

Challenges of Grade I Teachers in Teaching Literacy and Numeracy in Last Mile Schools

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Abstract:

This study explored the challenges faced by Grade 1 teachers in last-mile schools using a phenomenological approach. Interviews with five teachers from a small school division in Negros Island revealed key challenges, including academic achievement gaps, student engagement issues, family and home influence, language barriers, teacher well-being, and limited technological resources. Teachers coped through needs-based instruction, professional development, collaboration, and thorough preparation. Best practices identified for replication included feedback-driven assessments, collaborative teaching, technology-based instruction, and inclusive learning methods. Despite these efforts, persistent issues such as inadequate resources, learner-specific support needs, teacher burnout, and parental involvement challenges remained. Suggested solutions included equitable resource distribution, targeted educational programs, language-responsive training, and a supportive work culture. Teachers also highlighted valuable lessons, such as core teaching insights, the importance of collaboration, and personal growth. The study likens these experiences to a climber overcoming rocky obstacles, where coping mechanisms and best practices act as protective gear, unresolved challenges as large rocks, and suggested solutions as an unused pickaxe. Future research on educational challenges may adopt this perspective, emphasizing learning as the driving force behind teaching. Implementing the proposed solutions and adopting best practices are highly recommended.

Keywords: Challenges, grade 1 teachers, literacy, numeracy, last mile schools

Introduction:

Nature of the Problem

The Philippine Department of Education resumed face-to-face classes as part of the country's post-pandemic recovery efforts (Jackaria, 2022). With the President's support, Education Secretary Leonor Magtolis Briones authorized regional directors to implement the transition (Department of Education, 2022). However, teachers face challenges in addressing literacy and numeracy gaps among learners. According to DepEd Region 6, 13% of Grade 1 learners are full refreshers, while 15% are non-numerates, highlighting the impact of pandemic-related disruptions on foundational skills. Addressing these gaps requires well-prepared educators and targeted interventions to support students' learning recovery (Jackaria, 2022).

Literacy and numeracy are crucial life skills, influencing students' academic success and future opportunities (Northern Ireland Audit Office, 2013). Many nations have prioritized improving these competencies through new policies and teaching methods (Mumpuniarti, 2017; Quinn, 2011). However, pandemic lockdowns have widened existing learning disparities, disadvantaging students without adequate support. Low literacy and numeracy skills hinder daily functioning, from reading signs to managing finances. This situation underscores the need to explore the challenges faced by Grade 1 teachers in remote areas as they work to rebuild foundational skills among young learners.

As such, the researcher embarked on a phenomenological study to determine the essence of the challenges experienced by grade 1 teachers in teaching literacy and numeracy in last-mile schools. The findings of this paper may be used as the basis for the crafting of intervention programs, policy-making, and practice replication.

Current State of Knowledge

Solikhah and Surakarta (2018) highlight the challenges of reading comprehension due to vocabulary, grammar, and discourse issues, emphasizing the need to address vocabulary gaps for literacy improvement. Similarly, numeracy skills require both knowledge and the ability to apply mathematics effectively in real-world contexts (Victoria State

Government, 2022). The Department of Education defines literacy as the ability to read, write, speak, and listen across subjects, while numeracy involves understanding mathematical concepts for decision-making (DepEd Regional Office VIII, 2023). Yang (2022) stresses the importance of developing these skills early, as weak foundations contribute to low learner performance, exacerbated by pandemic-related learning losses and rising learning poverty. In response, DepEd (2023) is strengthening literacy and numeracy programs through the revitalized K-12 curriculum, aligning with the MATATAG agenda by reducing K-3 learning areas to focus on these essential skills.

Mier-Manjares (2023) highlighted DepEd Bicol's initiative to involve tertiary teacher-volunteers in a learning recovery program focused on explicit reading and remediation, while Ombay (2024) reported DepEd's plan to propose suspending regular classes for an 8–12-week literacy and numeracy recovery program in collaboration with EDCOM II. These efforts reflect the ongoing state of literacy and numeracy education in the Philippines. Internationally, the Irish Department of Education launched an ambitious literacy and numeracy program, while the OECD (2015a) found below-average adult skills in Poland despite stronger youth performance. Indonesia has also implemented strategies to improve literacy and numeracy. However, unprepared students, ineffective teaching methods, and resource shortages persist as major challenges, necessitating intensive reading interventions and psychosocial support (Jackaria, 2022). Lewis and Kuhfeld (2023) estimated that by 2022-2023, students required 4.1 months to catch up in reading and 4.5 months in numeracy, with marginalized learners facing the greatest struggles.

Kane (2024), as cited in Ross (2024), suggested that educational gaps existed before the pandemic and worsened with the shift in learning methods. Wu and Teets (2021) noted a decline in student engagement, while Ashikuzzaman (2023) highlighted language barriers as an additional challenge. Parental education also influences literacy and numeracy outcomes, as Salminen et al. (2021) found that parents' struggles often predict similar difficulties in their children. Teacher well-being is another factor, with Santamaria et al. (2021) reporting high stress levels and Latoja (2022) describing the challenges of returning to pre-pandemic routines. Kuswanti (2023) emphasized technology's role in enhancing literacy and numeracy, though limited access hinders learning. Finally, Md-Ali, Abdul Karim, and Mohd Yusof (2016) identified key traits of effective primary school teachers, including structured teaching, skills, ethics, and comprehension.

Lariosa et al. (2022) explored the lived experiences of teachers in far-flung schools in Sarangani through in-depth interviews, revealing challenges such as student motivation, language barriers, poverty, absenteeism, child labor, and infrastructure issues. Despite these struggles, teachers found joy in community interactions and felt inspired by their mission. They employed various strategies, including individualized activities, contextualized materials, and parental financial literacy sessions. Their experiences formed three themes: a meaningful life, positive feelings toward work, and a deep sense of commitment. Similarly, Felongco et al. (2022) conducted a study in Cotabato, identifying themes such as fulfillment, daily struggles, school inaccessibility, psychological stress, and resource limitations. Teachers faced separation from family, cultural adaptation, and hazardous travel conditions, especially during bad weather. These studies highlight both the challenges and the resilience of teachers in remote schools.

Teachers in far-flung schools face significant psychological stress due to loneliness, family separation, armed conflicts, and community threats, requiring adaptability to cope. Inadequate pedagogical resources, including a lack of classrooms, books, and teaching materials, hinder quality education. While some teachers aspire to transfer to urban schools, others find fulfillment in their mission to educate Filipino children. A similar study by Ucag et al. (2024) on Negros Island highlighted physical challenges like transportation issues and resource shortages, along with socioemotional struggles related to community integration and psychological well-being. Teachers relied on creativity, resilience, and innovation to navigate these difficulties, leading to personal growth and professional fulfillment. These experiences were categorized into three themes: challenges, strategies for thriving, and the rewards of teaching in remote areas.

Theoretical Underpinnings

This study adopts the interpretivism framework, specifically the constructivist paradigm, which emphasizes subjective, socially constructed knowledge and mind-dependent reality (Kawulich, 2012, as cited in Keskitalo et al., 2021). The ontology aligns with individual and group-shared experiences, particularly in understanding teachers' challenges in literacy and numeracy instruction. Since epistemology in this framework views truth as embedded in human experiences, the study aims to construct findings based on teachers' lived experiences in last-mile schools. Axilogically, the research acknowledges the influence of the researchers' values on methodology, analysis, and interpretations, ensuring transparency in reporting to enhance transferability. Methodologically, the study employs a phenomenological approach to capture teachers' experiences, providing rich descriptions to understand their challenges.

The study is also guided by Resilience Theory, which emphasizes adaptive responses to challenges within an organization. Masten (2021) highlights that resilience enables individuals to effectively navigate difficulties, while Luthat et al. (2021) argue that ongoing coping mechanisms help mitigate negative impacts. Furthermore, Tedeschi & Calhoun (2004), as cited in Tehranineshat & Torabizadeh (2021), suggest that overcoming challenges fosters

personal growth, new skills, and deeper insights. This theoretical foundation supports the study's research questions, reinforcing the link between resilience, adaptation, and learning among teachers facing literacy and numeracy instruction challenges.

Objectives

This study aimed to determine the challenges of Grade 1 Teachers in teaching literacy and numeracy in last-mile schools in a small-sized school division in a third-class city in the Negros Island during the School Year 2022-2023. Specifically, this study sought to answer the following questions: 1) the challenges encountered by Grade 1 teachers in last-mile schools in terms of literacy and numeracy; 2) the coping mechanisms of the Grade 1 teachers in the last mile schools as a response to these challenges; 3) the best practices for Grade 1 teachers in last-mile schools to address these challenges; and 4) the unaddressed challenges perceived by the Grade 1 teachers in the last mile schools, despite their coping mechanisms and best practices.

Methodology

This section presents the discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedure for data analysis.

Research Design

A qualitative research design was utilized in this study. It is a subfield of the social sciences that focuses on the collection, analysis, and interpretation of qualitative or non-numerical data to gain a better understanding of social life through the investigation of specific groups of people or geographic locations (Crossman, 2020). Specifically, this utilized the phenomenological methodology. Bachkirova & Noon (2020) said that this approach is to determine the essence of the experience, in this case, teaching literacy and numeracy in last mile schools, through an analysis of participants' subjective views—in this case, the teachers themselves.

Study Respondents

The last-mile schools that make up the division in a third-class city in Negros Occidental will serve as the research sites for this study. The school's division was established in 2016. It consists of 54 elementary and secondary schools with approximately 1,150 teachers, 54 school heads, and 9 Public Schools District Supervisors. The division is composed of ten last-mile schools. Due to the constraints in time and location, the researcher focused on the barangay with the highest number of last-mile schools. As such, only five of the last-mile schools were given focus. As such, only five teachers were involved in this research. In addition to the above-mentioned details, they are teachers who met the following criteria: a Grade 1 adviser, actively teaching in last mile schools

Instruments

The main data-gathering instrument of this study is the interview protocol. Based on the research goals, the reviewed literature and studies, and the theoretical framework of the study, the interview questions formulated were focused on challenges encountered, coping mechanisms, best practices, unaddressed challenges, suggested solutions, and learning gained by the teachers in teaching literacy and numeracy in the last mile schools. These questions were sent to an education expert teaching in a tertiary institution with a PhD in educational management.

Data Gathering Procedure

The researcher sought permission from school heads in last-mile schools, securing approval from five out of ten schools. Grade 1 teachers were contacted, and informed consent was obtained from all interviewees, who then coordinated their schedules for individual sessions. During implementation, the researcher formally introduced herself and conducted interviews following a structured protocol. Afterward, recordings were transcribed and analyzed, with copies stored securely on a flash drive and set for deletion after three months. To ensure rigor, credibility was established through member checks and peer review by experienced educators. Transferability was addressed by detailing the study's context, allowing readers to assess its applicability. Dependability was ensured via triangulation, including intercoder reliability, where an independent coder verified the consistency of results with the researcher.

Data analysis followed interpretive phenomenological analysis, as outlined by Emery & Anderman (2020). The researcher familiarized herself with transcripts through repeated reviews, then applied initial coding under predefined categories: challenges, coping mechanisms, best practices, unaddressed issues, suggested solutions, and lessons learned. Pattern identification helped form overarching themes, ensuring consistency and clarity. These themes were then contextualized within existing literature and theoretical frameworks. Peer review validated the coding process,

and member checks ensured findings accurately reflected participants' experiences, reinforcing the study's credibility and reliability (Lincoln & Guba, 1985).

Ethical Consideration

In this paper, the researcher considered the following: (a) citations, (b) informed consent, (c) anonymity of teachers, (d) protection of data, and (e) safety and comfort of participants. Citations and references are placed in this paper to acknowledge authors that aided and will aid the teacher-researchers. For informed consent, letters were sent to the teachers after the approval of their school heads. Only after the informed consent was signed did the interview schedule take place. Teachers were not named in this paper to protect their identity. Pseudonyms were used in instances when they needed to be cited. The data, particularly the recording of the interview, were stored on a flash drive and set to be deleted three months after the interview. Lastly, the safety and comfort of the participants were considered. They were made to determine the interview schedule when they were free and in excellent health.

Results and Discussion

This section deals with the presentation, analysis and interpretation of data gathered to carry out the objectives of this study. All these were made possible by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Challenge: Student Engagement

The second theme that emerged in the analysis is *Student Engagement*. This challenge focuses on the participation and involvement of learners in activities, which may be learner-to-content or learner-to-learner. The summary is in Table 3.

Table 1

Challenge: Theme 2

Theme	Codes	Sample Responses
Student Engagement	difficulty in engaging learners in learning tasks	"... since sang pandemic, nang, module, modular lang, module-module and then sang ara na sa face-to-face daw ang ila nga attention span nga ginatawag daw ka very short gid. Daw indi mo sila ma, ano gani? Ma-get involved sa class dali-dali..."
	struggle for learners to engage with peers	"So syempre wala sila na...interact with other kids. Ma...mag-uhan sila or ang ginatawag naton nga separation anxiety sa mga students kay syempre grade 1 pa lang."

The first aspect of this theme is the difficulty in engaging learners in learning tasks, with one teacher stating, "... since sang pandemic, nang, module, modular lang, module-module and then sang ara na sa face-to-face daw ang ila nga attention span nga ginatawag daw ka very short gid. Daw indi mo sila ma, ano gani? Ma-get involved sa class dali-dali..." This challenge may be attributed to the adjustments needed by learners and, thus, their tendency to be disengaged from the class.

The next focuses on the struggle for learners to engage with peers. One teacher mentioned, "So syempre wala sila na...interact with other kids. Ma...mag-uhan sila or ang ginatawag naton nga separation anxiety sa mga students kay syempre grade 1 pa lang." As with the previous aspect, this can be attributed to the adjustment of the learners from the distance learning modality.

These findings suggest that due to the challenges in student engagement brought on by the pandemic, there is a struggle to enrich learners' learning experiences in literacy and numeracy that can best be attained through the learners' engagement with the contents or learning materials and their peers. These can be connected to the study of Wu and Teets (2021). They found that the learners had decreased engagement due to the pandemic. This is also connected to a decrease in their learning focus and an increase in getting easily distracted.

Challenge: Family and Home Environment Influence

The next theme that emerged was *family and home environment influence*, which focuses on the direct challenges originating from parental factors or any factor, at that, coming from the learners' homes.

Table 2

Challenge: Theme 3

Theme	Codes	Sample Responses
Family and Home Environment Influence	reliance on parents during remote learning	"With the parents having been more involved in their children's learning during remote education, finding a balance in parental involvement in a classroom setting is necessary."
	parents' educational background and competency	"So indi ko makapangayo bulig sa ginikanan kay sa far-flung areas, no? Sa school namon didto, some of the parents, wala naka-graduate sa ila pag-eskwela. Ang iban sa ila elementary pa lang; wala sila katapos eskwela. So biskan sila mismo, hindi sila makatudlo basa or makatudlo Math sa ila mga kabataan kay sila mismo indi sila kabalo."

The first aspect is the reliance on parents during remote learning. One sample response was, "With the parents having been more involved in their children's learning during remote education, finding a balance in parental involvement in a classroom setting is necessary." This suggests that the teachers' struggle was present in bridging learners toward gradual independence from their reliance on their parent's involvement in learning from the pandemic setup of education. The next aspect is the parents' educational background and competency. One teacher shared, "So indi ko makapangayo bulig sa ginikanan kay sa far-flung areas, no? Sa school namon didto, some of the parents, wala naka-graduate sa ila pag-eskwela. Ang iban sa ila elementary pa lang; wala sila katapos eskwela. So biskan sila mismo, hindi sila makatudlo basa or makatudlo Math sa ila mga kabataan kay sila mismo indi sila kabalo." This is another scenario where the background of the parents affects students' learning. The teachers expressed this to be a problem since the foundation prior to first grade and the follow-up at home of learners could not be fully attained.

These findings suggest that the reliance of learners on their parents means a challenge for learner independence, and in some cases, the educational limitations and competence of parents mean a challenge for bridging the gap in foundational knowledge and enrichment that should not only be constrained in the classrooms. These can be related to the article by Fontenelle-Tereshchuk (2021) suggesting that in the distance learning setup, there really was an overreliance on parents in the learning of the students, similar to the claim of the respondents in this paper. On the other hand, Salminen et al. (2021) stated that parental education and competence are associated with children's literacy and numeracy in early childhood. They mentioned that the mathematical and reading difficulties of parents predicted the literacy and numeracy skills of learners.

Challenge: Language Barrier

The next theme that emerged under challenges is the *Language Barrier*, focusing on the language differences between the teachers and the community. A response revealed, "And, of course, language differences gid. Of course, sa Sibucano, ang language nila ya is Cebuano, Bisaya, so as a teacher from, uh, urban, sometimes, budlay gid makaintyindi sa ila. I need to ask kapila pa nga 'Ano? Ano?' asta maintiendihan ko nila."

Table 3

Challenge: Theme 4

Theme	Codes	Sample Responses
Language Barrier	language differences between teachers and the community	'And, of course, language differences gid. Of course, sa Sibucano, ang language nila ya is Cebuano, Bisaya, so as a teacher from, uh, urban, sometimes, budlay gid makaintyindi sa ila. I need to ask kapila pa nga 'Ano? Ano?' asta maintiendihan ko nila."

This means that the differences in languages, particularly in Cebuano-Bisaya and Hiligaynon, caused a challenge in communicating content and even other content-related messages. This is connected to an article written by Ashikuzzaman (2023). He claimed that language barriers in education cause disruption in information flow, engagement, and meaningful interactions among the key roles in the setting.

Challenge: Teacher Well-Being

The theme, Teacher Well-Being, captures the next challenge experienced by teachers. This focuses on the mental health and overall well-being of teachers relative to the disposal of their teaching duties.

Table 4

Challenge: Theme 5

Theme	Codes	Sample Responses
Teacher Well-Being	high workload from paper works	"Kita nga teachers may be dealing with stress of burnout during pandemic kay daw kadamo sang paper works and of course other matters pa gid nga gina-ano gina-ano , umm, tackle and of course affecting our ability to teach effectively."
	adjustment difficulties due to the sudden shift to face-to-face classes	"Daw ka nalipat ka na paano i-deal ang amo na nga mga bata. Kumbaga first week ko pa lang sa pagbalik sang klase nga face-to-face daw ara balang na-culture shock, na-culture shock lang ko guro, nakibot lang ko guro kay tungod two weeks—I mean, two years, two years nga wala gid ka, ka in-person nga klase. Daw ara balang, "Ano ubrahon ko?" Daw lain na ang bata nga i-deal mo kay tungod nag-pandemic."

The first aspect focuses on the high workload from paperworks with a response stating, "Kita nga teachers may be dealing with the stress of burnout during pandemic kay daw kadamo sang paper works and of course other matters pa gid nga gina-ano gina-ano, umm, tackle and of course affecting our ability to teach effectively." This captures the stress of teachers due to workload affecting their teaching duties.

The next aspect focuses on the adjustment difficulties due to the sudden shift to face-to-face classes. One response was, "Daw ka nalipat ka na paano i-deal ang amo na nga mga bata. Kumbaga first week ko pa lang sa pagbalik sang klase nga face-to-face daw ara balang na-culture shock, na-culture shock lang ko guro, nakibot lang ko guro kay tungod two weeks—I mean, two years, two years nga wala gid ka, ka in-person nga klase. Daw ara balang, "Ano ubrahon ko?" Daw lain na ang bata nga i-deal mo kay tungod nag-pandemic." This captures how teachers had to adjust also from distance learning to face-to-face modality, requiring them to apply teaching strategies that were different from the ones they used during the pandemic.

All these suggest that due to the demand of the pandemic and the sudden shift to in-person classes, the teachers struggled in terms of their well-being. Santamaria et al. (2021) captured these, reporting that a high percentage of teachers showed symptoms of anxiety, stress, and depression due to their workload during the pandemic. Latoja (2022) also reported how, while students also adjusted in return to the 'old normal,' teachers, too, were adjusting, similar to the findings in the coding of this paper.

Challenge: Technological Resource Access

The last theme that emerged under challenges is *Technological Resource Access*. This theme focuses on the lack of technological resources in teaching literacy and numeracy in far-flung schools.

Table 5

Challenge: Theme 6

Theme	Codes	Sample Responses
Technological Access	Lack of technological resources	"... one of the challenges is lack of resources kag television. Kay tungod kung may television, dako gid nga makabulig sa mga kabataan like maka-engage gid sila especially kung ila libre nga time, makatan-aw gid sila."

A response related to this was, "... one of the challenges is lack of resources kag television. Kay tungod kung may television, dako gid nga makabulig sa mga kabataan like maka-engage gid sila especially kung ila libre nga time, makatan-aw gid sila." This means that in the absence of sufficient technological resources, some aspects of learning that could enrich literacy and numeracy are compromised. Kuswanti (2023) stated that using technology provides learners with enhanced opportunities to view materials in literacy and numeracy in interactive and relevant ways; thus, the lack of this could mean the non-attainment of learning experiences possible only through such a technology. Ucag et al. (2024) reported this same challenge for teachers in far-flung schools in two divisions in the Negros Island: limited resources, lack of electricity, and internet connection.

Coping Strategy: Variety of Needs-Based Instruction

For coping strategies, the first theme that emerged is *the Variety of Needs-Based Instruction*. This focuses on the use of assessment and instruction targeting the needs of learners.

Table 6

Coping Mechanism: Theme 1

Theme	Codes	Sample Responses
Variety of Needs-Based Instruction	use of assessments for learning	"... wala ko kabalo kung ano ang ubrahon ko, nagsulod sa pinsar ko nga i-assess diagnostic assessments sa students... conducting initial assessments to understand each student's current literacy and numeracy levels helps you of course as a teacher..."
	differentiated instruction	"Using a variety of teaching methods and materials to cater to different learning styles and levels in the classroom ensured that all students could progress at their own pace."
	engaging and interactive activities	"I usually work with students in small groups or one-on-one to allow for more personalized instruction and support, particularly for those nga ga-struggle. Mga struggling the most."
	remedial and remediation activities	"kinanglan gid nga engaging ang ila nga activities nga gina-ano. Ma-incorporate ka games, mga hands-on activities." "As a teacher, we use... remedial reading so that the learners can cope up those nga kulangan nila sa poor retention and lack of attention. Reteach and reteach lang so that nga mabal-an pa gid nila kung ano ang ginatudlo mo sa ila..."

The first aspect is on the use of assessments for learning with one response being, "... wala ko kabalo kung ano ang ubrahon ko, nagsulod sa pinsar ko nga i-assess diagnostic assessments sa students... conducting initial assessments to understand each student's current literacy and numeracy levels helps you of course as a teacher..." This captures how the teachers utilized assessments to gauge the levels of the learners in terms of literacy and numeracy.

The next is focused on differentiated instruction with one response, "Using a variety of teaching methods and materials to cater to different learning styles and levels in the classroom ensured that all students could progress at their own pace." One teacher shared, "I usually work with students in small groups or one-on-one to allow for more personalized instruction and support, particularly for those nga ga-struggle. Mga struggling the most." This emphasizes how teachers use tailored instruction to address different learning styles and levels in the classroom. Another aspect is the use of engaging and interactive activities, with one teacher saying, "... kinanglan gid nga engaging ang ila nga activities nga gina-ano. Ma-incorporate ka games, mga hands-on activities." This captures the strategy wherein teachers employ interactive activities that keep learners engaged.

The last code under this theme is the use of remedial and remediation activities. The response stated, "As a teacher, we use... remedial reading so that the learners can cope up those nga kulangan nila sa poor retention and lack of attention. Reteach and reteach lang so that nga mabal-an pa gid nila kung ano ang ginatudlo mo sa ila..." This is different from the rest because the above codes focused on strategies done within class hours. The use of remedial and remediation activities highlights the teachers' coping strategy beyond the scheduled classroom section. This allows them to provide opportunities for learners to cope with their literacy and numeracy skills. These are affirmed by Chotijah & Minsih (2022) and Sanchez-Gomez et al. (2023). They claimed that by using a needs-based approach to learners in terms of materials and instruction, they can attain the competencies expected of them—in this case, literacy and numeracy.

Coping Strategy: Professional Development

Another theme that emerged in the responses is *Professional Development*. This is the set strategy employed by the teachers to cope with challenges by expanding their professional and technical skills.

Table 7

Coping Mechanism: Theme 2

Theme	Codes	Sample Responses
Professional Development	attendance at seminars/workshops	"So after pandemic daw damo gid kita nga mga professional development, mga opportunities nga mga seminars—teaching strategies, mga technology integration nga mga seminars nga which is valuable sa amo na nga tiempo kay kinanglan ta gid na."
	learning through social media	"I watch online trends on social media on how to teach children effectively."

The first code under this theme is attendance at seminars/ workshops. A response related to this was, *"So after the pandemic, daw damo gid kita nga mga professional development, mga opportunities nga mga seminars—teaching strategies, mga technology integration nga mga seminars nga which is valuable sa amo na nga tiempo kay kinanglan ta gid na."* This captured how teachers engaged themselves in seminars to improve their teaching strategies, including technology integration, which they considered relevant to teaching literacy and numeracy. The other code under this is learning through social media, with one response highlighting, *"I watch online trends on social media on how to teach children effectively."* This shows that aside from the usual seminars and workshops of teachers, teachers also engage in informal learning setups through social media to keep themselves abreast of the ways to cope with the challenges in teaching literacy and numeracy. Ajani (2019) affirmed this theme, claiming that professional development is crucial in teaching practice. This allows teachers to improve their classroom practices, thereby targeting educational challenges and improving student learning.

Coping Strategy: External and Internal Collaborations

The next coping strategy theme is *External and Internal Collaborations*. This covers the teachers' strategies focused on involving stakeholders within and outside the school, as well as colleagues, to cope with the challenges.

Table 8

Coping Mechanism: Theme 3

Theme	Codes	Sample Responses
External and Internal Collaborations	regular communication with parents	"Maintaining regular communication with parents about their children's progress kag, of course, ang any way nga makasupport sila sa learning sang ila bata."
	involvement of learned neighbors/relatives of learners	"Ti, ang plan, ang ginaubra is, mayo lang man kay may—ano ni gani? Tupadbalay. Nga kung pwede bi maka-makabulig sa ila kung ano, kag kung syempre ang utod. Maayo lang kung may utod nga nakalabot high school or mga taas nga level sa ila grade level."
	sharing of expertise and resources among colleagues and superiors	"So, we have, uhm, sharing experiences, and of course, resources and strategies with other teachers to help develop effective approaches and provide mutual support." "Kag tapos may times man nga, for example, si Ma'am tu sa Grade 2 daw siya gid ya ga-handle sa mga ga-struggling learners. Nan. Didto na tu dayon tanan ibutang. And then sa piyak naman. Daw ga... once a week lang man, naga-amo na nga mga times. So that is collaboration with colleagues."

The first code under this theme is regular communication with parents. A sample response stated, *"Maintaining regular communication with parents about their children's progress kag, of course, ang any way nga makasupport sila sa learning sang ila bata."* This highlights how teachers involve parents in how they can support their kids through their regular communication. The second code is the involvement of learned neighbors/relatives of learners. The response to this code is captured: *"Ti, ang plan, ang ginaubra is, mayo lang man kay may—ano ni gani? Tupadbalay. Nga kung pwede bi maka-makabulig sa ila kung ano, kag kung syempre ang utod. Maayo lang kung may utod nga"*

nakalab-ot high school or mga taas nga level sa ila grade level." This means that in lieu of the parents, the relatives or neighbors were also tapped by teachers, especially if they were more competent to help the children.

The last code for this theme is the sharing of expertise and resources among colleagues and superiors. A teacher shared, *"So, we have, uhm, sharing experiences, and of course, resources and strategies with other teachers help develop effective approaches and provide, mm, provided mutual support."* This was affirmed by another response, *"Kag tapos may times man nga, for example, si Ma'am tu sa Grade 2 daw siya gid ya ga-handle sa mga ga-struggling learners. Nan. Didto na tu dayon tanan ibutang. And then sa piyak naman. Daw ga... once a week lang man, naga-amo na nga mga times. So that is a collaboration with colleagues."* This means that in order to cope with the challenges, teachers also communicate amongst themselves and collaborate in planning and implementing their strategies in teaching literacy and numeracy. All these are affirmed in the report of Chen & Xiao (2021). They claimed that collaboration among stakeholders, internal and external, is essential and necessary in supporting educational goals and teaching practices.

Coping Strategy: Preparation of Oneself and Materials

The last theme under the coping strategies of teachers is *the Preparation of Oneself and Materials*. This covers the coping strategies concerning teachers' advanced preparation of learning materials and their preparation of themselves in terms of their attitudes.

Table 9

Coping Mechanism: Theme 4

Theme	Codes	Sample Responses
Preparation of Oneself and Materials	advanced preparation of materials	"... kinanglan gid ni Teacher mag-effort gid nga, so, after dulhog sa Friday afternoon. Ma-ano ka na dayon, mag-Saturday-Sunday, kinanglan mangita ka na dayon sang kinanglan mo nga activities for the whole week na na siyempre. Kinanglan mo makita kung ano ang kinanglan mo nga ubrahon or i-download mo kay para ma-ano ang mga bata."
	embodying positive attitudes	"By being positive, initiative, flexible, resourceful, kag be patient gid, no? Especially kung, you have lots of slow learners. Pasensyoso ka gid dapat."

The first code is advanced preparation of materials. The response relevant to this is, *"... kinanglan gid ni Teacher mag-effort gid nga, so, after dulhog sa Friday afternoon. Ma-ano ka na dayon, mag-Saturday-Sunday, kinanglan mangita ka na dayon sang kinanglan mo nga activities for the whole week na na siyempre. Kinanglan mo makita kung ano ang kinanglan mo nga ubrahon or i-download mo kay para ma-ano ang mga bata."* This captures the efforts of the teachers to take time to prepare the electronic materials needed for a week's class due to technological limitations in the far-flung schools.

The next code is embodying positive attitudes. The response stated, *"By being positive, initiative, flexible, resourceful, kag be patient gid, no? Especially kung, you have lots of slow learners. Pasensyoso ka gid dapat."* This implies that teachers also prepare themselves effectively by setting the right attitudes to cope with the challenges in teaching literacy and numeracy. Price & Carstens's (2020) report can be related to this. In their report, they claimed that teachers in far-flung areas conducted advanced preparation of materials, usually a week prior, as this has proven beneficial in their contexts. In addition to this, related to the *aspect of preparation*, Honra (2022) claimed that proactive attitudes significantly impact improved well-being.

Best Practice: Regular and Feedback-based Assessment Practices

In terms of best practices, the first theme that emerged is *Regular and Feedback-based Assessment Practices*. This theme includes best practices focusing on using regular assessments to gauge learners' level of literacy and numeracy and utilizing a rewards system as a means of feedback.

Table 10

Best Practice: Theme 1

Theme	Codes	Sample Responses
Regular and Feedback-based Assessment Practices	conduct of regular assessments	"So, regular and varied assessment gid ang ginaubra. So, I implement frequent formative assessments to gauge students' understanding and progress from time

giving of praise and feedback to learners	to time. So, every after two weeks. Adjusting instruction sa results dayon nila... kung ano ang results sang assessments nga ginahatag ko." "Rewards system bala nga ginatawag naton bala. Kung makacorrect nga ubra si student, hatagan mo siya reward, ipraise mo siya, or tagaan mo siya task nga daw siya ang teacher sa classroom."
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The first code under this theme is the conduct of regular assessments with a response stating, "So, regular and varied assessment gid ang ginaubra. So, I implement frequent formative assessments to gauge students' understanding and progress from time to time. So, every after two weeks. Adjusting instruction sa results dayon nila... kung ano ang results sang assessments nga ginahatag ko." This captures the regularity of assessments that aid teachers in adjusting instruction. The next code is giving of praise and feedback to learners with a response stating, "Rewards system bala nga ginatawag naton bala. Kung makacorrect nga ubra si student, hatagan mo siya reward, ipraise mo siya, or tagaan mo siya task nga daw siya ang teacher sa classroom." This captures the best practices of teachers to reward the attainment of expected competencies in literacy and numeracy that could translate into learning motivation. This corresponds to the claims of Essa & Burnham (2019), stating that assessments are key aspects in improving the foundational skills of learners. Assessments allow learners to be gauged appropriately and teachers to be well-informed about their classes and the instructional decisions they have to make.

Best Practice: Collaborative Learning and Teaching Practices

The next theme is *Collaborative Learning and Teaching Practices*. These practices focus on the collaboration of external and internal stakeholders, including the collaboration of learners among themselves.

Table 11

Best Practice: Theme 2

Theme	Codes	Sample Responses
Collaborative Learning and Teaching Practices	involvement of parents and members of the community in teaching	"Mahatag ka sang learning resources, especially literacy and numeracy at home." "So, we tap other, um, stakeholders, or other parents man da bi. Ang tiya, ang tiyo, utod. Or taga or pakaisa. Mga cousins. Nan. Family members. So, involvement."
	peer teaching among learners	"... ibutang ang fast learners sa mga slow learners o kumbaga ta ang top-performing student, iimpon ta sa low-performing students nga group and then siya na da bi ang ma-act as little teacher."
	collaboration among teachers	"...in teaching literacy and numeracy, I ask my two co-teachers to help me with this idea. With the collaborative effort of us teachers in Grades 1-3, we divide our learners from full refresher, light refreshed, and grade-ready."

The first code is the involvement of parents and members of the community in teaching. A response stated, "Mahatag ka sang learning resources, especially literacy and numeracy at home." This was affirmed by another, "So, we tap other, um, stakeholders, or other parents' man da bi. Ang tiya, ang tiyo, utod. Or taga or pakaisa. Mga cousins. Nan. Family members. So, involvement." This is a best practice that highlights the inclusion of parents, neighbors, or other members of the community in the teaching-learning process beyond classroom instruction due to the absence of their necessary competencies.

The next aspect is peer teaching among learners. A teacher shared, "... ibutang ang fast learners sa mga slow learners o kumbaga ta ang top-performing student, iimpon ta sa low-performing students nga group and then siya na da bi ang ma-act as little teacher." This is also a best practice in the sense that learners get to engage with each other and learn from their high-performing peers, highlighting the sense of collaboration among them. The last aspect is the collaboration among teachers. A sample response mentioned, "...in teaching literacy and numeracy, I ask my two

co-teachers to help me with this idea. With the collaborative effort of us teachers in Grades 1-3, we divide our learners from full refresher, light refreshed, and grade ready." This best practice highlights how teachers help each other address the challenges of literacy and numeracy, as manifested in their dividing the learners according to their reading categories. Lehl et al.'s (2020) article tackled collaboration in the field of education. They claimed that the collaboration between the school, the family, and the community should promote children's learning. However, their findings indicated mixed results regarding the impact of these collaborative efforts, suggesting a need for further investigation to understand its effects fully. In this study with the far-flung schools in a small schools' division in the province of Negros Occidental, teachers perceive collaboration as a best practice, viewing it as a beneficial approach for addressing educational challenges. Alegre et al. (2020) affirmed the aspect of this theme focused on peer tutoring, mentioning that this has academic benefits in primary grades, like the claims in this paper.

Best Practice: Engaging and Technology-Based Teaching Practices

The next theme is *Engaging and Technology-Based Teaching Practices*, which includes all practices wherein teachers incorporate technology and engaging activity to learners.

Table 12

Best Practice: Theme 3

Theme	Codes	Sample Responses
Engaging and Technology-Based Teaching Practices	multi-sensory instruction	"May ara gid ya student nga visual sa ya, so, more on pictures. Kung auditory siya, syempre, self-explanatory naman nga most of the time, gapamati lang siya. Kung kinesthetic naman ya, dapat may giyo-giyo naman."
	electronic gamified and interactive activities	"...may ara ko gakakit-an nga mga offline applications or games nga interactive nga pwede siya madownload sa far-flung areas to teach literacy and numeracy."
	radio-based instruction	"Then may radio-based instruction man kami which is ginarecord ko ang akon nga tingog, ginapadala ko ang radio kag ang USB sa ila kag may talamdan sila nga learning materials."

The first code is multi-sensory instruction. "May ara gid ya student nga visual sa ya, so, more on pictures. Kung auditory siya, syempre, self-explanatory naman nga most of the time, gapamati lang siya. Kung kinesthetic naman ya, dapat may giyo-giyo naman," was one response. This means that teachers make use of materials that cater to different senses to contribute to the mastery of literacy and numeracy. The next code is electronic gamified and interactive activities. A sample response was, "...may ara ko gakakit-an nga mga offline applications or games nga interactive nga pwede siya madownload sa far-flung areas to teach literacy and numeracy." This focuses on the use of engaging activities in the form of electronic materials and games to enhance the learning of literacy and numeracy. The last code under this is radio-based instruction. A teacher shared, "Then may radio-based instruction man kami which is ginarecord ko ang akon nga tingog, ginapadala ko ang radio kag ang USB sa ila kag may talamdan sila nga learning materials." This captures the use of technology, in this case radio, to assist students' learning, which may be done in the classroom teacher's absence. Kundu et al. (2021) supported this theme. In their study, they determined that the use of technology and engaging modes of teaching had a positive effect on learner engagement and created positive changes in the classrooms, particularly in primary grades.

Best Practice: Inclusive and Adaptive Learning Methods

The next theme is *Inclusive and Adaptive Learning Methods*. These best practices highlight the integration of socioemotional activities, needs-based instruction, and culturally responsive teaching.

Table 13

Best Practice: Theme 4

Theme	Codes	Sample Responses
Inclusive and Adaptive Learning Methods	socioemotional learning	"So embed social learning or social-emotional learning practices into daily routines like morning meetings, tapos, mindfulness activities, and discussions about emotions towards students' well-being. So, every morning, I usually, um, dira na da

culturally responsive teaching	<i>naga-insert ang socio-emotional learning before mag-start gid ang klase."</i> <i>"So, sa bukid, daw didto lang ta kabati lain-lain nga religions pa gid. So, usually, dapat gina-hibalan pa gid na and of course indigenous communities, IPs, yes, IPs. Damo gid na tu sa bukid. So dapat hibalan gid ang background man nila in order for you to, um, teach culturally."</i>
grouping learners according to competency	<i>"Ginatan-aw ko man ang mga bata nga slow learners nga kinanghanglan gid sang remedial classes. So, aside sa remedial classes, may mga, uh, activities man nga ginahatag ko, nga, uh, assignments nila nga himuon."</i> <i>"We divide our learners from full refresher, light refreshed, and grade-ready."</i>

The first code is socioemotional learning with a sample response, *"So embed social learning or social-emotional learning practices into daily routines like morning meetings, tapos, mindfulness activities and discussions about emotions towards students' well-being. So, every morning, I usually, um, dira na da naga-insert ang socio-emotional learning before mag-start gid ang klase."* This best practice secures learners' awareness of their well-being and state of emotions to prepare them for the teaching-learning activities for the day. The next code is culturally responsive teaching. *"So, sa bukid, daw didto lang ta kabati lain-lain nga religions pa gid. So, usually, dapat gina-hibalan pa gid na and of course indigenous communities, IPs, yes, IPs. Damo gid na tu sa bukid. So dapat hibalan gid ang background man nila in order for you to, um, teach culturally,"* shared a teacher. This is also a best practice since, through this, teachers get to provide activities that are not offensive to the Indigenous cultures and ensure that all learning materials adhere to the cultural context of the learners.

Lastly, the learners are grouped according to competency. A sample response mentioned, *"Ginatan-aw ko man ang mga bata nga slow learners nga kinanghanglan gid sang remedial classes. So, aside sa remedial classes, may mga, uh, activities man nga ginahatag ko, nga, uh, assignments nila nga himuon."* This is affirmed by another, *"We divide our learners from full refresher, light refreshed and grade-ready."* This is a best practice that captures how teachers ensure that learners' actual needs are addressed by placing them in groups that would allow them to experience instruction tailored according to their reading and numeracy levels. Raudenbush et al. (2020), in their study, discovered that learners exposed to inclusive and adaptive teaching methods have achieved gains in their proficiency compared to those who were not. Taylor et al. (2021) even defined this theme as an emerging and innovative trend in education, mentioning that this offers "great opportunities to promote student learning (p. 31)."

Unaddressed Challenge: Resource and Infrastructure Concerns

The first theme under unaddressed challenges is *Resource and Infrastructure Concerns*. This captures the still-existing challenge concerning funding, resources, facilities, and technologies.

Table 14

Unaddressed Challenge: Theme 1

Theme	Codes	Sample Responses
Resource and Infrastructure Concerns	access to technology	<i>"Indi kami kaaccess internet. Wala gid tu internet. Indi kami kaaccess signal biskan sa cellphone and wala man tu engaging tools nga technology engaging tools sa mga students. May ara tu computer but then cannot cater or butang personal pc gid siya ya nga cannot cater a lot of students."</i>
		<i>"Wala gid naaddress is having technology. Imposible gid katama. Indi gid man imposible, quite impossible lang nga makaara kami nga technology like television bi. Kay dako gid tan inga bulig kung may television kami in engaging gid tani amon mga kabatan sa learning process."</i>
	funding issues	<i>"So as what I've said earlier, ang funds nga need. Ang mga funding nga medyo kulang. Kulang gid ang funds nga need gid dapat sa far-flung school."</i>

lack of sturdy facilities

"Syempre need gid dapat sang tarong nga classroom sa babaw. Ang classrooms tu daan daw indi pareho sang ari di sa ubos. Ang mga classrooms tu ya indi DepEd-funded classrooms. Ang mga materials pa gid—makeshift classrooms lang."

The first aspect is access to technology. *"Indi kami kaaccess internet. Wala gid tu internet. Indi kami kaaccess signal biskan sa cellphone and wala man tu engaging tools nga technology engaging tools sa mga students. May ara tu computer but then cannot cater or butang personal pc gid siya ya nga cannot cater a lot of students,"* shared a teacher. This is affirmed in *"Wala gid naaddress is having technology. Impossible gid katama. Indi gid man imposible, quite impossible lang nga makaara kami nga technology like television bi. Kay dako gid tan inga bulig kung may television kami in engaging gid tani amon mga kabatan sa learning process."* These responses highlight that there is still an existing need for technologies in the far-flung areas to improve literacy and numeracy instruction. The next code is funding issues, with a sample response: *"So as what I've said earlier, ang funds nga need. Ang mga funding nga medyo kulang. Kulang gid ang funds nga need gid dapat sa far-flung school."* This highlights the intention of the schools to increase their funds to better their materials and the delivery of education.

The last code is the lack of sturdy facilities. A teacher mentioned, *"Syempre need gid dapat sang tarong nga classroom sa babaw. Ang classrooms tu daan daw indi pareho sang ari di sa ubos. Ang mga classrooms tu ya indi DepEd-funded classrooms. Ang mga materials pa gid—makeshift classrooms lang."* This captures how the classrooms in the far-flung areas are not of high quality in terms of sturdiness as these are only made up of light materials—like that of a makeshift. The teachers still see this as a challenge as it poses an issue on the conduciveness of the learning environment. Uca et al. (2024) also captured this same challenge in their interview with teachers in far-flung schools in Negros. This suggests that this problem is not addressed in other contexts also. Mopuyang (2024) also reported this same struggle in the narratives of teachers in geographically isolated areas.

Conclusions

This study examined the challenges faced by Grade 1 teachers in last-mile schools in a mountainous barangay in Negros Occidental. Five female teachers (aged 27-32, with 1-5 years of experience) highlighted key themes: challenges, coping mechanisms, best practices, unaddressed issues, suggested solutions, and lessons learned. Major challenges included academic achievement gaps, student engagement difficulties, language barriers, teacher well-being concerns, and limited technological resources. Teachers coped through needs-based instruction, professional development, stakeholder collaboration, and lesson preparation. Best practices involved feedback-driven assessments, collaborative teaching, technology-based instruction, and inclusive strategies. Despite these efforts, unresolved issues such as inadequate resources, learner support needs, teacher burnout, and parental limitations persisted. Suggested solutions included equitable resource allocation, targeted educational programs, language-responsive hiring, and a supportive work culture. The study aligns with Resilience Theory, emphasizing that educators navigate and grow through challenges with effective strategies. The researcher recommends using this framework for future studies and urges the Department of Education to address identified best practices and unaddressed challenges. Given the complex nature of literacy and numeracy challenges in last-mile schools, a comprehensive approach is essential, integrating community involvement, collaboration, and innovation.

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