



## Community Challenges in Accessing Educational Facilities

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### Abstract

*This study aims to examine the key barriers affecting access to educational facilities in Moyo Island, West Nusa Tenggara, Indonesia, and to provide an integrated understanding of how these challenges influence educational inequality in remote island contexts. A qualitative case study approach was employed using semi-structured interviews with 30 participants, including parents, teachers, and community leaders. Data were analyzed using thematic analysis to identify major patterns and relationships among barriers. The findings reveal four primary barriers: geographical constraints, infrastructural deficiencies, economic limitations, and teacher shortages. These factors operate in an interconnected manner, where geographic isolation reduces school attendance, poor infrastructure creates unfavorable learning environments, economic pressures increase dropout risks, and teacher shortages lower educational quality. The study demonstrates that educational access in remote areas is shaped by a systemic interaction of multiple barriers. Therefore, integrated and multi-sectoral policy interventions are required to improve equitable access to education in rural and isolated communities.*

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## INTRODUCTION

Education has been widely acknowledged as being a fundamental human right and a key driver of sustainable development, social mobility and economic growth. The access to quality education is unequal worldwide, especially in those parts of the world that are geographically remote and socioeconomically disadvantaged (Nixon, 2020). Structural inequalities are still restricting access to education by the marginalized groups in developing countries, particularly those in the rural and remote regions. In this regard, Indonesia has achieved a lot in increasing access to education, both through national policies and programs, but the disparities still exist in various areas because of the uneven growth of infrastructure and socio-economic status (Thamrin, 2020; Telaumbanua et al., 2024; Fatimah et al., 2023). The example of the remote island communities, like Moyo Island, West Nusa Tenggara, illustrates the overall difficulties of ensuring equitable distribution of education.

The Indonesian education commitment is committed by law, including Law No. 20 of 2003 on the National Education System that ensures the right of every citizen to be

educated, and is consistent with international commitments, including the Sustainable Development Goals (SDG 4: Quality Education). Regardless of these regulatory commitments, gaps in implementation can still be observed in remote areas where geographical isolation, poor infrastructure and low provision of basic educational facilities are some of the barriers to access to basic educational facilities. Research shows that rural populations tend to be less educated and have less access to teaching material and quality education than urban population (Avvisati, 2020; Dong et al., 2020). These gaps emphasize the necessity of studying local impediments that do not allow successful implementation of national education policies.

The central issue that is to be discussed in this paper is the constant obstacles to the access to the educational facilities in Moyo Island, a remote and undeveloped area with a low level of connectivity and infrastructure. Geographic isolation is a major limitation to mobility as students and teachers will have difficulty accessing schools on a regular basis. Past research has demonstrated that long commuting distances, poor transport infrastructure, and rugged landscapes have been some of the contributors to poor school attendance and high school dropout rates in the rural environment (Suprpto et al., 2022; Chirisa et al., 2023; Mncube, 2023). Physical access in such settings will be a determining factor of educational attendance, especially in younger children who are more susceptible to environmental limitations.

Besides geographic factors, infrastructural shortages and lack of resources contribute to inequality in education. The lack of basic facilities such as proper classrooms, sanitation, electricity and learning materials in schools in remote areas often undermines the quality of education delivery in schools. Zhang et al. (2023) and Dong et al. (2020) note that the impact of poor infrastructure on learning outcomes is not only a limitation but it also leads to institutional capacity to facilitate effective teaching processes. Moreover, lack of qualified teachers and high turnover rates in isolated communities undermine educational continuity and quality, posing systemic issues that need multi-layered policy changes (Symeonidis & Eloff, 2023; Varghese et al., 2023).

The literature suggests some broad answers to such issues, such as development of infrastructure, incentive schemes of teachers, and specific funding of disadvantaged areas. As an illustration, the most influential idea to increase access and involvement in rural education systems has been found to be better transportation and school infrastructure (McDermot et al., 2022). Likewise, the policies to lure and retain qualified teachers in remote locations, including financial incentive, housing, and career development opportunities, have proven beneficial effects on education quality (Sahito & Vaisanen, 2020). In Indonesia, the government has launched programs like school operational assistance (BOS), conditional cash transfer, and teacher distribution to minimize disparities, but their impacts differ across the country.

More precise recommendations that have been brought to the fore in the past research focus on the need to deal with socio-economic and cultural impediments in addition to structural limiting factors. Economic disadvantage is one of the primary barriers to school attendance because rural families are frequently unable to pay indirect educational expenses, including uniforms, transportation, learning supplies (Ahn & Davis, 2023). Moreover, socio-cultural aspects, such as gender expectations, early marriages, and child labor, still impact the engagement in education, especially among girls in rural areas (Ghosh, 2021; Hadiati et al., 2022). These results indicate that the educational interventions should be multidimensional and should incorporate the economic support, community involvement, and cultural sensitivity.

Also, the literature is shedding light on the role of community-based and context-specific interventions in enhancing access to education in remote communities.

Strategies like mobile education, distance learning programs and community involvement programs have been adopted in different places as a way of surmounting geographical and infrastructural challenges. Nevertheless, the success of these strategies varies with the local conditions, such as technological preparedness, community engagement, and policy facilitation. The literature is commonly characterized by general country or regional research; therefore, their work on how these interventions work at very local and remote settings like small island communities is lacking.

Although there is an increasing literature on educational inequality, a gap in research that empirically examines the interdependence of geographic, infrastructural, economical and socio-cultural obstacles within the context of remote island conditions is pronounced. Most studies have a habit of examining these factors separately and thus they do not give a complete picture of the impact of these factors in enhancing access to education. In Moyo Island, little academic focus has been directed towards capturing lived experiences of the local communities and how these intertwined difficulties inform educational outcomes. The aforementioned gap highlights the necessity to conduct a context-specific study incorporating several aspects of access barriers into one analytical model.

Thus, the research project will explore the main issues related to the communities in Moyo Island, West Nusa Tenggara, in getting access to educational facilities and give a comprehensive picture of the influences on educational inequality in this remote environment. The uniqueness of the present study is that it is integrative, as it incorporates geographic, infrastructural, economic, and social-cultural aspects of research by using qualitative inquiry. This study aims to add to the creation of more inclusive and context-sensitive educational policies by recording the voices and experiences of local stakeholders. The research topic is the barriers to educational access and the possible avenues to enhance access to education in rural Indonesia, which in turn can contribute to the overall goal of equitable and sustainable education in rural Indonesia.

## **METHODS**

This study employed a qualitative research approach to explore the challenges faced by communities in accessing educational facilities on Moyo Island, West Nusa Tenggara, Indonesia. A qualitative design was considered appropriate for this study as it enables an in-depth understanding of participants' lived experiences, perceptions, and social realities within a specific geographic and socio-cultural context. The study adopted a case study strategy to allow a comprehensive examination of the multifaceted barriers to educational access in a remote island setting.

The research focused on key stakeholders directly involved in or affected by educational access issues. A purposive sampling technique was used to select participants who possessed relevant knowledge and experience regarding educational challenges in the area. A total of 30 participants were involved in this study, consisting of 15 parents of school-aged children, 5 teachers from local schools, and 10 community leaders. These groups were selected to capture diverse perspectives representing household, institutional, and community-level experiences.

Data collection was conducted over a three-month period from May to July 2024. The primary method of data collection was semi-structured interviews, which allowed flexibility in exploring participants' experiences while maintaining consistency across key research themes. The interviews were conducted in participants' homes or community settings to ensure a comfortable and familiar environment. Each

interview lasted between 45 and 60 minutes and was conducted in the local language to facilitate clear communication and authentic responses.

The interview guide was designed to explore four main dimensions of educational access identified in the literature: geographic barriers, infrastructural conditions, economic constraints, and teacher availability and quality. Participants were asked to describe their experiences related to school accessibility, transportation challenges, school facilities, financial limitations, and the availability of qualified teachers. Probing questions were used to elicit deeper insights and clarify participants' responses. All interviews were audio-recorded with participants' informed consent and transcribed verbatim shortly after data collection.

Data analysis was conducted using thematic analysis, following a systematic process of coding and theme development. First, all interview transcripts were read multiple times to ensure familiarity with the data. Second, initial codes were generated by identifying significant statements, recurring issues, and meaningful patterns related to barriers in educational access. These codes were then grouped into broader categories based on conceptual similarities.

Through an iterative process, the categories were refined into four main themes: (1) geographical barriers, (2) infrastructural challenges, (3) economic constraints, and (4) teacher shortage and quality. These themes directly reflect the dominant patterns emerging from participants' narratives and form the basis of the findings presented in this study. To enhance analytical rigor, the coding process was conducted carefully to ensure consistency between raw data and thematic interpretation.

To ensure the credibility and trustworthiness of the findings, several qualitative validation strategies were employed. Data triangulation was achieved by comparing perspectives across different participant groups, including parents, teachers, and community leaders. Additionally, representative quotations from participants were used to support each theme, ensuring that the analysis remained grounded in empirical data. The researcher also maintained detailed records of the coding and analysis process to ensure transparency and methodological consistency.

Ethical considerations were carefully observed throughout the study. All participants were informed about the purpose of the research, and their voluntary participation was obtained prior to data collection. Confidentiality and anonymity were ensured by removing identifiable information from transcripts and reports. Participants were also given the right to withdraw from the study at any stage without any consequences.

This methodological approach ensures that the findings presented in this study are empirically grounded, contextually relevant, and analytically robust, while maintaining consistency between the research design and the reported results.

## **RESULTS AND DISCUSSION**

The results section below is the findings of the current qualitative research study that explored the Barriers to Access Education Facilities among communities at Moyo Island, West Nusa Tenggara. In this qualitative study, which involved the completion of a set of open-ended questions by fifteen parents of learners in different junior and senior schools, five teachers from different schools, and ten community leaders, the intent was to gain an understanding of the experiences of those stakeholders who are most affected by the existing inequalities in education. Deliberate interviews which offered qualitative information enriched this study through offering great insights on multiple barriers including geographical, infrastructural, teacher and economic barriers to education. The information as well as ideas gotten from these discussions not only point out existing problems in the educational structure in Moyo Island but also point out the importance of addressing

the problems according to the community's need and circumstances. The subsequent sections shall provide an account of the major findings in the study towards providing the audience with better lights on the challenges to education amongst families in the island.

The thematic analysis identified four major barriers affecting educational access, as summarized in Table 1.

Table 1. Summary of Barriers to Educational Access in Moyo Island

<b>Theme</b>	<b>Key Issues Identified</b>	<b>Impact on Education</b>	<b>Representative Evidence</b>
Geographical Barriers	Long distance, steep terrain, limited transport	Irregular attendance	"Children walk through steep hills to reach school."
Infrastructural Challenges	Damaged classrooms, lack of water, poor sanitation, unstable electricity	Poor learning conditions	"The roof leaks and classrooms are not safe."
Economic Constraints	Cost of uniforms, supplies, transport, child labor	Dropout risk	"We cannot always afford school needs."
Teacher Shortage & Quality	Lack of teachers, high turnover, limited qualifications	Low learning quality	"Teachers often leave and are not replaced."

Source: Authors' elaboration based on interview data (2024)

As shown in Table 1, the identified barriers are interrelated and collectively influence educational access. The following sections elaborate each theme in detail.

### **Geographical Barriers**

Another recognized obstacle in this study was the geographical factor of Moyo Island, which has a severe impact on the education centers. Moyo Island lies to the north of Sumbawa in West Nusa Tenggara and can only be reached by ferry. The geographical isolation of the island is that majority of the people who live on the island experience mobility challenges in that they have to cover a long distance or even use off-road means to get to school. Little means of transport is available with the result that at times, adversities in the form of heavy rainfall and rough sea hinder the movement. Hence, students are always struggling to attend school regularly, and some drop out of school because of physical barriers to education for disabled.

This has also added to the problem due to the feature of the land on the island. Many schools, especially those provide by NGO's or local communities are situated in and around the main villages only and this causes the students from the remotest areas on Moyo Island to suffer. Some students are forced to trek for several hours irregular and rough surfaces to access their schools, and there are no facilities to help them. This comes out clearly when one parent being interviewed noted that,

*"My children have to leave home very early in the morning and walk through steep hills to get to school. Sometimes it's too much for them, and they miss days of class because of how tired they are."*

This issue was echoed by several other community members and educators. Teachers also expressed concerns about how geographical challenges impact students' performance and attendance. One teacher observed,

*"We have many students who live far from school. On rainy days, the paths become muddy and slippery, making it dangerous for them to come. Many of*

*them just stay at home when the weather is bad, and this affects their learning progress.”*

It is made worse by the fact that there are limited structures put in place on the island. Very many of the villages have no links with the various locations of the main schools through tarmacked roads and public means of transport being scarce, many families are left with no option other than to trek. This has an especially an impact on the poor child who cannot afford other modes of transport like motor bike or a boat. However, the lack of reliable means of transport in emergency situations or for normal commuting discourages the child in the rural area from going to school. This infrastructural void has become a hindrance to the rural residents' educational needs since a local government official pointed out that,

*“Without proper roads or transportation, it is hard for students to commit to daily school attendance. The government has made some efforts, but the infrastructure here is still not sufficient for the needs of the community.”*

Geographical isolation not only affects students but also teachers who often travel from other areas to teach in Moyo Island's schools. Teachers reported that the logistical difficulties of reaching the island, coupled with the lack of amenities, contribute to high turnover rates among educators. Many teachers choose not to stay on the island long-term, further straining the already limited educational resources available to the community.

*“Some teachers can't handle the travel or the living conditions here,”*

One principal remarked.

*“We've lost good teachers because it's too difficult for them to manage the commute or stay here for long periods.”*

Besides, the geographical barriers have several influential impacts on the type of education students receive. One of the biggest challenges that schools face is the poor access to educational resources and thereby most of the schools on the island are poorly equipped with relevant teaching aids, modern facilities and equipment. They are expensive and take considerable time to import books, educational materials, and other resources from the mainland and all these have a say to the unbearable learning atmosphere. This shortage of resource was also mentioned by the teachers during the interview session one teacher said.

*“We often don't have enough books or materials because it takes so long for them to arrive from the mainland. Sometimes, students have to share books or use outdated ones because we can't get new supplies in time.”*

The combination of the island's remote location, difficult terrain, and inadequate infrastructure limits students' ability to attend school regularly and hinders the overall quality of education provided. These challenges require targeted interventions, including improved transportation infrastructure and investment in educational resources, to ensure that all children on the island have equitable access to education.

### **Infrastructural Challenges**

The other main challenge to access education in Moyo Island is infrastructural hitches that hampers the idea of implementing facilities to enable prisoners access to education. The absence of the most basic facilities like good network of roads, school structures, and learning facilities greatly affect education output in the island. A majority of the school found in this island are located in least developed areas and their physical facilities are very worst. A significant number of these structures is dilapidated with walls in a very bad state, leakages on the roofs and inadequate

classroom facilities. These poor standards not only affect academic performance standards but also more importantly; present hazards to young learners and educators.

In the interviews, several teachers expressed concern on state of the school infrastructure arguing that it was showing how it impacts on teaching and learning. One teacher lamented,

*“The classrooms are overcrowded, and some of the walls have cracks. When it rains, the roof leaks, and we have to move students to a different area so they don’t get wet. It’s very distracting and makes it hard for the children to focus.”*

These problems are long-standing as the island has not seen much attention regarding infrastructure from local authorities over the years because of financial and practical problems with necessary changes.

The other major problem includes inadequate and /or poor sanitation and water amenities in learning institutions. A significant number of the schools have no clean sources of water and most have inadequate or no sanitation facilities at all. Where schools have restrooms, they are usually dirty, disembodied restrooms without water facilities or proper pipe borne sewerage systems. It affects female students majority from early menstrual cycles because they are relegated to lessons from homes due to lack of proper ablution facilities. One parent from a local Authority mentioned this during an interview noting that

*“My daughter sometimes stays home from school because the bathroom at her school is not clean, and there’s no water. It’s very hard for her, and I worry about how this affects her studies.”*

Moreover, a constant erratic supply of electricity on the island makes it difficult to implement the necessary infrastructural changes in the schools. Schools in many cases do not have a stable supply of electricity, and as a result such educational tools as present day computers or projectors are hardly utilisable. In the few schools that have put in computers, most of these computers are either obsolete or do not work due to constant power blackouts. This implies that students in Moyo Island do not have easy access to some basic educative tools which makes them be very far from students in Moyo Island compared to students in the other regions in Indonesia who enjoy other better educative facilities. For instance, one school principal observed that,

*“We try to introduce the students to computers, but often the power goes out, and we can’t use them. Even when we have power, the computers are so old that they don’t work properly. The students are missing out on important skills because of this.”*

In addition, there is also poor transport network in the island which hampers the improving and developing of schools and distribution of learning assets. Due to lack of tarred roads some of which are as shown below: During the rainy season the roads become murrum and difficult to transport supplies to schools. This leads to perpetual deficits in stock of textboxes, stationery and many other teaching consign stationery and many other teaching consignments. for instance, one teacher said during an interview.

*“We often run out of basic supplies like paper and pencils because it’s so hard to get deliveries from the mainland. Sometimes, students have to share textbooks or go without them, which makes it harder for them to learn effectively.”*

This logistical challenge underscores the broader infrastructural weaknesses that the island faces, particularly in terms of supporting a functioning and efficient educational system.

The lack of proper school facilities also extends to the limited availability of extracurricular spaces such as libraries, science labs, and sports fields. These facilities are crucial for a well-rounded education, yet many schools on Moyo Island lack them entirely. This deprives students of opportunities for practical, hands-on learning and engagement in physical activities, both of which are essential for their overall development. One teacher commented,

*“We don’t have a library or a science lab, so students never get the chance to do experiments or read books beyond what’s in the classroom. It’s a big disadvantage because they miss out on experiences that could spark their interest in subjects like science.”*

This shortage of educational resources and facilities not only limits students’ academic growth but also restricts their potential to explore diverse interests and skills outside the core curriculum.

### **Economic Constraints**

Economic constraints are a major challenge that severely restricts access to education for many families on Moyo Island. The high levels of poverty on the island mean that many parents struggle to meet even the basic costs associated with schooling, such as uniforms, books, and transportation. Although education in Indonesia is theoretically free under the government’s compulsory education program, in practice, families are often required to cover a variety of additional expenses. For families living in poverty, these costs can be prohibitive, forcing many children to drop out of school or never enroll at all. One parent interviewed expressed the difficulty of meeting these financial demands:

*“Even though school is supposed to be free, we still have to pay for things like uniforms and textbooks. Sometimes, we don’t have enough money, so my children have to stay at home until we can afford to send them back.”*

This economic pressure affects many families on Moyo Island, particularly those who rely on subsistence farming or fishing as their primary source of income. With these livelihoods being seasonal and often unpredictable, families frequently face financial shortfalls, which can lead to extended periods during which their children are unable to attend school.

Moreover, transportation costs represent another significant economic barrier. Many children live in remote areas far from the nearest school, and without public transportation options on the island, parents are left with the responsibility of either walking their children to school or paying for private transportation. For families living in poverty, these transportation costs can be unsustainable. One teacher noted,

*“Some students live far away, and their parents can’t afford to pay for transportation every day. As a result, they miss a lot of school because they simply can’t get there.”*

This issue is particularly acute for students in secondary school, as the limited number of schools on the island means that some students must travel long distances to attend classes.

Additionally, economic constraints also affect the ability of students to participate in school-related activities beyond regular lessons, such as extracurricular programs, field trips, or other educational enrichment opportunities. These activities, while not

mandatory, play an important role in enhancing students' learning experiences and promoting their overall development. However, the costs associated with these programs such as fees for materials, travel, or participation are often beyond the reach of economically disadvantaged families. A local school administrator explained,

*“We try to organize activities like field trips or sports events, but many of the students can’t afford to participate because their families don’t have the extra money. It’s unfortunate because these experiences could help them learn and grow in ways that go beyond the classroom.”*

As a result, students from poorer families are often excluded from opportunities that could broaden their educational experience and foster personal growth.

The impact of economic constraints on education is also evident in the lack of resources available to students at home. Many families on Moyo Island cannot afford basic educational tools such as books, stationery, or even reliable lighting for studying at night. This makes it difficult for students to complete homework or study effectively outside of school hours. One student shared their struggles, saying,

*“At home, we don’t have enough money to buy extra books or supplies, so sometimes I have to borrow from my friends. At night, it’s hard to study because we don’t always have electricity, and we use candles or oil lamps, which don’t give enough light.”*

These economic hardships exacerbate the educational disparities between students from wealthier and poorer families, limiting the latter’s ability to fully engage with and benefit from their schooling.

Additionally, many families face a difficult choice between sending their children to school and having them contribute to the household income. In economically disadvantaged households, children are often expected to help with farming, fishing, or other forms of labor to support the family financially. This expectation can lead to high rates of absenteeism and school dropout, as parents prioritize immediate economic needs over long-term educational goals. One father mentioned,

*“Sometimes we need our children to help with work, especially during the harvest or when we’re fishing. If they stay in school all the time, we don’t have enough hands to help, and it becomes very hard for us to make a living.”*

The economic necessity of child labor underscores the broader socioeconomic challenges faced by families on the island, where the immediate need for income outweighs the potential long-term benefits of education.

### **Teacher Shortage and Quality**

Another critical challenge identified in this study is the severe shortage of qualified teachers on Moyo Island, which has had a profound impact on the quality of education available to students. The shortage of teachers is particularly acute in remote areas of the island, where recruiting and retaining educators is difficult due to the island’s isolation, lack of amenities, and challenging living conditions. Many teachers who are assigned to Moyo Island come from other regions and often find the living conditions on the island, including the absence of basic services and limited social amenities, to be too difficult to bear for extended periods.

To further explain these relationships, this study proposes a conceptual framework as illustrated in Figure 1.

# TEACHER QUALITY IN MOYO ISLAND

Qualitative Research Findings (2024)

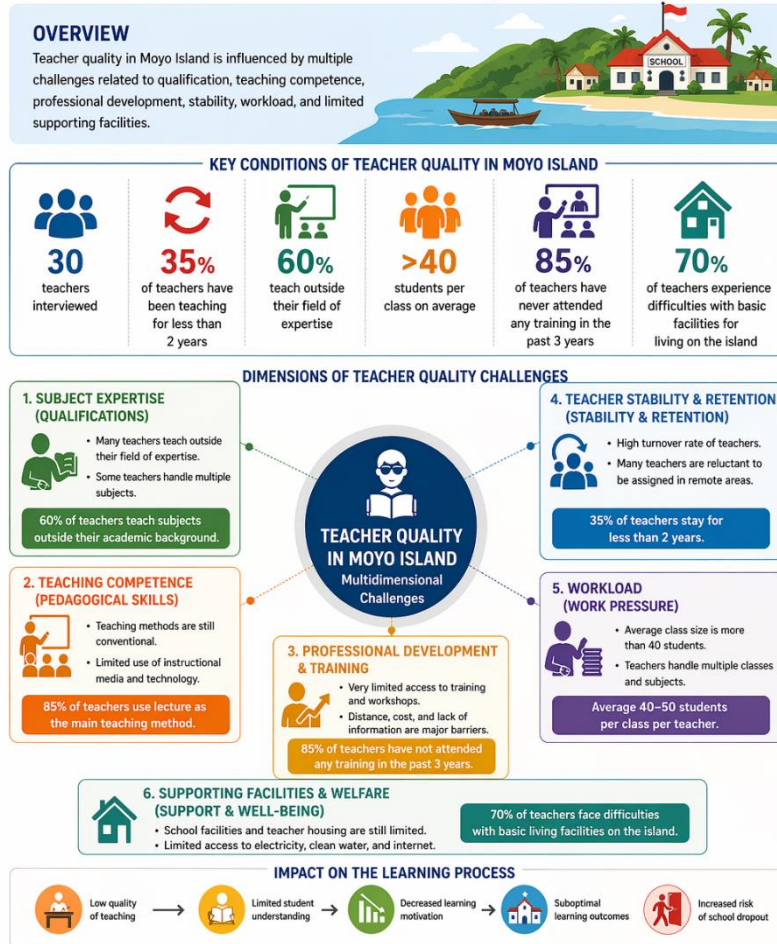


Figure 1. Dimensions of Teacher Quality Challenges in Moyo Island

Source: Authors' elaboration based on qualitative interview data (2024)

The conceptual framework illustrates that social, cultural, and economic factors act as key determinants influencing both community participation and perceived effectiveness of flood mitigation projects. Community participation functions as a mediating variable that links these contextual factors to project outcomes, particularly in terms of sustainability, equity, and community acceptance. At the same time, social cohesion, cultural compatibility, and economic capacity also exert a direct influence on how communities evaluate the effectiveness of mitigation interventions. This integrated relationship highlights that flood mitigation success is not solely dependent on technical implementation but is co-produced through social dynamics, cultural alignment, and economic conditions within the community.

During interviews, several school administrators and teachers noted the high turnover rates among educators, which has led to significant disruptions in the continuity of instruction. One school principal explained,

*"We often lose teachers after just a few months. They come here, see the conditions, and decide to leave because it's too difficult for them to stay. This has been happening for years, and it's affecting the quality of education for the students."*

The frequent turnover of teachers has led to gaps in instruction, with students sometimes going weeks or months without teachers for specific subjects. This inconsistency has hindered the learning process, as new teachers often struggle to

pick up where the previous ones left off, leading to a lack of coherence in the curriculum.

In addition to the shortage of teachers, the qualifications and experience of the teachers who do remain on the island are often not up to standard. Many schools on Moyo Island are staffed with teachers who have not received adequate training in modern teaching methods or specialized subjects. This is particularly problematic in areas such as science, mathematics, and language instruction, where a higher level of expertise is required. One teacher acknowledged this issue, stating,

*“I teach multiple subjects because we don’t have enough teachers, but I’m not trained in all of them. I do my best, but I know the students aren’t getting the depth of education they need in certain areas.”*

The lack of subject-specific expertise among teachers has resulted in a general decline in academic performance, particularly in subjects that require specialized knowledge and teaching techniques.

Moreover, the lack of professional development opportunities for teachers on Moyo Island further exacerbates the issue of teacher quality. With limited access to training programs, workshops, or seminars, many teachers are unable to improve their skills or stay updated with the latest educational practices. Teachers expressed frustration about the absence of support for their professional growth, with one teacher noting,

*“We don’t have access to training programs here. The only way to improve our skills is by going to the mainland, but that’s expensive and time-consuming. As a result, many of us are stuck using outdated methods.”*

This lack of access to professional development has contributed to the stagnation of teaching quality on the island, as educators are unable to innovate or incorporate new pedagogical strategies into their classrooms.

The shortage of teachers also leads to overcrowded classrooms, with one teacher often responsible for teaching multiple subjects to a large group of students. This situation makes it difficult for teachers to provide individualized attention to students who may need additional help. One teacher shared their experience,

*“I have to manage more than 40 students in one class, and I’m teaching multiple subjects. It’s impossible to give each student the attention they need, especially those who are struggling. It feels like I’m just trying to keep things going instead of actually helping them learn.”*

This overwhelming workload leads to burnout among teachers, further contributing to the high turnover rates and exacerbating the shortage.

Additionally, the teacher shortage impacts the availability of extracurricular activities and specialized programs that could enrich students’ educational experiences. Many schools on Moyo Island lack teachers who can provide instruction in areas such as art, music, or physical education, which are essential for fostering creativity and physical development. One school principal remarked,

*“We don’t have enough teachers to offer subjects like art or music. The students miss out on these opportunities, and it’s a shame because these activities could help them develop other skills and interests.”*

The absence of such programs limits the holistic development of students, leaving them without opportunities to explore and cultivate talents outside of the traditional academic subjects.

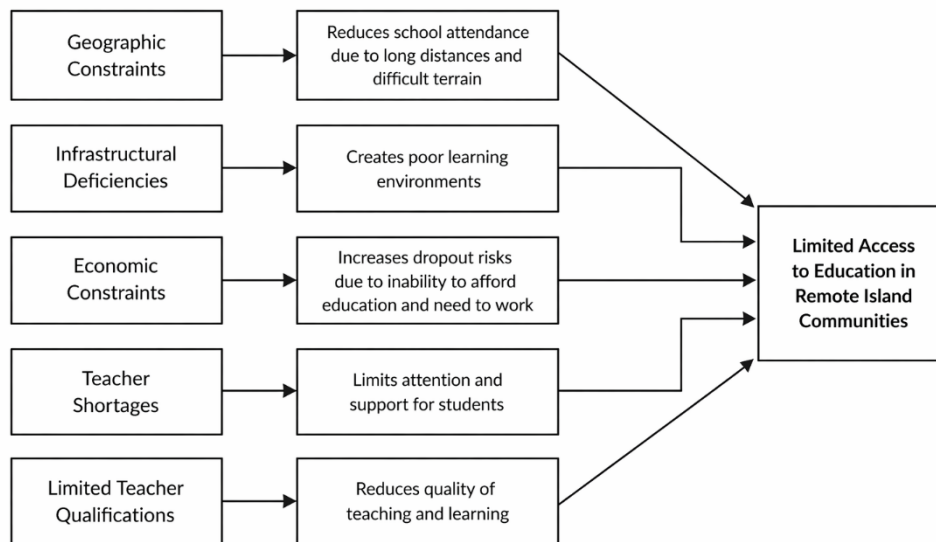


Figure 2. Mechanisms of Educational Access Barriers in Moyo Island

Source: Developed by the authors based on qualitative analysis.

Figure 2 illustrates the mechanisms through which the identified barriers influence educational access in Moyo Island. Geographic constraints reduce school attendance due to long distances and difficult terrain. These challenges are reinforced by infrastructural deficiencies that create poor learning environments. Economic constraints further increase dropout risks, while teacher shortages and limited qualifications reduce the quality of education. These interconnected factors collectively lead to limited access to education in remote island communities.

This study provides a comprehensive and context-specific understanding of the barriers to educational access in Moyo Island, West Nusa Tenggara, by examining the interconnected roles of geographic, infrastructural, economic, and institutional factors. Unlike many previous studies that treat these barriers as separate dimensions, the findings of this research demonstrate that these constraints operate in an integrated and sequential manner, as illustrated in Figure 1. This integrative perspective contributes to the growing body of literature on educational inequality by highlighting the systemic nature of access limitations in remote island contexts.

One of the most prominent findings of this study is the significant impact of geographical barriers on educational access. Consistent with prior research (Suprpto et al., 2022; Chirisa et al., 2023), the results confirm that long distances, difficult terrain, and limited transportation infrastructure reduce school attendance among students. However, this study extends existing knowledge by showing that geographic isolation does not merely act as a physical constraint but also triggers a cascade of secondary effects, including student fatigue, irregular attendance, and reduced engagement in learning activities. In the specific context of Moyo Island, the reliance on walking through steep and unsafe terrain amplifies these challenges, particularly for younger students. This finding suggests that geographic barriers in island settings require more localized and adaptive policy responses compared to mainland rural areas.

Infrastructural challenges emerge as another critical determinant of educational inequality, reinforcing the limitations imposed by geographic isolation. The findings align with previous studies indicating that poor infrastructure negatively affects

educational outcomes (McDermot et al., 2022; Dong et al., 2020). However, this study provides a more nuanced understanding by linking infrastructural deficiencies directly to the quality of the learning environment. Issues such as damaged classrooms, lack of sanitation facilities, and unstable electricity supply not only disrupt teaching activities but also create unsafe and uncomfortable learning conditions. Importantly, the absence of adequate water and sanitation facilities disproportionately affects student participation, particularly among female students, thereby highlighting the intersection between infrastructure and social dimensions of education. This reinforces the argument that infrastructure development should be viewed not merely as a logistical improvement but as a fundamental component of educational quality and equity.

Economic constraints further exacerbate the challenges faced by communities in accessing education. Consistent with the literature (Ahn & Davis, 2023), this study confirms that indirect costs of education such as uniforms, transportation, and learning materials pose significant barriers for low-income families. However, this research advances the discussion by illustrating how economic pressures in remote island communities are deeply intertwined with livelihood patterns. In Moyo Island, where households primarily depend on subsistence farming and fishing, income instability leads to difficult trade-offs between education and immediate economic survival. As a result, children are often required to contribute to household income, increasing the risk of absenteeism and school dropout. This finding underscores the need to reframe educational access policies by incorporating economic resilience strategies for rural households, rather than focusing solely on tuition-free education programs (Collom & Cooper, 2022).

The issue of teacher shortage and quality represents another significant barrier identified in this study. While previous research has emphasized the importance of teacher availability in improving educational outcomes (Sahito & Vaisanen, 2020; Symeonidis & Eloff, 2023), this study provides deeper insights into the specific challenges faced in remote island contexts. High turnover rates, lack of qualified teachers, and limited professional development opportunities contribute to inconsistent teaching quality and fragmented learning experiences. Furthermore, the necessity for teachers to handle multiple subjects beyond their expertise reduces instructional effectiveness and limits students' academic development (Ghaleb, 2024; Nor et al., 2024). This finding highlights that teacher-related challenges are not solely a matter of quantity but also of quality, retention, and professional support systems.

A key contribution of this study lies in its demonstration of how these four dimensions geographical, infrastructural, economic, and teacher-related factors interact dynamically rather than operate independently. As illustrated in Figure 1, geographical barriers reduce school attendance, which is further compounded by poor infrastructure that creates an uncondusive learning environment. Economic constraints increase dropout risks, while teacher shortages reduce the overall quality of education. These interconnected mechanisms collectively produce a systemic barrier to educational access. This integrated model advances the literature by moving beyond fragmented analyses and offering a holistic framework for understanding educational inequality in remote areas (Mishra et al., 2023; Banda, 2024; Bernard et al., 2023).

This study has significant policy implications. To start with, educating the remote islands needs a multi-sectoral approach where infrastructure development, transportation systems, economic support, and teacher management policies are integrated. As an example, access to roads and transportation services might be enhanced, which would dramatically decrease the effect of geographic remoteness on school attendance (Hopson et al., 2024). Second, the school infrastructure, especially

sanitation and electricity are important investments that should be made to ensure that there is a conducive and safe learning environment. Third, they should also increase the targeted financial assistance programs to include indirect educational costs, and thus, decrease the economic burden facing low-income families. Lastly, policies geared towards enhancing teacher retention including incentives, housing and professional development opportunities are essential in ensuring continuity and quality education in remote areas.

Along with its practical implications, the study is a contribution to the theoretical discourse on the issue of educational inequality as it highlights the significance of context-specific analysis. Although the literature tends to generalize the problem of rural education, this study shows that the island communities exhibit special structural and environmental circumstances, which demand special interventions. The integrative framework generated in this study offers a foundation to future studies to examine such dynamics in other remote and marginalized locations.

### CONCLUSION

This study highlights that barriers to educational access in Moyo Island, West Nusa Tenggara, are shaped by the dynamic interaction of geographical, infrastructural, economic, and institutional factors rather than by isolated constraints. Geographic isolation reduces school attendance, which is further compounded by inadequate infrastructure that creates poor learning environments, while economic pressures increase dropout risks and teacher shortages diminish educational quality. By demonstrating how these factors operate as an interconnected system, this study provides a more comprehensive understanding of educational inequality in remote island contexts. The findings emphasize the need for integrated and multi-sectoral policy interventions that address transportation access, school infrastructure, financial support, and teacher retention simultaneously. Ultimately, improving educational access in such regions requires context-sensitive strategies that go beyond conventional approaches and respond to the unique structural challenges faced by marginalized communities.

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