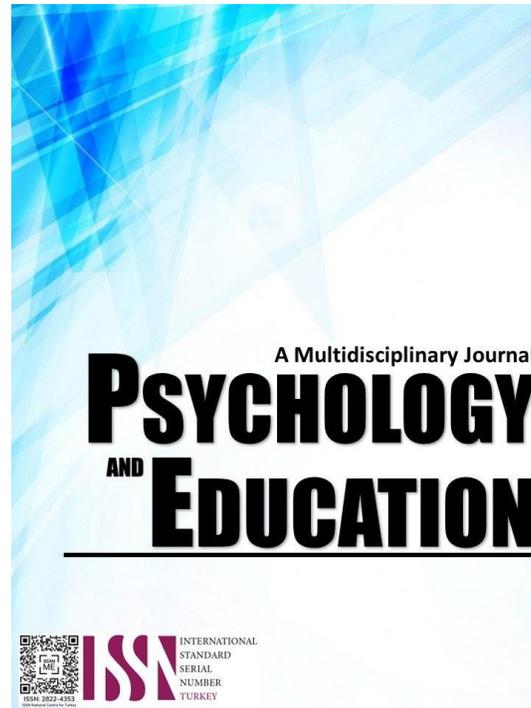


# **GEOGRAPHICAL FACTORS: A STUDY ON HINTERLAND SCHOOLS**



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## Geographical Factors: A Study on Hinterland Schools

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### Abstract

This study investigates the impact of geographical factors on education in hinterland schools in San Fernando, Bukidnon, Philippines. Specifically, it focuses on the challenges posed by geographical isolation, such as transportation difficulties, lack of infrastructure, limited access to resources, and environmental factors, and how these challenges affect learner attendance, performance, and overall educational experience. The research highlights the significant influence of terrain, weather conditions, and distance on students' ability to attend school and engage in learning, with many students facing long walks through rugged terrain to reach their schools. Furthermore, the study examines the coping mechanisms of teachers, learners, and parents in these remote areas, alongside the role of community involvement in overcoming barriers. The findings reveal that while the geographic location of the schools often exacerbates existing educational inequalities, community resilience and teacher adaptability play key roles in sustaining education. Teachers show remarkable dedication, often walking long distances themselves and teaching in difficult conditions, but still face significant challenges due to poor infrastructure, limited resources, and the lack of basic facilities. Despite these hardships, parents and community leaders actively participate in supporting the schools and advocating for improvements. The study concludes that addressing these geographic challenges requires targeted interventions, including the improvement of infrastructure, provision of learning resources, and policy adjustments to ensure equitable access to quality education for learners in remote areas. Recommendations include leveraging community support, integrating mobile learning solutions, and providing incentives to teachers in remote schools to improve retention and enhance the learning environment.

**Keywords:** *geographic factors, Hinterland schools, education, rural education, teacher challenges, infrastructure, community involvement, educational resources, learner attendance*

### Introduction

The study of the geographic factors of hinterland schools is essential to understanding the unique challenges and opportunities these educational institutions face. Hinterland schools are in remote, rural areas that are often isolated from city centers and urban amenities. This geographic isolation may have a significant impact on the quality of education provided, as well as on the overall development and success of learners.

Tanveer et al. (2017) stated that comprehensive data and correct school location are crucial for effective resource planning and addressing geographical challenges faced by schools, especially in developing countries where parents struggle to send their children to remote locations.

Geography also plays a key role in shaping hinterland schools' curricula and teaching methods. For example, schools located in remote areas may face challenges in recruiting and retaining qualified teachers, resulting in a shortage of educators with specialized knowledge and skills. This can impact on the quality of instruction and limit the range of academic opportunities available to learners.

Supported by Lagrab W. and Akin N. (2015), Geographical Information System (GIS) models and spatial visualization of the location and spatial. The distribution of schools in a specific area introduces a better way for decision support. GIS techniques, together with the help of coordinates, could be used to analyze the ideal location for educational bodies according to the population ratio.

Additionally, the geographic location of hinterland schools may impact on the overall health and well-being of learners. The remote nature of these schools can affect access to healthcare services, nutritious food, and recreational opportunities. By studying the geographic factors that influence the health and well-being of learners in hinterland schools, the researcher can identify areas for improvement and develop targeted interventions to support learner growth and development.

The geographic factor of hinterland schools also influences learner outcomes and achievement levels. Learners in remote areas may face unique challenges related to transportation, connectivity, and access to educational resources. By studying these factors, we can better understand the barriers to learner success and develop strategies to overcome them.

Understanding the geographic factors influencing hinterland schools is important for promoting equity and social justice in education. Remote and rural areas often face higher poverty levels, unemployment, and social inequality, which can impact the quality of education available to learners. By studying these factors, we can work toward creating a more equitable and inclusive education system that provides all learners with the resources and support they need to succeed.

The study of the geographic factors of hinterland schools is also important for understanding the impact of environmental factors on education. Schools in remote areas are often more vulnerable to natural disasters, environmental degradation, and climate change. By

studying these geographic factors, we can develop strategies to mitigate the impact of environmental challenges on learning and well-being.

In conclusion, studying the geographic factors of hinterland schools is essential for understanding the complex interplay between geography, education, and community development. The researcher decided to conduct this study to gain more knowledge about the problems in the community, such as needs and limited resources.

### Research Questions

Specifically, this study sought to answer the following questions:

1. Do geographic factors impact learner attendance?
2. What are the perceived challenges and coping mechanisms of teachers, learners, and community members in the hinterland areas?
3. How do geographic challenges influence the availability of educational resources and infrastructure in hinterland schools?

## Methodology

### Research Design

This study used qualitative research methods, such as interviews, focus group discussions, observations, and document analysis, to study how geographic factors impact hinterland schools.

### Participants

The researcher used purposive sampling. On behalf of the parents, the heads of the tribes and the head of the barangay / sitio were taken as the respondents of the study. All teachers will be taken as respondents in the study.

Table 1. *Participants*

<i>Respondent Number</i>	<i>Sex</i>	<i>Age</i>	<i>Status / Position</i>	<i>Location</i>
Respondent 1	Female		LEARNER	
Respondent 2	Female		LEARNER	
Respondent 3	Male		Teacher	Pandarasdas
Respondent 4	Female		Teacher	an Mission
Respondent 5	Male		Parent	School
Respondent 6	Male		Parent	
Respondent 7	Male		LEARNER	
Respondent 8	Male		LEARNER	
Respondent 9	Female		Teacher	
Respondent 10	Male		Teacher	Sil-angon
Respondent 11	Male		Parent	Mission
Respondent 12	Female		Parent	School
Respondent 13	Female		LEARNER	
Respondent 14	Female		LEARNER	
Respondent 15	Male		Teacher	Langilan
Respondent 16	Male		Teacher	Mission
Respondent 17	Male		Parent	School
Respondent 18	Male		Parent	
Respondent 19	Female		LEARNER	
Respondent 20	Female		LEARNER	Sabuluwan
Respondent 21	Male		Teacher	Mission
Respondent 22	Male		Teacher	School
Respondent 23	Female		Parent	
Respondent 24	Female		Parent	

### Instrument

The research instrument consisted of four parts: an interview with an individual, a focus group discussion, observing the physical environment and interactions within the school and community, and Document analysis of relevant documents such as school reports, community surveys, or policy documents.

### Procedure

The data collection procedure consisted of three parts:

The first was in-depth interviews. The researcher conducted semi-structured interviews with key stakeholders, including teachers, learners, and parents, to gather detailed insights into the impact of geographic factors on hinterland schools.

The second was focus group discussions. The researcher organized focus group discussions with teachers, learners, and parents to explore common themes and perspectives on the challenges faced by hinterland schools.

The third is document analysis, in which the researcher reviews relevant documents, reports, and academic literature on the topic to provide a contextual background and theoretical framework for the study.

### Data Analysis

The study employed a statistical treatment that encompassed various methods. First, descriptive analysis was utilized to summarize the data obtained from interviews, focus groups, and observations. Second, content analysis was conducted to code qualitative data into themes, analyze their prevalence using frequency counts, and explore potential relationships through cross-tabulations.

One of the strengths of thematic analysis is its flexibility, as it can be applied across various theoretical frameworks and disciplines. It is also accessible to novice researchers due to its straightforward methodological process. However, its subjectivity can be a limitation, as different researchers may interpret the same data differently, leading to potential biases (Nowell et al., 2017).

### Ethical Considerations

The researcher obtained informed consent from participants before conducting interviews and focus group discussions. The second is confidentiality; the researcher ensured the confidentiality and anonymity of participants by using pseudonyms and securely storing data. And lastly, data protection. The researcher applied data protection guidelines and ethical standards in data collection, analysis, and reporting.

The first limitation is generalizability. Due to the qualitative nature of the study, findings may not be generalized to all hinterland schools. The second is Bias. The researcher's own biases and perspectives may influence data collection and analysis.

Overall, this research design aimed to explore the impact of geographic factors on hinterland schools through a qualitative lens, providing valuable insights into the challenges and adaptations made by these schools in remote and geographically isolated areas.

### Results and Discussion

This section presents the data collected from teachers, learners, and parents regarding the impact of geographic factors on education in hinterland schools. The findings highlight the challenges these communities face, particularly regarding school attendance, availability of educational resources, infrastructure conditions, and teacher retention. Through thematic analysis, this section explores how geographic isolation affects learning experiences and the strategies stakeholders employ to overcome these barriers. The data is categorized according to key research questions, providing insights into the difficulties encountered and the resilience demonstrated by the community in sustaining education despite adverse conditions.

#### Theme: Geographic Factors (E.G., Terrain, Distance, Accessibility, Climate) Impact Learner Attendance In Hinterland Education

##### Frame 1. *Geographic Factors Impact Learner Attendance*

###### Proximity of School (No Difficulty Due to School Location)

Teacher 13: Dili mi mag lisud ug baklay kay duol ug naa ra sa sittio ang among skwelahan pero kung mag ulan jud kay dili jud mi maka sulod sa klase kay tugaw ug kusog jud ang ulan (Since my school is in the heart of the village, traveling is not difficult, but when it rains heavily, I sometimes can't make it to class.)

###### Impact of Rainy or Cold Weather on Attendance and Health.

Teacher 8: kung ting ulan, mag lisud jud mig bakod. Tapos kung ting tugaw jud, usahay mahilantan mi kung ulan init or magka sip-on mi, (On rainy days, I struggle to wake up because of the cold, and I occasionally get sick with a fever or cold).

###### Learners Lacking Proper Clothing (e.g., Jackets)

Learner 9: kung bugnaw ang panahon sa amoa, mosulod ra japun ko bisan way jacket bahalag tugaw, maantus raman. (Cold weather is hard for me because I don't own a jacket to keep myself warm).

###### Classroom Discomfort Due to Cold Wind

Learner 4: kung kusog pud ang hangin sa amoa, mangita lang mig suok-suok nga way bangag nga dingding unya didto mi magplatar. (When cold winds hit our classroom, we just go to every corner of the room seeking protection from the cold winds).

###### Past Challenges Before Missionaries Arrived (Long Travel, Dangerous Terrain)

Parent 11: kaniadtong wala pay mga maestro nga nag tudlo diri sa among dapit, magbaklay jud ang among mga anak ug tag upat pataas arong lang maka abot sa pinaka duol nga elementary school. Mabalaka jud mi kay molatas pa silag sapa ug mga lalom nga pangpang ug bakilid kada adlaw. (Before the missionaries came, children had to hike for four hours to reach the DepEd school. Parents worried about crossing rivers and cliffs).

Parent 17: paminaw namo, wala najud paglaum ang among mga anak mag skwela tungod sa kalayo sa amoa pero karun, naa najud mga magtutudlo diri sa among sitio. (Our children seemed deprived of education back then, but now, we have teachers).

#### Long Distance and Weather Affecting Performance

Parent 6: bisan moulan o moinit, basta naa lang ang mag tutudlo sa skwelahan, among jud ginadasig among kabataan nga mag skwela. Pero kaniadto nga magbaklay pag layo, medyo luya jud sila kung magbaklay pa. (Even in hot and cold weather, we allow our learner to go to school, but walking long distances affects their performance).

Parent 12: ginapadasign jud nako ang akong anak nga mosulod bisan unsa pay panahon kay duol naman lang. kaniadto, nga wala pay magtutudlo diri, magduha-duha jud kog pa skwela. Makita pud nako sauna nga maluya jud sila ug dili makatarung ug tuon kay kapoy naman gud daan ilang utok (I always let my child go to school despite the weather, but I've seen how walking long distances affects their academic performance).

#### Parental Support Regardless of Weather

Parent 23: bisan unsay panahon, akong pa skwelahan akong anaka basta ganahan sya mosulod. (I sent my child to go to school if he wants to, even if there is bad weather).

Parent 24: moulan o moinit, tugutan nako ang akong anak mosulod basta nay magtutudlo. (No matter the weather, I allow my child to go to school).

Several teachers highlighted that the school is centrally located within the village, making it accessible and eliminating major geographic barriers. Teacher 1, Teacher 7, Teacher 13, and Teacher 19 all shared that they don't encounter difficulty traveling to school due to its location. However, despite the convenience, heavy rain still poses a challenge, as it can prevent them or the learners from attending school. This shows that while geographic proximity has addressed previous access issues, environmental factors like rain still affect attendance.

A recurring issue among teachers is the struggle brought on by cold and rainy weather. Teacher 2, Teacher 8, Teacher 14, and Teacher 20 expressed how difficult it is to wake up and prepare for school during rainy mornings due to the freezing temperatures. They also shared that they often experience illnesses such as colds or fever during these days, which further hinder their ability to attend or perform effectively at school. This indicates that weather conditions don't just affect comfort—they directly impact health and attendance.

Many learners mentioned the hardship they face during cold days due to the lack of jackets or warm clothing. Learner 3, Learner 9, Learner 15, and Learner 21 all shared that the cold weather is hard to endure without jackets, making it uncomfortable and difficult to focus. This highlights a deeper issue rooted in poverty—students are not fully equipped to face seasonal changes, which can affect both attendance and classroom engagement.

Aside from lacking warm clothing, learners also face discomfort inside the classroom due to poor insulation. Learner 4, Learner 10, Learner 16, and Learner 22 reported that when cold winds enter the classroom, they often move to the corners of the room to find warmth or shelter. This implies that classroom infrastructure is inadequate in protecting students from the elements and that even being physically present in school doesn't guarantee a conducive learning environment.

Parents reflected on the past struggles their children faced in accessing education before local teachers or missionaries came to their village. Parent 5, Parent 11, and Parent 17 recalled that learners used to hike up to four hours, crossing rivers and climbing cliffs, just to reach the nearest DepEd school. These dangerous conditions not only discouraged attendance but also placed learners at risk. The presence of missionaries now teaching within the village has resolved these long-standing challenges and made education more accessible and safer.

While some children continue to walk considerable distances to attend school, parents noticed that this physical effort, especially under extreme weather conditions, negatively affects their children's academic performance. Parent 6, Parent 12, Parent 18, and Parent 24 shared that although they encourage their children to go to school regardless of the weather, the strain of walking long distances, especially in hot or cold conditions, reduces energy and focus in the classroom. This reveals the compounded impact of both distance and environmental stress on students' learning outcomes.

Despite environmental and geographic challenges, some parents demonstrate strong support for their children's education by encouraging attendance regardless of weather conditions. Parent 23 and Parent 24 emphasized that they allow their children to go to school whether it rains or shines, showing a high value placed on learning. However, their support does not eliminate the challenges their children face, such as fatigue from walking long distances or exposure to bad weather, highlighting the gap between parental intention and the learners' lived realities.

The findings suggest that while proximity has improved due to localized schools, other geographic and environmental factors, such as weather, poor infrastructure, and poverty, continue to significantly hinder learner attendance, engagement, and performance. These challenges emphasize the need for climate-resilient school infrastructure, learner welfare programs (e.g., provision of warm clothing), and continuous community support. Ultimately, access is not only about location—it's about creating an environment where students and teachers alike can thrive despite natural and structural limitations.

According to UNESCO (2015), students in rural and geographically isolated areas face significant challenges related to poor infrastructure, long travel distances, and harsh environmental conditions, which often result in absenteeism and reduced academic performance.

Jiang et al. (2022) found that spatial accessibility to basic educational resources in rural areas is generally poor, with learners often required to travel long distances through challenging terrain. These geographic and environmental barriers were shown to negatively impact learner participation and academic performance, particularly in isolated regions.

Cheung (2021) discussed how rural learners face significant barriers to education due to harsh weather conditions, inadequate infrastructure, and geographic isolation. The study highlighted that factors such as cold weather, lack of proper clothing, and long, difficult commutes adversely affect learners' health, school attendance, and overall academic engagement.

#### *Frame 2. Perceived Challenges and Coping Mechanisms of Teachers, Learners, And Community Members In The Hinterland Areas*

##### Lack of Educational Materials and Facilities

Teacher 7: Naay usa ka higayon diin, wala nay lapis ang isa ka bata maong gihangyo nako iyang classmate nga tungaon ang iyang lapis arung sila duha makasulat. Ang among classroom kulang ug cr, tubig, suga, ug bangko. (There was a time, I cut the new pencil into 2 so that two learners can write; our classrooms need toilet, water, lighting, chairs).

Learner 16: wala mi gagamit ug mga tv, cellphon tungod kay wala man mi kuryente arun maka charge mi. (I don't use any electronic devices because there's no electricity available for charging).

##### Geographic Isolation and Transportation Challenges

Teacher 8: tungod sa kalayo ug kalisud sa among dapit, dili jud mi makasakay bisan kabayo nalng. Kinahanglan jud namo magbaklay pila ka oras. (Due to its location, the roads cannot even allow teachers to ride a horse. Teachers need to walk for many hours just to get there).

##### Strong Community Appreciation and Respect for Teachers

Learner 9: Ang among magtutudlo mga maayu jud. Sa among nakita nga ga sakripisyo sila tanan magbaklay sa pila ka oras maka ingun jud mi nga nahigugna jud sila namo. (My teachers are qualified. Just seeing them walking for long hours just to educate us is more than just qualified because of their love).

##### Acceptance and Gratitude Despite Lack of Resources

Parent 12: taliwala sa kadaghan sa kakulangon sa mong skwelahan, basta kay naa lang ang among mag tutudlo, bisan asa pa sa sila mag skwela, a ilalum sa kahoy walay problema basta ang among mga kabataan nagakat-on. (Even if there are many lacking in the school, as long as we have our teacher, even if they teach under the tree, it is no matter as long as our children are learning)

Teachers and learners alike report a serious shortage of essential learning materials and classroom facilities. Teachers such as Teacher 1, Teacher 7, Teacher 13, and Teacher 19 mentioned the absence of basic teaching tools like chalk, blackboards, lighting, chairs, and even toilets and clean water. To cope, they sometimes resort to cutting a pencil in half so two students can share it. Similarly, Teacher 2 and Teacher 14 observed that children only have a small supply of paper, pencils, and coloring materials. Learners also express concern. Learner 3 and Learner 15 say they don't have enough books to read for learning, and Learner 4 and Learner 16 highlight that they can't use electronic devices because there is no electricity to charge them. This lack of infrastructure and supplies deeply impacts both the teaching process and students' learning experience.

The physical location of the school poses another major challenge. Teacher 8 and Teacher 20 share how the roads are so rough and inaccessible that even horses can't navigate them. Teachers must walk for hours just to reach their classrooms, often through difficult and unsafe terrain. This geographic isolation significantly affects the consistency of teaching and adds to the burden faced by educators

working in remote hinterland areas.

Despite these challenges, both learners and community members hold a deep respect for their teachers. Parent 6 and Parent 18 expressed admiration for their teachers' dedication and care. Learners—Learner 9, Learner 10, Learner 21, and Learner 22—emphasize that their teachers are more than just qualified; their willingness to walk long hours and continue teaching against all odds speaks volumes about their commitment. This respect and admiration act as a strong emotional support for teachers and help maintain high morale within the school community.

Community members have shown remarkable resilience and acceptance regarding the lack of school resources. Parents like Parent 5, Parent 11, Parent 12, Parent 17, Parent 23, and Parent 24 consistently convey that having teachers who are present and willing to educate is more important than having a well-equipped classroom. They state that even if classes are held under a tree, they are satisfied as long as their children are learning. This attitude of gratitude and understanding illustrates the strong value placed on education in the community, regardless of material limitations.

The findings point to a deeply committed educational community working within severely limited conditions. While the lack of materials, facilities, and access routes presents clear barriers to quality education, the strength of community values and respect for teachers compensates, to some degree, for these shortcomings. Teachers in remote schools face numerous challenges, but their resilience, supported by the community, helps sustain education efforts (Lariosa et al., 2022).

However, goodwill and resilience alone are not enough to ensure equitable education. To truly support hinterland schools, systemic intervention is necessary—improving infrastructure, supplying learning materials, and addressing geographic and environmental hardships. The voices from this data also signal that rural communities are ready and willing to embrace educational improvement—what they need is support, not motivation.

Pancho (2022) described the various struggles experienced by newly hired teachers in remote schools, particularly related to transportation challenges, limited access to educational resources, and difficulties integrating into the community. These findings highlight the resilience of educators and the importance of community support as coping mechanisms in geographically isolated settings.

Cekiso et al. (2022) explained that the low socioeconomic status of families in rural areas significantly affects learners' access to educational materials and the availability of consistent community support. Their study emphasizes how material shortages and financial limitations hinder both learning and broader educational engagement in underserved communities.

### **Theme: Geographic Challenges Influence The Availability Of Educational Resources, Infrastructure, And Teacher Deployment In Hinterland Schools**

#### *Frame 3. Geographic Challenges Influence The Availability Of Educational Resources, Infrastructure, And Teacher Deployment In Hinterland Schools*

##### Limited Access to Learning Materials and Technology

Teacher 13: maniguro ko daan ug download sa mga lesson, educational video ug uban pang mga study materials kung maka lugsong ko sa ubos. (I make sure to download lessons, videos, and other study materials whenever I have an internet connection).

##### Poor Infrastructure and Classroom Resources

Learner 16: tungod sa kakulangan sa mga bangko namo, mapugos nalng jud tawon mig hapa sa salog arun makasulod bisan ang among papel gamay rapid kaayu. (We have no choice but to sit on the floor while writing due to a lack of chairs. Sometimes, we don't have enough paper).

Parent 23: tungod sa kalayo sa among lugar sa palitanan, mag lisud jud mig develop sa among skwelahan, wala pud mi kwarta ikaamot tungod sa among ka pobrehon. (Due to our distance from the city proper, materials needed to build and develop school infrastructure are limited).

##### Community Support and Involvement

Parent 24: Ang mga sitio leader namo maoy ga request ug magtutudlo maong naa sila karun sa among sitio maong tabangan pud namo sila. (The chieftain of the village requested missionaries to be the village's educators—that's the reason why they have a school to go to, and we have to help them too).

Parent 5: kami nga mga ginikanan, ginalantaw pud namo kanunay ang safety sa among magtutudlo samtang naa sila diri. (As parents, we secure our teachers from any harm and danger).

##### Teacher Deployment and Logistical Challenges

Teacher 7: Isip us aka magtutudlo, mag puyo mi sa sittio hangtud dili pa mahurot ang among pagkaun. Kaduha sa is aka bulang mi magbaba depende sa kadaghanon sa among pagkaun ug kung naa jud importante nga papel nga lihukon. (As missionaries, we just stayed in the village as long as supplies lasted. Twice a month, we go to the market to buy supplies).

Learner 22: Kung moksugo ang ulan, dili mi mag dungog maong undangon jud namo ang among klase. (If there is a strong rain, we can't hear anybody—that's why we stop the class).

Alternative Learning Settings

Teacher 2: Usahay, kung laayan ko sa among classroom mag tudlo, didto mi sa sapa mag dulaanay ug mag tuon. (Sometimes, if I do not teaching in the room, they go to the river and have a lesson).

Teachers in hinterland areas face challenges in accessing educational materials due to limited internet connectivity. Teachers 1, 13, and 19 explained that they make it a point to download videos, lessons, and learning materials whenever they are able to connect online. This proactive approach ensures continuity in teaching even when Internet access is unavailable for extended periods. Their initiative highlights the creative ways educators cope with technological barriers brought on by geographic isolation.

Learners 4, 9, and 16 all expressed concern over the lack of basic classroom furniture like chairs, forcing them to sit on the floor while writing. Learner 16 also mentioned the occasional shortage of paper, which further hindered their ability to study effectively. Parent 23 added that the geographic distance from urban centers makes it difficult to transport the necessary materials to improve infrastructure. These responses underscore how geographic remoteness directly limits the availability and delivery of educational resources and facilities.

Despite the limited resources, the community provides strong support to educators and schools. Parents 5, 6, 11, 12, 17, and 18 emphasized their commitment to protecting teachers from harm and participating in maintaining and developing school facilities. Their efforts include helping teachers carry supplies, cleaning classrooms, and even taking the initiative to improve the learning environment. Parent 24 noted that their village chieftain proactively requested missionaries to serve as educators, resulting in the establishment of a local school.

These acts of involvement reveal the deep value that the teachers face extreme logistical challenges due to the remoteness of the area. Teacher 7 shared that as a missionary, she only stays in the village as long as supplies last and travels to the market twice a month to restock. Teacher 8 noted that DepEd teachers often hike into the village on Mondays and return to the town center by Thursday, limiting their teaching days. Additionally, Teacher 20 and Learner 22 explained how bad weather, such as heavy rains, can disrupt or entirely cancel classes. These responses demonstrate how geography affects not only material resources but also the very presence and stability of teaching staff in remote schools.

Due to either environmental limitations or the desire for a change in environment, some teachers adapt by holding lessons in non-traditional settings. Teacher 2 shared that when she does not feel like teaching inside, she conducts classes near the river, while Teacher 14 takes learners into the forest. These examples show that even though traditional classroom environments may be lacking or not motivational, teachers find creative ways to ensure learning continues through nature-based or outdoor education, often using the local surroundings as extensions of the classroom.

These findings underscore the multifaceted challenges faced by educators in remote schools, where geographic isolation, limited infrastructure, and a lack of resources hinder the quality of education. However, the resilience of both teachers and the community, as well as their willingness to adapt and support one another, ensures that learning continues despite these barriers. Yet, as the data suggests, these efforts alone are insufficient to guarantee long-term educational success. Systemic changes, including infrastructure development, improved access to learning materials, and better teacher support, are essential to overcoming the inherent challenges of teaching in remote, underserved areas.

According to Lariosa (2019), teachers and students in remote schools face significant challenges related to geographic isolation, inadequate infrastructure, and a lack of resources. While community support and the resilience of educators help maintain a learning environment, these efforts alone cannot ensure sustainable educational success. Lariosa emphasizes that systemic interventions such as improvements in school infrastructure, better access to learning materials, and enhanced teacher support are crucial for overcoming the challenges of teaching in remote areas.

Arpilleda (2018) noted the challenges faced by rural schools due to limited funding, geographic isolation, and difficulties in attracting and retaining qualified teachers. These issues contribute to the persistent shortage of resources, the arduous travel conditions for educators, and the slow development of infrastructure in hinterland schools.

Masinire (2020) emphasized the prevalence of resource scarcity in rural educational settings and underscored the importance of community-driven strategies and teacher adaptability. His findings support the role of local communities in sustaining education and illustrate how teachers often employ creative approaches, such as conducting lessons in unconventional environments, to overcome these limitations.

#### Frame 4. *Observation*

School Infrastructure (E.G., Condition Of Buildings, Access To Facilities).

Every school has two classrooms. No lighting and lack of chairs. No electricity

Learner Engagement And Behavior In Classroom Settings.

The children's attention span is not long due to some learners not even having a proper breakfast, only sweet potato. One of the behaviors of children in jungle school is that they easily surrender on things they don't know; they don't even try, just like writing and reading.

Community Involvement In School Activities Or Events.

Women are the most active all the time when there are activities in school.

Sometimes, only the leaders are present when there are activities like bayanihan.

When there are visitors and many blessings to give, that is the only time you can see the whole population of the village.

When there are Visitors from other municipalities, Langilan Mission School villagers don't even lend a hand in carrying sacks of rice, canned goods, and dry goods, but when it's time for the visitors to give, there are many who line up to receive the gifts.

When they are sick, they only go to the hospital when they are dying. There are instances that they don't go to the Hospital for check-ups when their diseases are mild; they go when they are nearly dying due to long-distance walking.

They can eat rice for a few days and eat sweet potatoes for the rest of the month.

The lack of essential facilities such as lighting, chairs, and electricity in hinterland schools hampers the creation of a conducive learning environment. Without proper infrastructure, both learners and teachers face significant challenges in maintaining focus and productivity during lessons. Arpilleda (2018) notes that inadequate infrastructure is a common issue in rural schools, directly impacting the quality of education provided. Isaacs et al. (2019) suggest that alternative solutions like mobile learning and preloaded digital tools could help address some of these limitations, particularly in environments without access to electricity.

Learners' engagement is hindered by poor nutrition, with some children surviving on diets of sweet potatoes, resulting in short attention spans and a tendency to give up on challenging tasks like writing and reading. This reflects how basic needs directly influence educational outcomes. Cheung (2021) emphasizes that addressing learners' nutritional needs is integral to achieving "Education for All." Similarly, Ndfirepi and Masinire (2021) argue that improving learning environments, including ensuring access to adequate food, is essential for fostering better cognitive and academic performance in rural schools.

Community involvement in hinterland schools is limited, with women playing the most active roles, while broader participation often depends on external aid or incentives. This sporadic engagement highlights the need for more consistent community efforts to address educational challenges. Cervone (2020) advocates for community-driven approaches as a sustainable strategy for improving education in underserved areas, while Masinire (2020) emphasizes that strong community support is critical to sustaining rural education systems and addressing resource gaps.

Geographic isolation significantly affects access to resources and services, with communities relying on limited diets and only seeking medical care for severe conditions due to the distance to healthcare facilities. This isolation exacerbates resource scarcity and impacts learners' well-being. Tanveer et al. (2017) stress the importance of strategic infrastructure planning to reduce inequities in remote areas, while Chand and Mohan (2019) highlight the role of GIS in optimizing access to schools and essential services, helping to mitigate the challenges posed by geographic barriers.

#### Frame 5. *Document Analysis*

Geographic Data Describing The Hinterland Area And Its Characteristics.

- Langilan Mission School - 8-hour walks for beginners

- Pandarasdasan Mission School - 3 hours walk for beginners

- Sil-angon Mission School – 5 hours of walking for beginners

- Sabuluwan Mission School – 11 hours for beginners

Sil-angon Mission School & Pandarasdasan Mission School were given 2 additional DepEd teachers (3 total teachers at each school), but also due to distance, they hiked on Monday and took a rest due to long hours of hiking, taught on Tuesday, and went back to the city proper on Wednesday.

Sulad's Missionaries could stay in the villages until their supply lasts. Some Sulad teachers don't go to Halapitan, San Fernando, to buy even if they don't have supplies; they eat what their learners eat (cassava, sweet potato, banana).

Due to the distance, if there are no missionaries who go to their villages, they don't think their children can get an education. Even if their children tried to enroll in low lowlands, when their rations were out, they chose to go back to their home on foot. Some parents

Don't have the capacity to live in lowlands because they don't have land to plow for sustaining their needs and their children's school needs.

The walking distances to hinterland schools—ranging from 3 to 11 hours for beginners—highlight the extreme geographic isolation faced by learners and teachers. Such long commutes pose significant physical and logistical barriers to education, often resulting in irregular attendance, fatigue, and lower academic performance. These findings emphasize the need for strategies like decentralized education or improved transportation systems to mitigate the impact of distance on learning access. Tanveer et al. (2017) underscore the importance of strategic resource planning and infrastructure development in remote areas to address such inequities.

The assignment of additional DepEd teachers to hinterland schools and the commitment of missionary educators (Sulads) are commendable efforts to sustain education in remote areas. However, these interventions are limited by the teachers' ability to remain

in these locations for extended periods due to resource constraints and challenging conditions. Missionary educators' willingness to adapt to local conditions reflects the dedication required in such environments. Cervone (2020) advocates resource mobilization and community-driven initiatives, which could support and enhance these efforts by addressing gaps in infrastructure and resources.

Parents expressed that without missionaries, their children would not receive an education due to the prohibitive distances to lowland schools. Families' reliance on farming for survival prevents them from relocating to areas with better access. This feedback highlights the vital role of local educators and the importance of community-based solutions to sustain education in hinterland areas. Masinire (2020) emphasizes the critical role of community support in overcoming geographic challenges and ensuring education is accessible to learners in isolated regions.

## Conclusions

Geographic factors significantly impact education in hinterland schools, affecting learner attendance, teacher deployment, and the availability of resources and infrastructure. Community commitment and teacher resilience play a crucial role in overcoming these challenges. Despite adverse conditions, teachers and parents ensure the continuity of education. Resource scarcity and infrastructural deficiencies hinder the quality of education, leading to discomfort for learners and teachers and limiting access to modern learning tools. While geographic isolation remains a barrier, innovative solutions such as mobile learning and community-driven initiatives show promise in bridging the gap.

To address the educational challenges faced by hinterland schools in San Fernando, Bukidnon, we respectfully recommend a coordinated effort among the Department of Education (DepEd), Local Government Units (LGUs), and community stakeholders. The DepEd is encouraged to prioritize the construction of durable classrooms equipped with essential facilities such as toilets, access to clean water, and proper lighting, preferably solar powered, in areas without electricity. Providing adequate chairs, desks, and blackboards is also vital to ensure a conducive learning environment. To overcome connectivity issues, remote schools should be equipped with offline digital learning tools such as preloaded tablets or USB drives containing educational content. Moreover, to improve teacher retention and morale in these hard-to-reach areas, the DepEd should offer housing support or financial incentives and implement regular training programs focused on strategies for teaching in resource-scarce environments. Targeted education policies must also be developed to address geographic disparities and promote equitable access to quality education.

Local Government Units play a critical role in supporting these efforts by establishing strategic supply depots near hinterland schools to ease transportation challenges and by collaborating with DepEd and communities to improve roads and transportation systems for better school accessibility. They should also allocate local funds or forge partnerships to support educational initiatives in remote areas.

Meanwhile, parents, community leaders, and stakeholders are encouraged to strengthen their collaboration with schools by participating in educational initiatives and engaging in school improvement activities. Reviving the spirit of "bayanihan" through volunteer work for school maintenance, repairs, and resource mobilization will significantly boost local efforts. Furthermore, community members can serve as advocates for education, working closely with local officials and national agencies to ensure that the needs of rural learners are prioritized. Through these collaborative actions, we can bridge the gap in education caused by geographic isolation and give every child the opportunity to thrive, regardless of their location.

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