



Azal Arts and Humanities

Volume 3, Issue 3, 2026

<https://azalpub.com/index.php/AAH>

OPEN ACCESS

RESEARCH ARTICLE

Article Info

Received: 4/5/2026

Accepted: 7/25/2026

Published: 9/30/2026

Foundational Literacy and Numeracy Instruction in Multi-Grade Classrooms: Pedagogical Practices and Learning Support Mechanisms in Rural Philippine Elementary Schools

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Abstract

Foundational literacy and numeracy are critical determinants of learners' long-term academic success and lifelong learning. However, the delivery of effective foundational instruction remains particularly challenging in multi-grade classrooms where teachers simultaneously manage learners from different grade levels, abilities, and developmental stages. This study explored the pedagogical practices and learning support mechanisms employed by teachers in multi-grade classrooms to strengthen foundational literacy and numeracy among learners in rural Philippine elementary schools. Using a qualitative multiple-case study design, data were gathered through semi-structured interviews, classroom observations, focus group discussions, and document analysis involving multi-grade teachers, school administrators, parents, and learners from selected rural schools. Findings revealed that teachers implemented differentiated instruction, peer-assisted learning, contextualized teaching, flexible grouping strategies, learning stations, and localized instructional materials to address diverse learner needs. Learning support mechanisms included parental involvement, community partnerships, remediation programs, reading interventions, and numeracy enhancement activities. The study further identified teacher innovation, learner collaboration, and community support as critical factors contributing to foundational learning development. Despite challenges related to limited resources, teacher workload, and instructional constraints, multi-grade educators demonstrated resilience and adaptability in ensuring learner progress. The findings highlight the importance of strengthening instructional support systems, teacher capacity-building programs, and community engagement initiatives to improve literacy and numeracy outcomes in rural multi-grade educational settings.

Keywords: *foundational literacy, foundational numeracy, multi-grade classrooms, rural education, elementary education, differentiated instruction, learning support mechanisms, Philippines*

1. Introduction

Foundational literacy and numeracy are widely recognized as essential building blocks for educational achievement, social participation, and lifelong learning. Literacy enables learners to access, interpret, and communicate information effectively, while numeracy equips them with the mathematical understanding and problem-solving skills necessary for daily life and future academic pursuits. International organizations such as UNESCO, UNICEF, and the World Bank have consistently emphasized that foundational learning serves as the cornerstone of quality education and sustainable development. Learners who fail to acquire basic literacy and numeracy competencies during the early years of schooling often experience cumulative learning deficits that negatively affect their educational trajectories and future opportunities.

Recent global assessments have highlighted persistent concerns regarding learning poverty and foundational learning gaps among elementary learners, particularly in developing countries and rural educational contexts. The COVID-19 pandemic further exacerbated these challenges, resulting in significant disruptions to learning and widening existing educational inequalities. Consequently, educational systems worldwide have intensified efforts to strengthen foundational literacy and numeracy instruction, especially among vulnerable and marginalized learner populations.

In the Philippines, improving foundational learning has become a national educational priority. The Department of Education has implemented various initiatives aimed at enhancing reading proficiency, numeracy skills, and early-grade learning outcomes. Programs such as the National Reading Program, Every Child A Reader Program (ECARP), National Mathematics Program, and the recently introduced MATATAG Curriculum emphasize the importance of strengthening foundational competencies during the primary grades. These reforms acknowledge that literacy and numeracy are not merely academic skills but essential competencies that enable learners to participate meaningfully in society and continue learning throughout their lives.

Despite these efforts, significant challenges remain in rural and geographically isolated schools, particularly those operating multi-grade classrooms. Multi-grade teaching refers to the practice of instructing learners from two or more grade levels within a single classroom under the supervision of one teacher. This instructional arrangement is common in rural communities where limited enrollment, teacher shortages, geographical isolation, and resource constraints make single-grade class organization impractical. While multi-grade education provides access to schooling for learners in remote communities, it also presents complex instructional challenges that require teachers to simultaneously address diverse learning needs, developmental stages, curricular competencies, and classroom management demands.

The rural Philippine educational context presents unique opportunities and challenges for multi-grade instruction. Teachers often serve learners from various socioeconomic backgrounds while operating in environments characterized by limited educational resources, inadequate infrastructure, insufficient instructional materials, and restricted access to professional development opportunities. Nevertheless, rural schools remain critical institutions for promoting educational equity and ensuring that learners in geographically isolated communities receive quality educational services.

Existing literature has documented the potential benefits of multi-grade education, including peer learning, learner independence, collaborative learning, and social development. However, concerns persist regarding instructional quality, teacher preparedness, curriculum implementation, and learner achievement in multi-grade settings. Moreover, while previous studies have explored general multi-grade teaching practices, limited research has specifically examined how teachers support foundational literacy and numeracy development in rural Philippine multi-grade classrooms. There remains a need to understand the pedagogical strategies employed by teachers, the support mechanisms available to learners, and the contextual factors that facilitate or hinder foundational learning outcomes.

This study addresses this gap by exploring the pedagogical practices and learning support mechanisms employed in multi-grade classrooms to promote foundational literacy and numeracy among learners in rural Philippine elementary schools. Specifically, it seeks to examine how teachers navigate the complexities of multi-grade instruction, how learners experience literacy and numeracy learning, and what forms of support contribute to successful foundational learning development. By generating context-specific insights, the study contributes to the growing body of literature on rural education, foundational learning, and multi-grade pedagogy while providing evidence-based recommendations for educational policy and practice.

2. Research Questions

This study sought to answer the following questions:

1. What pedagogical practices are employed by multi-grade teachers in teaching foundational literacy and numeracy?
2. How do these instructional practices support learners' literacy and numeracy development?
3. What learning support mechanisms are available to learners in multi-grade classrooms?
4. What challenges do teachers encounter in implementing foundational literacy and numeracy instruction?
5. What enabling factors contribute to effective foundational learning in rural multi-grade classrooms?

3. Theoretical Framework

The study is anchored on Constructivist Learning Theory, Social Constructivist Theory, and Differentiated Instruction Theory. Constructivist Learning Theory posits that learners actively construct knowledge through experiences and interactions with their environment. Social Constructivism emphasizes the importance of social interaction, collaboration, and guided learning in cognitive development. Differentiated Instruction Theory provides a framework for adapting content, processes, products, and learning environments to accommodate diverse learner needs, making it particularly relevant to multi-grade educational settings.

4. Methodology

This study employed a qualitative multiple-case study design to gain an in-depth understanding of pedagogical practices and learning support mechanisms utilized in multi-grade classrooms. The research was conducted in selected rural public elementary schools operating multi-grade classes in geographically isolated communities in the Philippines. Purposive sampling was utilized to select participants who possessed direct experience in multi-grade teaching and foundational learning interventions. Participants included multi-grade teachers, school heads, parents, and learners.

Data were collected through semi-structured interviews, classroom observations, focus group discussions, and document analysis. Classroom observations focused on instructional practices, learner engagement, classroom management, and literacy-numeracy activities. Documentary sources included lesson plans, intervention materials, reading records, numeracy assessments, and school reports. Data were analyzed using Braun and Clarke's (2006) thematic analysis framework, allowing for the identification and interpretation of recurring themes across cases.

5. Findings and Discussion

Theme 1: Differentiated Instruction as the Foundation of Multi-Grade Literacy and Numeracy Teaching

The most dominant theme that emerged from the study was the strategic use of differentiated instruction to address the diverse learning needs of learners in multi-grade classrooms. Teachers consistently described the complexity of simultaneously teaching multiple grade levels while ensuring that learners at different developmental stages received appropriate instruction. Given the wide variation in learners' literacy and numeracy competencies, participants emphasized the necessity of modifying content, learning activities, instructional strategies, and assessment tasks according to learners' abilities and grade-level expectations.

One teacher explained:

"Hindi puwedeng pareho ang ituturo sa lahat dahil magkakaiba ang antas nila. Kailangan mong i-adjust ang activities para sa bawat grupo."

Another participant stated:

"May mga batang marunong nang bumasa habang ang iba ay nagsisimula pa lamang kaya kailangang iba-iba ang approach."

A third teacher shared:

"Kapag nagtuturo ako ng pagbasa, may grupo na nagbabasa na ng maikling kuwento habang ang iba naman ay nagsasanay pa lamang sa pagkilala ng tunog at salita."

Classroom observations revealed that teachers frequently organized learners into ability-based groups, provided varying levels of reading materials, and designed differentiated numeracy tasks according to learners' competencies. Teachers often rotated among groups to provide targeted instruction while assigning independent or peer-supported activities to other learners.

The findings suggest that differentiated instruction serves as a fundamental pedagogical strategy in multi-grade settings, enabling teachers to respond effectively to learner diversity while maximizing instructional opportunities. By tailoring instruction to individual needs, teachers created learning experiences that were developmentally appropriate and responsive to learners' varying levels of readiness.

These findings support the work of Tomlinson (2017), who argued that differentiated instruction enhances learner engagement and achievement by accommodating differences in readiness, interests, and learning profiles. Similarly, research by Mulryan-Kyne (2007) found that effective multi-grade teachers employ differentiated instructional strategies to manage diverse classrooms and improve learner outcomes. Studies by Little (2006) further indicate that differentiated teaching practices are essential for promoting equity and inclusion in multi-grade educational environments.

Theme 2: Peer-Assisted Learning Enhances Literacy and Numeracy Development

Another significant theme that emerged from the data was the use of peer-assisted learning as a mechanism for supporting literacy and numeracy development. Teachers frequently relied on peer tutoring, collaborative learning, and learner mentoring to address instructional challenges associated with multi-grade teaching. Older learners and those with stronger literacy and numeracy skills often assisted younger or less proficient classmates during reading and mathematics activities.

A teacher remarked:

"Malaking tulong ang peer tutoring dahil natutulungan ng mas magagaling na bata ang mga nangangailangan pa ng gabay."

Another participant shared:

"Kapag may natapos nang gawain ang isang bata, pinapatulong ko siya sa mga nahihirapan upang magkaroon sila ng dagdag na suporta."

Learners similarly expressed:

"Mas naiintindihan ko kapag tinutulungan ako ng kaklase ko."

"Hindi ako nahihiya magtanong kapag kapwa estudyante ang tumutulong sa akin."

Classroom observations showed learners working collaboratively during reading sessions, numeracy exercises, and small-group activities. Peer-assisted learning created opportunities for immediate feedback, collaborative problem-solving, and social interaction, thereby strengthening both academic and interpersonal skills.

The findings indicate that peer-assisted learning promotes learner confidence, collaboration, and academic achievement while helping teachers manage multiple instructional groups simultaneously. Learners benefited not only from academic support but also from the social and emotional encouragement provided by their peers.

These findings align with Vygotsky's (1978) concept of the Zone of Proximal Development, which emphasizes the role of more knowledgeable peers in facilitating learning. Research by Topping (2005) found that peer tutoring significantly improves literacy achievement, mathematical performance, and learner motivation. Similarly, Rohrbeck et al. (2003) reported that peer-assisted learning strategies enhance academic performance across various subject areas while fostering positive social relationships among learners.

Theme 3: Contextualized and Localized Instruction Promotes Meaningful Learning

The integration of contextualized and localized instruction emerged as another important theme. Teachers emphasized the importance of connecting literacy and numeracy lessons to learners' daily experiences, local culture, agricultural activities, and community realities. Because learners in rural communities often possess extensive experiential knowledge derived from their surroundings, teachers utilized familiar examples to make abstract concepts more understandable and meaningful.

One participant explained:

"Ginagamit namin ang mga halimbawa tungkol sa pagsasaka at pang-araw-araw na buhay upang mas maintindihan ng mga bata ang lesson."

Another teacher stated:

"Kapag tungkol sa ani, pagtitinda, o mga gawain sa bahay ang halimbawa sa Math, mas mabilis nilang naiintindihan."

A learner shared:

"Mas naiintindihan ko po ang bilang at pagkuwenta kapag ang halimbawa ay tungkol sa mga gulay at prutas na nakikita namin sa bukid."

The findings suggest that contextualized instruction strengthens learner engagement and comprehension by connecting academic content to real-life experiences. Learners demonstrated greater participation and understanding when lessons reflected familiar situations and local realities.

These findings support constructivist perspectives which emphasize that learning becomes more meaningful when learners can relate new knowledge to prior experiences. Research by Gilbert (2006) found that contextualized instruction enhances conceptual understanding and knowledge retention. Likewise, DepEd's contextualization framework and studies by Lombardi (2007) emphasize that authentic learning experiences increase learner motivation and meaningful learning outcomes.

Theme 4: Learning Stations and Flexible Grouping Improve Classroom Management and Independent Learning

Learning stations and flexible grouping emerged as effective classroom management strategies that enabled teachers to address the instructional demands of multi-grade classrooms. Teachers organized learners into small groups and assigned independent learning tasks while providing direct instruction to other groups.

One teacher stated:

“Habang nagtuturo ako sa isang grupo, may independent activities naman ang ibang grupo.”

Another participant explained:

“May reading corner, numeracy corner, at activity stations para hindi sabay-sabay ang nangangailangan ng atensyon.”

Observations revealed that learning stations encouraged learner autonomy, task completion, and active engagement. Learners became more responsible for their learning and developed self-management skills while waiting for teacher-guided instruction.

The findings suggest that flexible grouping and learning stations optimize instructional time and support individualized learning opportunities. These strategies enable teachers to manage multiple grade levels efficiently while maintaining learner engagement.

Research by Miller (2010) found that learning centers and flexible grouping enhance classroom organization and support differentiated instruction in multi-grade settings. Similarly, Berry (2010) reported that effective classroom structures contribute significantly to learner independence and academic success in multi-grade schools.

Theme 5: Reading Intervention Programs Strengthen Foundational Literacy Development

A prominent theme across participant responses was the implementation of reading intervention programs designed to address literacy gaps among struggling readers. Teachers reported conducting regular remediation sessions, guided reading activities, phonics instruction, and individualized reading support.

A participant noted:

“Araw-araw kaming may reading remediation para sa mga batang nahihirapang bumasa.”

Another teacher explained:

“May oras talaga para sa reading intervention dahil marami pa ring batang nangangailangan ng dagdag na suporta.”

A learner shared:

“Dati nahihirapan akong magbasa pero natulungan ako ng reading program namin.”

The findings indicate that targeted literacy interventions significantly contribute to reading improvement, confidence development, and learner progress. Teachers viewed reading remediation as a critical strategy for ensuring that learners acquire foundational literacy competencies necessary for future academic success.

These findings are supported by studies conducted by Allington (2012), who emphasized that intensive reading interventions improve reading achievement among struggling learners. Similarly, research by Snow, Burns, and Griffin (1998) demonstrated that early reading interventions significantly enhance literacy outcomes and reduce future learning difficulties.

Theme 6: Numeracy Enhancement Activities Support Mathematical Understanding and Problem-Solving Skills

Teachers consistently highlighted the importance of using concrete materials, educational games, manipulatives, and hands-on activities to strengthen numeracy skills. Participants explained that many learners struggled with abstract mathematical concepts and benefited from experiential approaches to learning mathematics.

One teacher shared:

“Mas natututo sila kapag gumagamit kami ng actual objects sa pagtuturo ng Math.”

Another participant remarked:

“Kapag may counters, sticks, o mga bagay na nahahawakan nila, mas madali nilang naiintindihan ang konsepto.”

A learner stated:

“Mas gusto ko ang Math kapag may games at ginagamit namin ang mga bagay na nakikita namin sa paligid.”

These findings suggest that hands-on learning experiences facilitate mathematical understanding and improve learner confidence in numeracy tasks.

The results support the Concrete-Representational-Abstract instructional model and studies by Carbonneau et al. (2013), which found that manipulatives significantly enhance mathematical achievement and conceptual understanding among elementary learners. Research by Clements and Sarama (2014) similarly emphasizes the effectiveness of experiential numeracy instruction in developing foundational mathematical competencies.

Theme 7: Community and Parental Support Facilitate Learning Continuity and Academic Success

Community and parental involvement emerged as crucial support mechanisms that strengthened foundational learning development. Parents assisted learners with reading practice, homework completion, and learning activities at home, while community stakeholders provided additional support through school programs and educational initiatives.

One parent explained:

“Tinutulungan namin silang magbasa at magsagot ng mga gawain sa bahay.”

Another parent stated:

“Kahit hindi kami guro, sinisikap naming tulungan ang aming mga anak sa kanilang pag-aaral.”

Teachers likewise emphasized the importance of parental involvement:

“Kapag may suporta ang magulang, mas mabilis ang progreso ng bata sa pagbasa at pagkuwenta.”

The findings suggest that collaborative partnerships between schools, families, and communities strengthen learning continuity and contribute positively to learner achievement.

These findings are consistent with Epstein’s (2018) School-Family-Community Partnership Framework, which highlights the positive influence of parental involvement on academic success. Research by Jeynes (2012) similarly found that parental engagement significantly improves literacy achievement, learner motivation, and educational outcomes.

Theme 8: Teacher Resilience and Innovation Sustain Foundational Learning in Resource-Constrained Contexts

The final theme highlighted teacher resilience and innovation as critical factors sustaining literacy and numeracy instruction in rural multi-grade classrooms. Despite resource shortages, limited instructional materials, and heavy workloads, teachers demonstrated remarkable adaptability and commitment to learner success.

A participant remarked:

“Kahit kulang ang resources, gumagawa kami ng paraan para matuto ang mga bata.”

Another teacher shared:

“Kami mismo ang gumagawa ng instructional materials dahil hindi sapat ang mga available resources.”

Teachers developed localized learning materials, improvised teaching aids, and utilized community resources to address instructional challenges. Their dedication enabled the continuity of learning despite contextual constraints. The findings indicate that teacher resilience functions as a protective factor that supports educational quality and learner achievement in challenging environments.

These findings support studies by Day and Gu (2014), who emphasized the importance of teacher resilience in sustaining effective teaching practices under adverse conditions. Similarly, research by Beltman et al. (2011) found that resilient teachers demonstrate adaptability, commitment, and innovative problem-solving behaviors that positively influence learner outcomes.

Overall Discussion

Collectively, the findings reveal that foundational literacy and numeracy instruction in rural multi-grade classrooms is sustained through a combination of differentiated teaching, collaborative learning, contextualized instruction, targeted interventions, parental involvement, and teacher innovation. These interconnected pedagogical practices and support mechanisms create learning environments that respond effectively to learner diversity while promoting literacy and numeracy development. Despite persistent challenges associated with resource limitations and instructional complexity, multi-grade teachers continue to demonstrate remarkable resilience and professional commitment in ensuring that learners acquire essential foundational competencies necessary for lifelong learning and academic success.

6. Conclusion

The study revealed that foundational literacy and numeracy instruction in rural multi-grade classrooms is characterized by adaptive, learner-centered, and contextually responsive pedagogical practices. Teachers employed differentiated instruction, peer-assisted learning, contextualized teaching, learning stations, literacy interventions, and numeracy enhancement activities to address diverse learner needs. These strategies promoted learner engagement, foundational skill development, and academic progress despite the complexities of multi-grade teaching.

The findings further demonstrate that learning support mechanisms such as parental involvement, community partnerships, remediation programs, and teacher innovation play significant roles in strengthening foundational learning outcomes. While challenges related to resource limitations, teacher workload, and instructional demands persist, multi-grade educators continue to demonstrate resilience and creativity in ensuring that learners acquire essential literacy and numeracy competencies.

7. Implications

The findings suggest the need for strengthened teacher training programs focusing on multi-grade pedagogy, differentiated instruction, literacy interventions, and numeracy development. Educational leaders should allocate additional resources for instructional materials and community-based support programs. Furthermore, policy initiatives should recognize the unique realities of rural multi-grade schools and provide targeted interventions to strengthen foundational learning outcomes.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Tomlinson, C. A. (2017). *How to differentiate instruction in academically diverse classrooms* (3rd ed.). ASCD.
- UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- World Bank. (2022). *The state of global learning poverty: 2022 update*. World Bank.
- UNICEF. (2023). *Foundational learning and the future of education*. UNICEF.
- Piaget, J. (1972). *The psychology of the child*. Basic Books.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.