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FROM ANALYSIS TO PROBLEM SOLVING: ANALYSING TEACHERS' STRATEGIES FOR ENHANCING NUMERACY SKILLS IN ELEMENTARY LEARNERS

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ABSTRACT

This study was conducted to examine teachers' instructional strategies and their influence on the numeracy skills of Grade VI pupils in the 2nd Congressional District of Cotabato. Utilizing a mixed-methods design, the research assessed twenty-five elementary teachers through quantitative surveys and qualitative inquiry. The findings revealed that while teachers demonstrate a very high level of instructional strategies—particularly in planning, scaffolding, and contextualization—pupils showed strong performance only in number sense and computational fluency, while higher-order skills like problem-solving and measurement remained moderate. Statistical results highlighted that contextualized and real-life problem-solving strategies were the most significant factors in enhancing numeracy. The study recommends targeted teacher training and improved resource provision to support effective numeracy instruction.

INTRODUCTION

Numeracy is recognized as the key foundation of elementary education, supporting both mathematical learning and the ability to solve real-life problems. Teachers play a vital role in helping children transition from basic counting to advanced reasoning and pattern recognition by employing flexible, learner-centered strategies. However, many elementary learners continue to struggle with basic operations and number sense, often due to the realities of overcrowded and under-resourced classrooms that existing frameworks rarely account for. This study is timely because it addresses the urgent need for context-based strategies that are sustainable and adaptable for local, culturally diverse classrooms. By determining which

instructional dimensions significantly influence numeracy skills, the research provides practical insights to strengthen student performance and long-term educational success.

METHODOLOGY

The study adopted a mixed-methods design, beginning with a descriptive-correlational quantitative phase to examine how teacher strategies naturally occur and influence student competencies. A total of twenty-five Grade VI teachers from the municipalities of Arakan, Antipas, Magpet, Makilala, and President Roxas served as the primary respondents. In the qualitative phase, the researcher employed a micro-ethnographic inquiry to examine moment-to-moment classroom discourse and behaviors. Data were gathered through Likert-scale questionnaires, semi-structured interviews, and classroom observations, which were then analyzed using Mean, Regression, and Thematic Analysis. All procedures followed strict ethical standards, including informed consent and the use of pseudonyms to ensure participant confidentiality.

RESULTS

Quantitative analysis shows that Grade VI teachers demonstrate a very high level of proficiency in instructional planning, questioning, and assessment, with weighted means ranging from 4.76 to 4.93. Pupils demonstrated strong foundational skills in number sense (Mean = 4.27) and computational fluency (Mean = 4.02$), but their skills in measurement (Mean = 3.66) and logical reasoning (Mean = 3.54) were notably lower. Regression results confirmed that the use of contextualized and real-life problems is the only significant factor influencing number sense ($p = 0.007$). Qualitatively, the research identified three major instructional themes: the use of experiential hands-on learning with manipulatives, the integration of contextualized interactive strategies like math stories, and the application of differentiated supportive practices to meet individual learner needs.

DISCUSSION

The findings illustrate that while teachers are highly active in delivering structured lessons, a significant gap exists between student procedural fluency and their higher-order reasoning. Contextualized teaching effectively bridges this gap by stripping away the academic mask of mathematics and showing its utility in the students' daily routines. However, several hurdles remain, including math anxiety, limited instructional time, and a lack of physical resources like measuring tools, which often force teachers back toward traditional, teacher-centered

methods. Strengthening numeracy requires an ecological approach that includes professional capacity building and community-integrated models of education.

CONCLUSIONS

The researcher concludes that teachers in the district consistently apply effective problem-solving strategies that strengthen instructional delivery and learner support. Despite this, higher-order skills such as reasoning and measurement require further development, as pupils primarily demonstrate proficiency in foundational numeracy. Contextualized and real-life instruction stands out as the most influential factor in improving specific skills like number sense. The study also highlights that the successful implementation of these strategies is perpetually challenged by learner differences, resource limitations, and weak external support systems. Ultimately, a sustained commitment to teacher training, resource allocation, and system-wide reforms is necessary to ensure effective numeracy instruction in elementary education.