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Explicit Teaching Approach in Mathematics for Multigrade Classes of Matnog District

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Abstract - *Multi-grade teaching remains a structural necessity in geographically isolated and sparsely populated communities, yet it presents complex instructional challenges, particularly in Mathematics. This study examined the implementation of the Explicit Teaching Approach (ETA) in multi-grade Mathematics classes (Grades III and IV) in Matnog District during School Year 2016–2017. Using a descriptive qualitative research design supported by descriptive statistics, data were gathered through classroom observations, a unified lesson plan intervention, teacher profile documentation, and a Focus Group Discussion (FGD). Five multi-grade teachers and 115 pupils participated in the study. Findings revealed that all teachers consistently demonstrated the core components of ETA, including review of prior knowledge, clear articulation of objectives, step-by-step modeling, guided practice, independent practice, continuous monitoring, and timely lesson pacing. Variations were observed in motivational strategies, ICT integration, and classroom management techniques. Thematic analysis of teacher feedback identified four dominant themes: instructional clarity, time efficiency, learner accessibility, and improved classroom scheduling. While ETA proved structurally appropriate and effective in organizing dual-grade instruction, disparities in classroom infrastructure—particularly the lack of electricity and instructional resources in some schools—posed limitations to equitable implementation. The study concludes that ETA is a feasible and practical instructional framework for multi-grade Mathematics classes when supported by structured lesson planning and continuous professional development. A proposed guide for ETA-based lesson development in multi-grade settings was formulated to institutionalize effective practices and enhance instructional consistency across rural schools.*

Keywords *- Explicit Teaching Approach, Multi-Grade Education, Mathematics Instruction, Rural Education, Instructional Strategies, Lesson Planning, Classroom Observation, Teacher Professional Development, Philippine Basic Education, Scaffolding, Direct Instruction, Spiral Curriculum*

INTRODUCTION

Mathematics continues to be regarded as a foundational discipline that shapes logical reasoning, analytical thinking, and problem-solving skills essential for national development. Despite sustained reform efforts worldwide, student performance in Mathematics remains a persistent concern. Research consistently indicates that instructional clarity, teacher competence, and classroom structure significantly influence learners' mastery of mathematical concepts. In response to proficiency gaps, the Philippine Department of Education (DepEd) introduced policy reforms aimed at strengthening literacy and numeracy instruction. Among these reforms was the Early Language Literacy and Numeracy Program (ELLNP) under DepEd Order No. 12, s. 2015, which institutionalized the Explicit Teaching Approach (ETA) as a structured instructional model.

Simultaneously, multi-grade education has become a structural necessity in rural and geographically isolated areas. Multi-grade classes, in which one teacher handles two or more grade levels simultaneously, were formally supported through DepEd Order No. 38, s. 1993 and strengthened under DepEd Order No. 81, s. 2009. While multi-grade education improves access, it also intensifies instructional demands. Teachers must balance multiple competencies, differentiate instruction across developmental levels, and manage limited resources within a single classroom. These complexities necessitate structured instructional strategies capable of maintaining clarity and efficiency.

The Explicit Teaching Approach is characterized by clearly articulated objectives, step-by-step modeling ("I do"), guided practice ("We do"), independent application ("You do"), and continuous monitoring with immediate feedback. Although ETA has been promoted as an effective instructional model, limited research has examined its application in multi-grade Mathematics classrooms within the Philippine context. This study therefore investigated the use of ETA in Grades III and IV multi-grade Mathematics classes in Matnog District during School Year 2016–2017, focusing on classroom characteristics, instructional implementation, good practices, teacher perceptions, and the development of a practical lesson planning guide.

METHODS

This study employed a descriptive qualitative research design supported by descriptive statistics. The conceptual framework followed an Input–Process–Output (IPO) model in which classroom characteristics and ETA implementation served as inputs; classroom observation and Focus Group Discussion (FGD) formed the process; and a proposed ETA-based lesson development guide represented the output.

Participants

Five multi-grade teachers handling Grades III and IV participated in the study. These teachers were assigned to five elementary schools in Matnog District. A total of 115 pupils were observed during instructional sessions.

Table 1. Profile of Multi-Grade Teachers

Teacher	Age	Sex	Years of Service	MG Training	Distance from School
A	30	Female	5 months	None	45 km
B	28	Male	6 years	Yes	15 km
C	31	Female	5 years	Yes	3 km
D	30	Male	3 years	Yes	17 km
E	29	Male	6 years	Yes	6 km

The age range (28–31 years) suggests a relatively young teaching workforce. Notably, one teacher had no formal multi-grade training, indicating a potential gap in professional preparation.

Pupil Population

Table 2. Enrollment Distribution in Multi-Grade Classes

School	Total Pupils	Grade III	Grade IV
Banogao	18	10	8
Paghuliran	19	12	7
Calayuan	24	11	13
Manurabi	28	15	13
V. Dorotan	24	11	12
Total	113–115*	—	—

(*Enrollment fluctuated slightly during the observation period.)

Class sizes were below 30 pupils, significantly smaller than mono-grade averages of 40–50 learners. Female pupils comprised 51% of the total population, indicating near gender balance.

Age analysis revealed variations beyond expected grade norms, suggesting delayed enrollment or grade repetition—factors that increase instructional complexity.

Physical Classroom Conditions

Table 3. Classroom Infrastructure Indicators

Indicator	A	B	C	D	E
Electricity	✗	✓	✓	✓	✓
Potable Water	✗	✗	✗	✗	✗
Adequate Furniture	Poor	Good	Shared Space	Minor Repairs	Good
ICT Access	None	Yes	Yes	Yes	Yes

Significant disparities were observed, particularly in School A, which lacked electricity and sufficient furniture. These conditions influence the equitable implementation of instructional innovations such as ICT-supported ETA.

Instruments and Data Collection

The study utilized a unified ETA-based lesson plan, an observation checklist aligned with explicit teaching indicators, an FGD guide, and teacher/classroom profile sheets. Instructional implementation occurred from December 6, 2016 to January 13, 2017, followed by an FGD conducted on January 23, 2017.

Data were analyzed using descriptive statistics, coding of ETA components, and thematic analysis of teacher feedback.

RESULTS

Implementation of the Explicit Teaching Approach Classroom observations revealed consistent application of ETA components across all five teachers.

Table 4. Observed Explicit Teaching Indicators

Indicator	Observed (5/5 Teachers)
Review of Prior Knowledge	Yes
Clear Statement of Objectives	Yes
Step-by-Step Modeling	Yes
Guided Practice	Yes
Independent Practice	Yes
Monitoring & Immediate Feedback	Yes
Brisk Lesson Pacing	Yes

Although core components were consistently observed, variations existed in instructional delivery. Teachers B and E used songs for motivation, Teacher D explicitly set behavioral standards before group activities, and Teacher E integrated ICT tools.

Identified Good Practices

Practice	Teachers Observed
Visual Aids	A, B
ICT Integration	E
Peer Tutoring	B
Positive Reinforcement	A
Questioning Techniques	D
Continuous Monitoring	All
INSET Participation	A, B

These practices enhanced learner engagement, instructional clarity, and classroom management. Importantly, while aligned with ETA, these practices also reflect broader pedagogical competence.

Teacher Feedback (Thematic Analysis)

Four major themes emerged from the FGD:

1. Clarity and Directness of Instruction – Teachers emphasized that ETA reduced ambiguity and improved skill mastery.
2. Time Efficiency – Structured sequencing enabled completion of lessons within allocated periods.
3. Learner-Friendliness – Scaffolding supported slower learners and reduced anxiety.
4. Time-Friendly Scheduling – Teachers reported smoother transitions across subjects.

DISCUSSION

The findings demonstrate that the Explicit Teaching Approach is structurally compatible with multi-grade Mathematics instruction. The systematic sequence—from review to modeling, guided practice, and independent work—provided clarity necessary for managing dual-grade competencies. Smaller class sizes likely facilitated closer monitoring and feedback.

However, infrastructure inequities significantly affected uniformity in implementation. The absence of electricity in one school restricted ICT integration, highlighting the role of material resources in pedagogical innovation. Furthermore, differences in teacher experience and training suggest that professional development remains essential for consistent ETA implementation.

The unified lesson plan emerged as a stabilizing framework. Leveraging the spiral progression of the K–12 curriculum allowed integration of related competencies across grade levels, reducing redundancy and maximizing instructional efficiency. While ETA proved effective, its success depended heavily on foundational teaching skills such as questioning, reinforcement, and classroom management.

Overall, ETA is feasible, structured, time-efficient, and supportive of diverse learners in multi-grade Mathematics classrooms. However, sustainability requires continuous professional development, equitable resource allocation, and institutional support.

CONCLUSION

This study examined the use of the Explicit Teaching Approach (ETA) in Mathematics for multi-grade classes (Grades III and IV) in Matnog District and arrived at several important conclusions.

The findings show that the Explicit Teaching Approach is practical and workable in multi-grade classrooms. Its structured sequence—review of prior knowledge, clear presentation of objectives, step-by-step modeling, guided practice, and independent work—helped teachers manage two grade levels within one classroom more effectively. The organized flow of instruction reduced confusion and supported better lesson pacing, which is crucial in multi-grade settings where time must be divided carefully.

The study also found that ETA promotes clarity and mastery. Teachers observed that learners, including those who struggle in Mathematics, were able to follow the lesson more easily because the approach provides scaffolding. By modeling first and gradually releasing responsibility to pupils, the teachers were able to guide learners toward independent performance with greater confidence.

Time management emerged as another strength of ETA. Teachers consistently completed their lessons within the allotted time. In multi-grade classrooms, where instructional time is limited and shared between grade levels, having a structured teaching framework helped prevent delays and overlapping instruction.

However, the effectiveness of ETA is influenced by teacher preparedness and classroom conditions. Teachers who had attended multi-grade training demonstrated stronger classroom management and instructional confidence. In contrast, disparities in infrastructure—such as lack of electricity and inadequate furniture in some schools—limited equal access to instructional resources, particularly ICT tools. This suggests that successful implementation of ETA depends not only on instructional design but also on teacher development and adequate learning environments.

The unified lesson plan developed in this study further showed that competencies from Grades III and IV can be aligned effectively under the spiral progression of the K–12 curriculum. With proper planning, multi-grade instruction can be organized systematically without sacrificing quality.

Overall, the study concludes that the Explicit Teaching Approach is a suitable and effective strategy for multi-grade Mathematics classes in rural settings. To sustain its impact, continuous teacher training, improved classroom facilities, and structured lesson planning support must be prioritized.

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