



TEACHERS' PERSPECTIVES ON INSTRUCTIONAL CHALLENGES IN MATHEMATICS EDUCATION IN PUBLIC ELEMENTARY SCHOOLS: INSIGHTS FROM ILAGAN SOUTH DISTRICT

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ABSTRACT

This qualitative phenomenological study explored teachers' perspectives on instructional challenges in Mathematics education in public elementary schools in Ilagan South District. The study examined the difficulties teachers encounter in delivering Mathematics instruction, learners' classroom responses, and the adaptive pedagogical strategies utilized to improve teaching effectiveness and learner engagement. Data were gathered through semi-structured in-depth interviews with twelve purposively selected elementary Mathematics teachers. Thematic analysis following Braun and Clarke's framework was employed in analyzing the data. Findings revealed that teachers experienced challenges related to learners' low numeracy skills, poor problem-solving abilities, limited comprehension, learner disengagement, and insufficient instructional resources. Participants also emphasized the difficulty of addressing diverse learner abilities and sustaining learner motivation in Mathematics classes. Despite these challenges, teachers demonstrated instructional adaptability through contextualized teaching, differentiated instruction, collaborative learning, manipulative-based activities, and technology-assisted strategies. Teachers further highlighted the importance of patience, instructional creativity, and learner-centered pedagogies in improving Mathematics learning experiences. The findings underscore the significance of responsive and contextualized pedagogical approaches in addressing instructional challenges in elementary Mathematics education. The study highlights the need for strengthened numeracy intervention programs, instructional resource support, and continuous teacher professional development in Mathematics instruction.

Keywords: *Mathematics education, instructional challenges, pedagogical practices, elementary teachers, qualitative research, numeracy, learner-centered instruction*

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I. INTRODUCTION

Mathematics education plays a critical role in developing learners' logical reasoning, analytical thinking, problem-solving abilities, and quantitative literacy. In elementary education, Mathematics serves as a foundational subject that supports cognitive development and prepares learners for higher-level academic competencies. However, despite its importance, Mathematics remains one of the most challenging subjects for many elementary learners due to abstract concepts, computational difficulties, and low learner confidence.

Teachers in public elementary schools frequently encounter instructional challenges associated with learners' weak numeracy foundations, limited comprehension, low classroom participation, and varying academic abilities. These challenges become more complex in classrooms characterized by diverse learner needs, limited instructional materials, and varying levels of parental and academic support. Consequently, Mathematics teachers are compelled to implement adaptive and innovative pedagogical practices to sustain learner engagement and improve conceptual understanding.

In recent years, educational reforms have emphasized learner-centered and contextualized approaches in Mathematics instruction. Teachers are increasingly encouraged to utilize differentiated instruction, collaborative learning, manipulative-based teaching, and technology-assisted pedagogies to enhance classroom participation and comprehension. Despite these efforts, many teachers continue to experience difficulties in effectively delivering Mathematics instruction within resource-constrained and academically diverse classroom settings.

While numerous studies focus on learner achievement and quantitative performance indicators in Mathematics education, limited qualitative studies explore teachers' lived instructional experiences and classroom realities in elementary Mathematics teaching. Understanding teachers' perspectives is essential in identifying localized instructional concerns and pedagogical practices that shape Mathematics learning in public elementary schools. This study explored teachers' perspectives on instructional challenges in Mathematics education in

public elementary schools in Ilagan South District. Specifically, it examined the instructional difficulties encountered by teachers and the pedagogical practices they employed to improve learner engagement and instructional effectiveness in Mathematics classes.

Objectives of the Study

This study aimed to:

1. Explore teachers' instructional challenges in Mathematics education;
2. Examine learners' classroom responses and participation in Mathematics instruction; and
3. Identify innovative pedagogical practices utilized by teachers to improve Mathematics learning.

Review of Related Literature

Mathematics instruction in elementary education is often affected by learners' weak foundational numeracy skills, low confidence, and difficulties in abstract reasoning. According to Boaler (2021), Mathematics anxiety and limited conceptual understanding negatively influence learner engagement and academic performance. Learners who experience repeated difficulty in Mathematics often develop low motivation and classroom disengagement.

Teachers likewise encounter instructional difficulties related to differentiated instruction, classroom diversity, and limited teaching resources. Hattie (2020) emphasized that effective Mathematics teaching requires responsive pedagogical strategies that address learners' varying abilities and learning styles. Contextualized and learner-centered instruction strengthens conceptual understanding and promotes active participation.

Constructivist perspectives further explain that learners develop mathematical understanding through interaction, collaboration, and meaningful experiences (Vygotsky, 1978). Consequently, manipulative-based instruction, collaborative problem-solving, and experiential learning approaches are widely recognized as effective pedagogical strategies in Mathematics education.

Theoretical Framework

The study was anchored on Vygotsky's Social Constructivist Theory (1978), which explains that learning occurs through social interaction, scaffolding, and



collaborative engagement. The theory supports learner-centered and interactive pedagogical approaches in Mathematics instruction.

The study also utilized Bruner's Constructivist Learning Theory (1966), which emphasizes that learners construct knowledge through active exploration, discovery, and contextualized experiences. These theories guided the exploration of instructional challenges and adaptive pedagogical practices among Mathematics teachers.

II. METHODOLOGY

This study utilized a qualitative phenomenological research design to explore teachers' lived experiences and instructional challenges in Mathematics education. The study was conducted in selected public elementary schools in Ilagan South District, Isabela. Participants consisted of twelve elementary Mathematics teachers selected through purposive sampling based on their teaching experience and involvement in Mathematics instruction.

Data were gathered through semi-structured in-depth interviews focusing on instructional challenges, learner engagement, classroom experiences, and innovative teaching practices. Ethical considerations including informed consent, confidentiality, anonymity, and voluntary participation were strictly observed.

The gathered data were analyzed using Braun and Clarke's (2006) thematic analysis framework. Interview transcripts were coded and categorized to identify recurring themes and patterns related to instructional challenges and pedagogical practices. Trustworthiness was established through member checking, triangulation, audit trails, and thick description.

III. RESULTS AND DISCUSSION

Theme 1: Struggling with Learners' Weak Numeracy and Problem-Solving Skills

Participants consistently identified learners' weak foundational numeracy skills and poor problem-solving abilities as major instructional challenges in Mathematics education. Teachers observed that many learners struggled with basic operations, mathematical reasoning, and multi-

step problem-solving tasks, which affected their classroom participation and comprehension.

One participant shared:

"Marami sa mga learners ang hirap pa rin sa basic operations kaya naapektuhan pati ang mas advanced na lessons."

Another teacher explained:

"Kapag word problems na ang lesson, hirap silang mag-analyze at mag-apply ng tamang solution."

Participants further emphasized that learners often lacked confidence in solving mathematical tasks, resulting in classroom hesitation and reduced participation.

A participant stated:

"May mga bata na takot sumagot kasi iniisip agad nila na mali ang sagot nila."

The findings suggest that weak numeracy foundations and low mathematical confidence significantly affect learners' engagement and comprehension in Mathematics instruction. These findings support Boaler (2021), who emphasized that Mathematics anxiety and conceptual difficulties negatively influence learner participation and achievement.

Theme 2: Managing Diverse Learner Abilities and Classroom Participation

Teachers described difficulties in addressing diverse learner abilities and maintaining active classroom participation during Mathematics instruction. Participants explained that learners possessed varying comprehension levels, learning paces, and academic readiness, requiring continuous instructional adjustments.

One participant shared:

"Hindi pare-pareho ang bilis ng pagkatuto ng learners kaya kailangan talagang mag-adjust sa teaching strategies."

Another teacher remarked:

"May mabilis makaintindi pero mayroon ding kailangan ng mas maraming examples at guidance."

Participants also observed that some learners became disengaged during lengthy explanations and abstract discussions. Consequently, teachers implemented collaborative and interactive activities to sustain learner participation.



A participant explained:

“Kapag interactive ang activities, mas nagiging active at confident ang learners.”

The findings indicate that differentiated and learner-centered pedagogical approaches are essential in addressing classroom diversity and improving learner engagement. These findings align with Hattie (2020), who emphasized the importance of responsive instruction in improving learning outcomes.

Theme 3: Demonstrating Pedagogical Creativity Through Contextualized and Manipulative-Based Instruction

Participants emphasized the importance of contextualized teaching and manipulative-based activities in simplifying abstract mathematical concepts. Teachers utilized real-life examples, localized situations, visual aids, counters, and improvised instructional materials to strengthen learner understanding.

One teacher shared:

“Mas naiintindihan nila ang lesson kapag may konkretong examples at actual materials na ginagamit.”

Another participant stated:

“Kapag inuugnay sa totoong buhay ang Math lesson, mas nagiging meaningful sa learners.”

Teachers also revealed that limited instructional resources encouraged them to become more resourceful and innovative in creating instructional materials and classroom activities.

One participant explained:

“Kahit kulang ang materials, gumagawa kami ng paraan para maging interactive ang lesson.”

The findings highlight teachers’ pedagogical adaptability and creativity in addressing instructional limitations. These findings support constructivist learning perspectives emphasizing experiential and contextualized learning in Mathematics education.

Theme 4: Sustaining Instructional Commitment Through Patience and Reflective Teaching

Participants emphasized that patience, reflective teaching, and emotional commitment were essential in sustaining effective Mathematics instruction. Teachers described continuously evaluating learner responses, modifying instructional approaches, and encouraging struggling learners to improve classroom participation and understanding.

One participant remarked:

“Kailangan talagang maging patient kasi hindi lahat agad nakakasunod sa lesson.”

Another teacher explained:

“Bilang teacher, kailangan marunong kang mag-reflect kung effective ba ang strategies mo.”

Teachers viewed teaching Mathematics as both an instructional and motivational process that requires emotional support, encouragement, and continuous adaptation.

The findings suggest that reflective and learner-centered teaching practices strengthen instructional effectiveness and positive classroom relationships in Mathematics education.

These findings align with Day and Gu (2020), who emphasized the importance of reflective practice and professional adaptability among teachers.

Discussion

The findings revealed that instructional challenges in Mathematics education are strongly associated with learners’ weak numeracy foundations, low confidence, diverse learning abilities, and limited engagement in abstract mathematical tasks. Teachers experienced significant difficulties in addressing varying learner needs while sustaining active classroom participation and comprehension.

Despite these challenges, participants demonstrated strong pedagogical adaptability through contextualized instruction, differentiated teaching, collaborative learning, manipulative-based activities, and reflective classroom practices. Teachers’ instructional creativity and learner-centered approaches enabled them to create more meaningful and engaging Mathematics learning



experiences.

The study further highlights the importance of supportive instructional environments, responsive pedagogical strategies, and continuous professional reflection in improving Mathematics education in public elementary schools.

IV. CONCLUSION

The study concluded that elementary Mathematics teachers in Ilagan South District encounter instructional challenges related to learners' weak numeracy skills, low mathematical confidence, classroom diversity, and limited learner engagement. These challenges significantly influence instructional delivery and classroom participation.

Despite these instructional realities, teachers demonstrated resilience and pedagogical innovation through contextualized teaching, differentiated instruction, manipulative-based learning, collaborative activities, and reflective pedagogical practices. These adaptive strategies strengthened learner participation, conceptual understanding, and classroom interaction.

The findings underscore the importance of learner-centered and context-responsive pedagogical approaches in improving Mathematics instruction. Strengthening numeracy intervention programs, instructional resource provision, and teacher professional development initiatives may further enhance instructional effectiveness and learner outcomes in elementary Mathematics education.

Implications of the Study

The findings may guide educational leaders, curriculum developers, and policymakers in strengthening numeracy intervention programs, instructional resource support, and teacher training initiatives related to innovative Mathematics pedagogies. Schools may also enhance collaborative professional learning opportunities that promote differentiated and learner-centered instruction. Future studies may further examine the long-term impact of contextualized and manipulative-based pedagogical practices on learners' mathematical achievement and engagement across diverse educational contexts.

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