical advancements could provide a deeper understanding of the mechanisms through which community engagement impacts school infrastructure. Encourage theoretical explorations that combine social capital and stakeholder theories to examine how community networks and the inclusion of diverse stakeholders contribute to successful educational projects. This could lead to a more nuanced theory that addresses the complex social dynamics and stakeholder interests involved in educational development in rural areas.

### **Practice**

Schools and NGOs should implement structured programs that actively involve community members in the planning, execution, and evaluation of school infrastructure projects. These programs should include clear roles, responsibilities, and benefits for participants, fostering transparency and increasing community engagement and satisfaction. Develop and deliver training programs for community members to enhance their skills in project management, fundraising, and evaluation. Empowering the community with these skills will not only improve the quality of their participation but also ensure the sustainability of the infrastructure developed. Establish regular feedback mechanisms through community meetings, surveys, and online platforms. These tools will help gather insights on the community's evolving educational needs and perceptions of the infrastructure, allowing for timely adjustments and improvements.

### **Policy**

Governments and educational authorities should formulate policies that support and mandate community involvement in all phases of school infrastructure development. These policies could

include financial incentives for communities that actively participate or regulations that require a certain level of community input in educational projects. Policy-makers should ensure that adequate resources are allocated specifically for projects that demonstrate high levels of community involvement. This could include matching community-raised funds or providing additional support in the form of materials and expertise. Implement national-level frameworks for monitoring and evaluating the effectiveness of community participation in educational development. Such frameworks should assess both the process and the outcomes of community engagement, providing data that can guide policy adjustments and improvements.

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