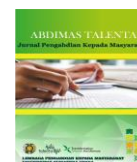




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Identification of Educational Governance Problems in Rural Areas as a Basis for Policy Recommendations

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ABSTRACT

Educational governance in rural areas involves complex challenges because educational quality is shaped not only by classroom instruction but also by teacher availability, infrastructure, digital access, financing capacity, community participation, and geographical conditions. This study aims to identify major educational governance problems in rural areas and formulate policy directions through a synthesis of empirical research and contemporary issues reported in news sources. A qualitative approach using qualitative document analysis was employed. The data consisted of peer-reviewed journal articles and news or institutional news publications addressing educational provision in rural and remote settings. The documents were analysed using reflexive thematic analysis through data familiarisation, coding, theme development, theme review, theme definition, and interpretation. Six major themes emerged: (1) teacher distribution and workforce sustainability; (2) infrastructure limitations and the digital divide; (3) misalignment between uniform policies and local needs; (4) limited community participation and educational accountability; (5) funding constraints and resource mobilisation; and (6) the vulnerability of educational services to geographical conditions and external disruptions. The findings indicate that rural educational problems cannot be adequately addressed through isolated interventions. This study proposes the 6P Framework for Rural Educational Governance—Mapping, Personnel, Infrastructure, Participation, Financing, and Protection—as a conceptual basis for developing more context-sensitive educational policies. Rural education policy should move beyond uniform approaches toward needs-based, collaborative, and resilient governance.

Keyword: Educational Governance, Rural Education, Educational Policy, Document Analysis, Educational Inequality



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1. Introduction

Education is a fundamental public service whose effectiveness largely depends on the capacity of education systems to provide equitable access to high-quality learning opportunities. Although expanding access to education has become a major policy priority in many countries, disparities between urban and rural areas remain a persistent concern. Geographic location often interacts with socioeconomic conditions, infrastructure availability, teacher supply, access to technology, and the capacity of governments and local communities to manage educational resources. As a result, educational disadvantage in rural areas is rarely caused by a single factor but instead reflects the combined influence of multiple structural and institutional conditions.

Rural areas should not be understood merely as locations situated far from urban centers. Rural contexts vary considerably in their social, economic, geographic, demographic, and institutional characteristics. Consequently, educational challenges in these areas may differ substantially in both their causes and manifestations. For example, a school with limited internet connectivity requires a different policy response

from a school that has adequate technological infrastructure but experiences teacher shortages or high teacher turnover. This variation suggests that rural education governance requires context-sensitive approaches rather than uniform interventions.

Teacher availability and sustainability represent major challenges in rural education. [1] showed that teachers' decisions to work in rural schools are influenced not only by financial compensation but also by quality of life, working conditions, family considerations, professional support, and relationships with local communities. Similarly, [2] found that financial incentives may help attract teachers to rural schools but do not necessarily ensure their long-term retention. These findings suggest that teacher distribution should be understood as part of a broader educational workforce ecosystem rather than merely as a numerical issue concerning the number of teachers assigned to particular schools.



Figure 1. Technology can Expand Access to Learning Materials

Working conditions are also closely associated with teacher retention. Arnold and Rahimi (2025) demonstrated that workload, emotional demands, work-family conflict, stress, job security, job satisfaction, and organizational commitment are associated with teachers' intentions to remain in or leave their positions. These factors have important implications for rural education governance. Policies that emphasize teacher placement without adequately addressing working and living conditions may create a recurring cycle in which teachers are assigned to rural schools but subsequently transfer or leave because the structural conditions affecting their work remain unresolved.

Another major challenge concerns digital transformation. Technology has the potential to expand access to instructional materials, teacher professional development, learning resources, and educational communication. However, the effectiveness of technology depends heavily on the availability of reliable connectivity, appropriate devices, electricity, digital competencies, and technical support. Emphasized the importance of digital competence among rural teachers, while found that teachers may demonstrate considerable willingness to adopt technology even when working under limited infrastructural conditions [3-4]. These findings indicate that the digital divide should not be understood solely as a lack of devices or internet access. It also includes differences in human capacity and institutional readiness to integrate technology effectively into educational practice.

Similar problems are reflected in contemporary news reports. Reports concerning regional and remote schools indicate that teacher shortages may interact with geographical distance, limited access to specialized services, and technological disparities, thereby widening inequalities in educational provision [5-6]. UNESCO has likewise emphasized that the benefits of digital transformation in education remain unevenly distributed, particularly in low-resource settings. Such evidence suggests that digitalization can contribute to educational improvement only when technological interventions are supported by adequate infrastructure, institutional capacity, and human resources [7].

At the same time, research on rural education indicates that local communities should not be viewed solely as recipients of educational services. Showed that mechanisms allowing communities to participate in teacher monitoring and accountability can influence relationships between schools and their surrounding communities [8]. Taken together, these studies demonstrate that educational problems in rural areas are multidimensional. Teacher distribution, digital access, infrastructure, financing, community participation, and policy implementation are often examined as separate issues. From a governance perspective, however, these dimensions are closely interconnected. Teacher retention, for example, may depend on infrastructure, professional support, local living conditions, and community relations. Similarly, the effectiveness of digital learning may be influenced by infrastructure, teacher competencies, funding, and institutional support. Addressing these issues independently may therefore overlook the systemic nature of rural educational disadvantage [9].

In addition, academic research and news reporting provide different but potentially complementary forms of evidence. Peer-reviewed studies offer findings generated through systematic research procedures, whereas news reports can provide timely accounts of emerging problems, policy consequences, and implementation challenges. Integrating these two types of documents may therefore provide a broader understanding of rural education governance by connecting established empirical knowledge with contemporary educational conditions. Despite the growing body of literature on rural education, existing studies frequently concentrate on individual dimensions such as teacher shortages, digital inequality, infrastructure, community participation, or school financing. Less attention has been given to integrating these dimensions within a broader governance perspective that examines how different problems interact and how such interactions can inform policy formulation. A systematic qualitative analysis combining empirical research and contemporary documentary evidence may therefore help identify recurring governance patterns and support the development of more integrated policy recommendations.

2. Methods

2.1. Research Design

This study employed a qualitative approach using qualitative document analysis. Document analysis enables researchers to systematically examine existing textual materials in order to understand a particular phenomenon, identify recurring patterns, and interpret the meanings embedded within documentary sources. [10] argues that this approach is particularly appropriate when a study relies on existing documents as the primary source of data and can be combined with thematic analysis to generate more comprehensive and interpretive findings.

In this study, documents were not treated merely as sources of supporting quotations or background information. Rather, each document was considered a unit of analysis and examined in terms of the educational problems discussed, the actors involved, the underlying causes, the reported consequences, and the policy responses or alternatives proposed [11]. This analytical orientation allowed the study to move beyond descriptive summarization and toward a more systematic interpretation of educational governance issues in rural contexts.

2.2. Data Sources

The analytical corpus consisted of two main categories of documents. The first category comprised peer-reviewed research articles and review articles addressing issues related to rural education, including teacher distribution and retention, digitalization, community participation, educational reform, teachers' working conditions, and resource mobilization. The second category consisted of news reports and institutional news publications describing contemporary educational challenges. Particular attention was given to teacher shortages, rural school financing, digital inequality, disruptions to educational services, barriers to educational access, and the resilience of education systems in geographically or socioeconomically disadvantaged settings. The primary corpus included nine substantive academic publications and six news or institutional publications. Methodological references were not counted as part of the analytical corpus because they were used solely to inform and justify the research procedures.

Table 1. Primary Analytical Corpus

Code	Document Type	Main Focus
J1	Research article	School choice and rural teacher retention
J2	Research article	Community participation and teacher behavior
J3	Research article	Financial subsidies and rural teacher retention
J4	Research article	Teachers' perspectives on educational reform
J5	Research article	Working conditions and teacher retention
J6	Review article	Digital competence of rural teachers
J7	Case study	Resource mobilization in rural schools
J8	Scoping review	Parent and community participation
J9	Research article	Digital integration in rural education
B1	News report	Teacher shortages, distance, and the digital divide
B2	News report	Funding for teacher development programs
B3	News report	Workforce shortages and continuity of educational services
B4	News report	Financial vulnerability of rural schools
B5	Institutional news publication	Digital equity in low-resource settings
B6	Institutional news publication	Educational disruption caused by external conditions

Documents were selected according to the following inclusion criteria:

- 1) the document substantially addressed educational provision in rural, remote, regional, or resource-constrained settings;
- 2) it discussed at least one issue related to educational governance;
- 3) academic sources were published in peer-reviewed scholarly journals;
- 4) news sources were published by identifiable media organizations or recognized institutions; and
- 5) sufficient textual content was available to support systematic analysis.

Documents were excluded when they focused on technology without a clear connection to education, consisted primarily of unsupported opinion, duplicated information already represented in the corpus, or lacked substantive relevance to rural educational contexts.

2.3. Data Analysis

The data were analyzed using reflexive thematic analysis. This approach conceptualizes themes as interpretive constructions developed through the researcher's engagement with patterns of meaning across the dataset, rather than as categories that emerge automatically from the text. The analytical procedure was informed by the principles of reflexive thematic analysis described. The analysis was conducted in six stages.

- 1) First, all documents were read repeatedly to develop familiarity with their contexts, central arguments, and the educational problems being discussed.
- 2) Second, initial coding was conducted on text segments that described issues relevant to educational governance. Examples of initial codes included teacher shortage, teacher turnover, limited connectivity, school infrastructure, community monitoring, funding vulnerability, professional development, and geographical isolation.
- 3) Third, codes with conceptual similarities were grouped into broader analytical categories.
- 4) Fourth, these categories were compared across academic and news sources to identify recurring patterns, convergent evidence, and contextual differences.
- 5) Fifth, related categories were organized into broader themes capable of explaining educational governance problems at a more integrative level.
- 6) Sixth, the final themes were interpreted in relation to the research questions and used as the basis for formulating policy recommendations.

The analytical process did not treat the frequency of a particular term or code as the sole indicator of thematic importance. Instead, the significance of each theme was determined by its relevance to the research questions, its consistency across different types of sources, the strength of its conceptual relationship with other themes, and its implications for the provision and governance of education.

2.4. Credibility and Analytical Rigor

The credibility of the analysis was strengthened through source triangulation, particularly by comparing evidence reported in academic studies with contemporary issues documented in news and institutional publications. This approach enabled the study to examine whether problems identified in scholarly research were also reflected in current educational conditions. Analytical rigor was further supported by maintaining traceability between the original documents, initial codes, analytical categories, final themes, and subsequent interpretations. This process helped ensure that policy recommendations were grounded in the documentary evidence rather than derived solely from general assumptions about rural education.

News reports were not treated as equivalent substitutes for peer-reviewed empirical evidence. Instead, they were used primarily to illustrate the contemporary manifestations of educational problems that had been identified or examined in academic research. Empirical findings from scholarly publications therefore remained the principal basis for academic interpretation, while news and institutional sources served a complementary contextual function. Because the study relied entirely on publicly available documentary sources and did not involve direct interaction with human participants, no participant recruitment was undertaken and no personal data were collected directly by the researchers. The analysis was limited to information contained within publicly accessible documents.

3. Result and Discussion

The qualitative document analysis identified six major themes representing recurring educational governance challenges in rural contexts. These themes indicate that rural educational disadvantage is not attributable to a single factor but rather emerges from the interaction of human resources, infrastructure, institutional arrangements, community participation, financial capacity, and geographical vulnerability. The six themes were: (1) teacher distribution and workforce sustainability; (2) educational infrastructure and the digital divide; (3) misalignment between uniform policies and local needs; (4) limited community participation and educational accountability; (5) financial constraints and resource mobilization; and (6) vulnerability to geographical conditions and external disruptions.

Table 2. Major Themes of Rural Educational Governance Problems

Theme	Core Problem	Governance Implication
1	Teacher distribution and retention	Human resource policies need to extend beyond teacher placement
2	Infrastructure limitations and the digital divide	Digitalization requires ecosystem readiness
3	Misalignment between uniform policies and local conditions	Context-sensitive policy differentiation is required
4	Limited community participation	Collaborative educational governance needs to be strengthened
5	Financial constraints	Greater funding flexibility and resource mobilization are required
6	Geographical and external vulnerability	Education systems require resilience planning

The findings suggest that these six themes are closely interconnected. Teacher shortages, for example, may be intensified by poor infrastructure, geographical isolation, limited professional support, and inadequate incentives. Similarly, technological inequality is influenced not only by connectivity but also by teacher

competence, electricity availability, institutional capacity, and funding. Rural educational governance therefore appears to operate as an interconnected system rather than as a collection of isolated policy problems.

3.1. Teacher Distribution and Workforce Sustainability

The first and most prominent theme concerned the availability and sustainability of the teaching workforce. The documents consistently indicated that rural education systems face difficulties not only in recruiting teachers but also in retaining them over time. The analysis identified several recurring factors associated with teacher sustainability, including financial incentives, quality of life, professional autonomy, workload, family considerations, housing and transportation, opportunities for career development, administrative support, and relationships with local communities. Academic studies in the corpus further indicated that financial incentives may improve recruitment but do not necessarily guarantee long-term retention. News reports similarly documented situations in which shortages of qualified personnel disrupted or reduced the continuity of educational services. The findings therefore indicate that the problem is broader than the numerical distribution of teachers. Rural educational governance must address the entire employment cycle, including attraction, placement, professional support, development, and retention.

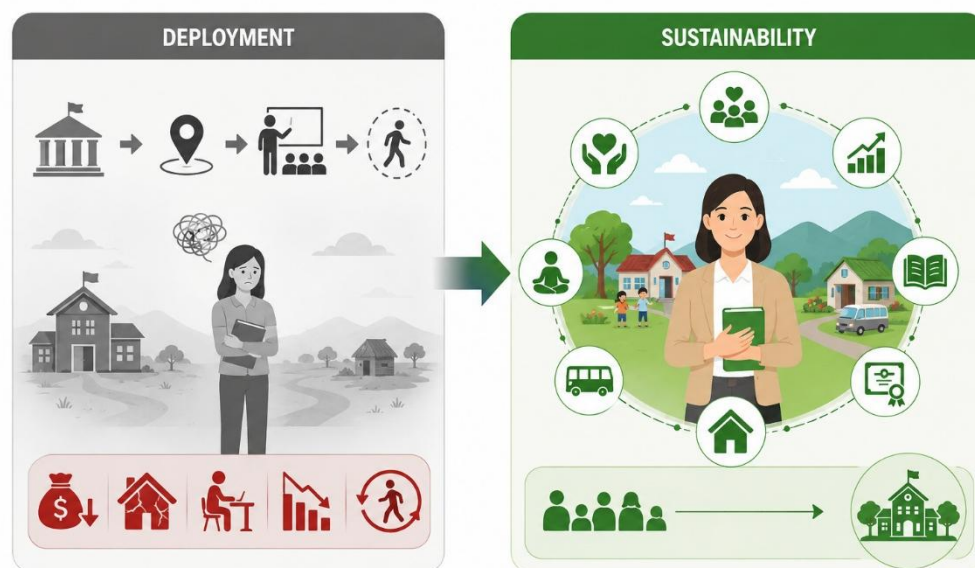


Figure 2. From Teacher Deployment to Teacher Sustainability

Taken together, these studies support a transition from teacher deployment toward teacher sustainability. Under this perspective, policy success should not be measured merely by whether vacant positions have been filled. It should also consider the duration of teacher retention, access to professional development, workload management, career progression, professional support, and overall working and living conditions. A more comprehensive policy approach could therefore integrate financial incentives with housing or transportation assistance, mentoring programs, professional learning opportunities, career advancement pathways, supportive school leadership, and recruitment strategies that prioritize candidates with connections to rural communities.

3.2. Educational Infrastructure and the Digital Divide

The second theme concerned physical and digital infrastructure. The documents showed that technology is frequently promoted as a mechanism for reducing the disadvantages associated with geographical distance. However, the effectiveness of digital education was strongly dependent on broader infrastructural conditions. Several components emerged repeatedly from the analysis: reliable internet connectivity, access to appropriate devices, stable electricity, digital competence, technical support, and institutional capacity to integrate technology into teaching and learning. An important pattern identified in the documents was that limited use of technology could not always be attributed to teachers' unwillingness to adopt digital tools. In several contexts, teachers demonstrated positive attitudes toward technology despite operating under significant infrastructural constraints. The findings therefore suggest that digital inequality is better understood as an ecosystem-level problem rather than simply a lack of devices or internet access.

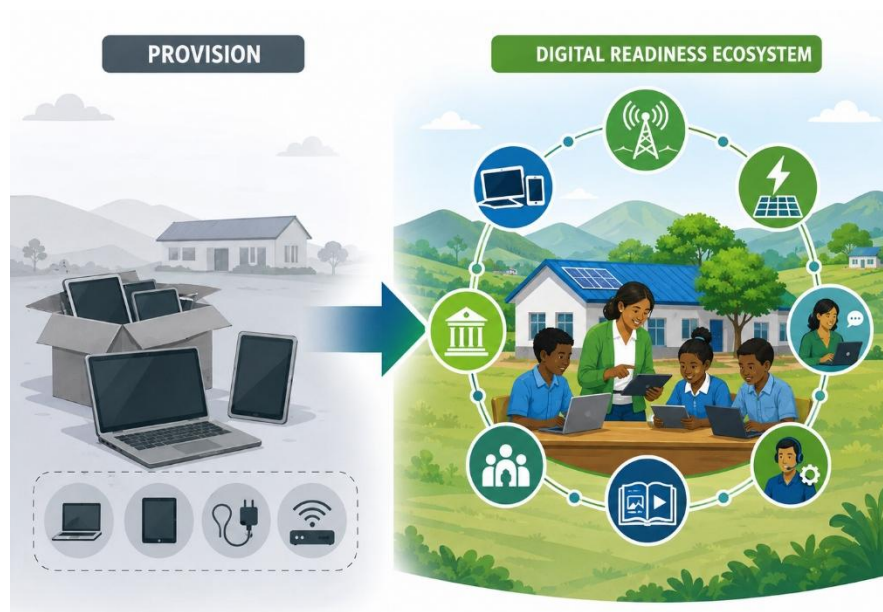


Figure 3. From Technology Provision to a Digital Readiness Ecosystem

Contemporary institutional reports have also highlighted persistent inequalities in access to the benefits of educational digitalization, particularly in low-resource settings. These findings support the concept of a digital readiness ecosystem. Such an ecosystem requires at least five interconnected components:

- reliable connectivity;
- appropriate digital devices;
- stable energy infrastructure;
- user competence; and
- technical and institutional support.

Providing devices without internet access, connectivity without adequate teacher competence, or training without appropriate technological infrastructure is unlikely to produce sustainable digital transformation. In areas where connectivity remains limited, digital education should also avoid assuming that all technology-enhanced learning must depend on continuous internet access. Offline platforms, locally stored digital content, radio, educational television, downloadable learning materials, and combinations of low- and high-technology solutions may remain educationally valuable.

3.3. *Misalignment Between Uniform Policies and Local Needs*

The third theme concerned the mismatch between standardized policy approaches and heterogeneous rural conditions. The documents demonstrated considerable variation among rural schools. Some schools experienced severe teacher shortages but benefited from strong community involvement. Others had sufficient teaching personnel but faced transportation difficulties, poor internet connectivity, declining student populations, poverty, or environmental risks. This variation indicates that similar educational problems may have different underlying causes across locations. Consequently, standardized interventions may produce uneven outcomes when local implementation capacity and contextual conditions are not adequately considered. The analysis therefore identified policy-context misalignment as a significant governance challenge. The issue is not necessarily the absence of policy, but rather the extent to which policy design corresponds to local needs and capacities.

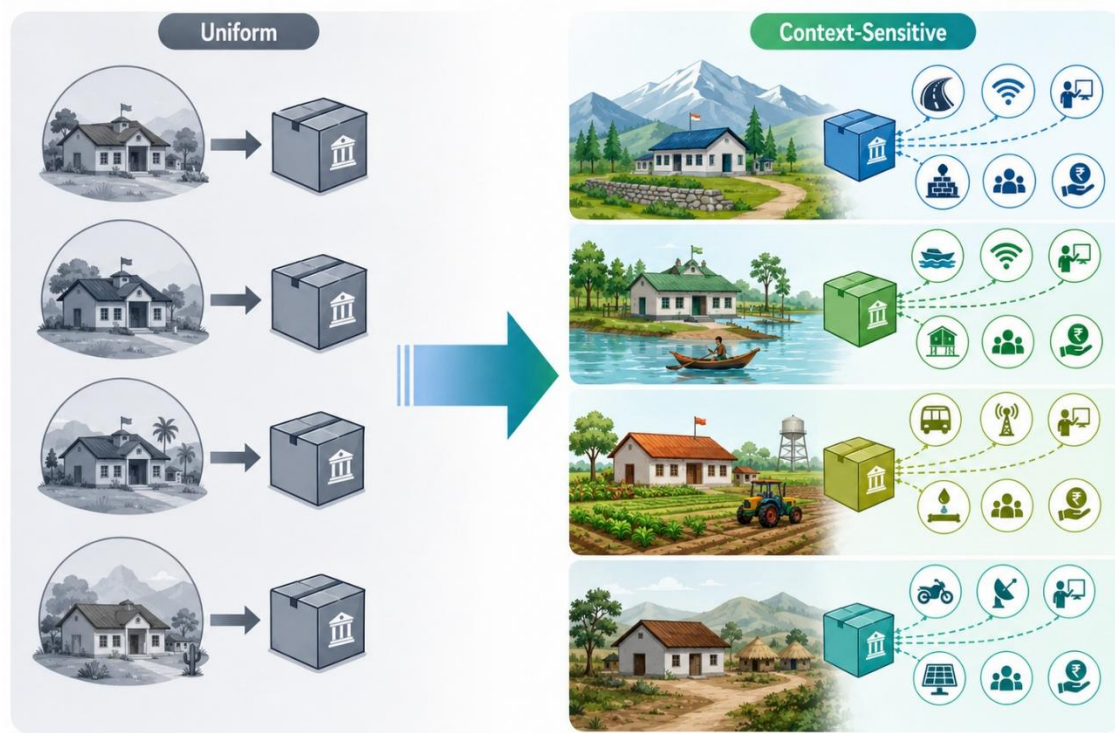


Figure 4. From Uniform Intervention to Context-Sensitive Governance

Rural areas are highly heterogeneous. The analysis showed that schools classified under the same broad category of "rural" may experience substantially different educational challenges. This interpretation is consistent with international discussions emphasizing that educational technology and other policy interventions cannot be treated as one-size-fits-all solutions. The implication is that policy differentiation should not necessarily mean lowering educational standards for rural schools. Instead, common minimum educational standards may be maintained while allowing different strategies and levels of support to achieve them.

The policy question should therefore shift from: "What program should be implemented in every school?" to: "What educational standards should be guaranteed, and what forms of support does each context require to achieve them?". This shift represents a move from standardized program delivery toward context-sensitive educational governance.

3.4. Community Participation and Educational Accountability

The fourth theme concerned the role of communities in educational governance. The documents revealed that rural communities may contribute to education through infrastructure support, school meetings, financial assistance, teacher monitoring, local leadership, resource sharing, and participation in decision-making. However, community involvement was often fragmented or limited to specific activities. The analysis further showed that community participation is most meaningful when communities are not treated solely as recipients of educational services or as supplementary sources of labor and funding. Instead, the evidence supports a broader understanding of community participation that includes identifying educational needs, monitoring service delivery, contributing local knowledge, mobilizing resources, and participating in program evaluation. The findings therefore suggest the need to strengthen collaborative educational governance, in which schools, families, local authorities, community organizations, and other stakeholders share responsibility within clearly defined institutional arrangements.

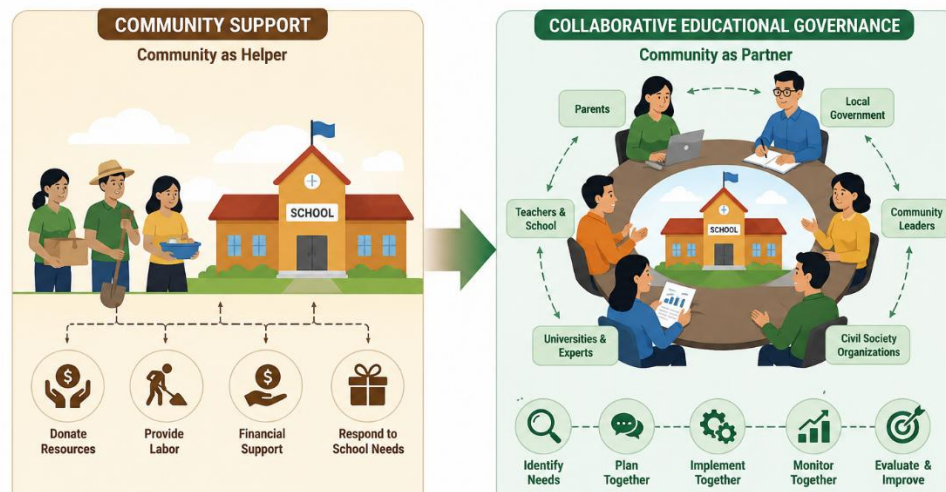


Figure 5. From Community Support to Collaborative Educational Governance

However, community participation should not be reduced to providing money, labor, or materials when schools experience resource shortages. A more meaningful model is collaborative educational governance, in which communities participate in identifying problems, defining priorities, mobilizing appropriate resources, monitoring services, and evaluating educational initiatives. Local governments, schools, parents, community leaders, youth organizations, universities, civil society organizations, and local businesses may possess different forms of knowledge and resources. Effective governance creates mechanisms through which these assets can be coordinated. This approach also recognizes that rural communities should not be conceptualized solely through a deficit perspective. Local knowledge, social networks, leadership, trust, collective identity, and existing community institutions can constitute important educational resources.

3.5. Financial Constraints and Resource Mobilization

The fifth theme concerned financial vulnerability and the capacity of rural schools to mobilize resources. The documents indicated that rural schools may be particularly vulnerable to changes in government funding, temporary grants, or externally financed programs because alternative funding sources are often limited. In several cases, funding reductions affected not only physical resources but also the continuity of professional services and educational programs. At the same time, the evidence indicated that rural communities may possess forms of capital that extend beyond financial resources. These include social networks, local knowledge, leadership, community facilities, professional expertise, and institutional partnerships. The findings therefore reveal two complementary dimensions of rural educational financing: the need for adequate and equitable public funding and the potential for responsible local resource mobilization.

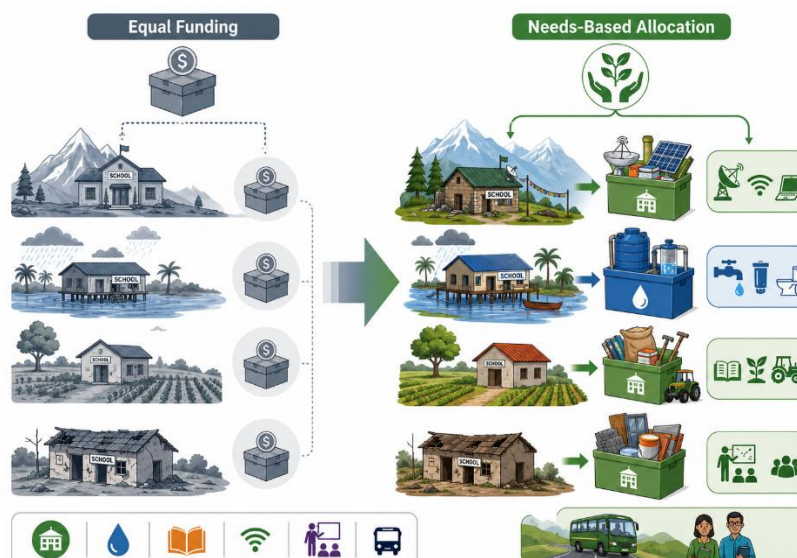


Figure 6. From Equal Funding to Needs-Based Resource Allocation

The analysis indicates that schools operating in resource-constrained or geographically isolated settings may have fewer alternatives when external funding is reduced or discontinued. This produces what may be described as funding vulnerability. These findings suggest that rural education financing should combine two principles.

First, governments remain responsible for ensuring sufficient minimum resources so that educational quality does not depend on the economic capacity of local communities. Second, schools and communities may be supported in mobilizing additional resources through transparent and context-appropriate partnerships. Community resource mobilization should therefore supplement rather than substitute for public responsibility. The broader policy implication is that financial equity should not necessarily be interpreted as equal expenditure per school or per student. Schools facing greater geographical isolation, transportation costs, teacher shortages, or infrastructure limitations may require higher expenditure to achieve comparable educational outcomes.

4. Educational Resilience to Geographical and External Disruptions

The sixth theme concerned the vulnerability of educational services to geographical conditions and external disruptions. Rural schools may be affected by long travel distances, limited transportation, environmental hazards, extreme weather events, demographic changes, unstable digital connectivity, workforce shortages, and interruptions in funding. The documentary evidence indicated that these factors can interact. For example, geographical isolation may increase difficulties in teacher recruitment, access to specialist services, maintenance of infrastructure, and implementation of digital learning. The analysis therefore identified educational resilience as an important but frequently underdeveloped dimension of rural educational governance. Schools and education systems require mechanisms that allow learning to continue when normal service delivery is disrupted. These mechanisms may include offline learning resources, alternative communication systems, temporary learning facilities, flexible instructional arrangements, and community-based learning support.



Figure 7. From Reactive Responses to Educational Resilience

Geographical distance, transportation constraints, extreme weather, natural hazards, workforce shortages, demographic changes, financial instability, and digital disruptions may threaten continuity of learning. In rural areas, the consequences may be particularly serious because alternative services are often limited. A single disrupted road, unavailable teacher, unstable internet connection, or damaged school facility can have a disproportionately large effect on access to education.

Educational governance should therefore incorporate educational resilience, understood as the capacity of schools and education systems to maintain or rapidly restore learning when normal service delivery is interrupted. Possible strategies include offline learning resources, alternative communication channels,

community learning centers, temporary facilities, flexible schedules, distributed learning materials, and contingency arrangements for teachers and students.

4. Conclusion

This study demonstrates that educational governance in rural areas is shaped by interconnected challenges rather than isolated problems. The qualitative document analysis identified six major issues: teacher workforce sustainability, infrastructure and digital readiness, policy-context alignment, community participation, financial sustainability, and educational resilience. These findings indicate that improving rural education requires more than expanding access or implementing standardized programs. Effective governance should therefore move toward context-sensitive and needs-based approaches that recognize differences in local conditions, institutional capacity, and available resources. Teacher policies should emphasize long-term retention and professional support, while digital transformation should be supported by adequate infrastructure, competencies, and technical capacity. Community participation, equitable resource allocation, and resilience planning are also essential for maintaining sustainable educational services. Based on these findings, the study proposes the 6P Framework for Rural Educational Governance Profiling, Personnel, Provision, Participation, Public Financing, and Protection. This framework provides an integrated perspective for identifying local educational needs and developing more responsive policy interventions. Future research may empirically validate the framework across different rural contexts and examine how its dimensions contribute to educational quality, equity, and sustainability.

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