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RESEARCH ARTICLE

DEVELOPMENT AND VALIDATION OF NUMBERQUEST FOR GRADE 3&4 LEARNING TOOLKIT

Roxanne C. Jacinto

Balasi Elementary School

Abstract

This study investigated the development and validation of the NumberQuest multi-grade learning toolkit to improve the division skills of Grade 3 and Grade 4 learners in selected multi-grade classrooms in the Schools Division of Apayao. It was anchored on the persistent problem of low numeracy performance, particularly in division with remainders, identified as the least learned competency. A developmental research design was used, involving Grade 3 and Grade 4 learners for the diagnostic assessment and limited try-out, and six (6) expert validators composed of mathematics teachers and education specialists. Instruments included a researcher-made diagnostic test, validation checklists, and usability evaluation tools. Results showed that learners performed satisfactorily in basic division, multi-digit division, and word problems but struggled with division with remainders. In response, the NumberQuest toolkit was developed, consisting of structured lessons, activity sheets, and contextualized tasks. Validation results revealed that the toolkit was highly valid in content, design, assessment, and usability. The study concludes that NumberQuest is an effective and context-responsive instructional material that improves learners' division skills in multi-grade classrooms.

Keywords: division, multi-grade learners, instructional toolkit, numeracy, validation

*Corresponding author: roxanne.jacinto001@deped.gov.ph

INTRODUCTION

Education systems worldwide continue to face persistent gaps in learning outcomes, particularly in foundational literacy and numeracy skills that are essential for academic success and lifelong learning. The UNESCO Global Education Monitoring Report (2024) reports that nearly 70% of children in low- and middle-income countries are unable to read or understand a simple text by the age of ten, while more than 250 million learners remain out of school [1]. These learning deficits extend to mathematics, where international assessments such as the OECD Programme for International Student Assessment reveal declining performance in basic numeracy skills, including fundamental number operations such as division [2]. The World Bank emphasizes that this global learning crisis threatens the achievement of Sustainable Development Goal 4, which aims to ensure inclusive and equitable quality education for all learners by 2030 [3]. These conditions highlight the urgent need for effective, engaging, and developmentally appropriate instructional materials in basic education.

In the Philippine context, national and international assessment results consistently reflect significant challenges in numeracy achievement. Data from the 2022 PISA cycle indicate that Filipino learners scored well below the OECD average in mathematics, pointing to serious gaps in understanding basic mathematical concepts and procedures [4]. Despite recent reforms such as the MATATAG Curriculum and the Learning Recovery Program, challenges persist in ensuring instructional consistency, teacher preparedness, and access to appropriate learning resources. Reports from EDCOM II and the World Bank further indicate that a substantial proportion of Filipino learners struggle with reading comprehension, which adversely affects their ability to understand mathematical instructions, interpret word problems, and apply logical reasoning in division tasks [5].

Related studies in mathematics education consistently emphasize that learners' difficulties in division are often linked to weak conceptual understanding, limited procedural fluency, and lack of exposure to concrete and contextualized learning experiences (e.g., manipulatives, guided practice, and problem-based tasks). Research further shows that instructional materials that are structured, interactive, and contextually relevant significantly improve learners' numeracy performance, particularly in foundational operations such as division [8]. However, most existing interventions are designed for monograde classrooms and do not adequately address the learning needs of diverse learners in multi-grade settings. This indicates a persistent gap in the availability of validated, context-specific instructional tools for teaching division in multi-grade classrooms.

These challenges are more pronounced in remote and underserved areas where multi-grade classrooms are prevalent. In the Cordillera Administrative Region, particularly in the province of Apayao, geographical isolation, limited educational resources, and teacher shortages have resulted in the widespread implementation of multi-grade teaching [6]. Regional education reports consistently indicate below-proficiency performance in basic mathematical operations, including division, among elementary learners [7]. School-level monitoring data and classroom observations at Balasi Elementary School further confirm that many multi-grade learners experience persistent difficulties in recalling basic division facts, interpreting remainders, and solving multi-digit division problems. Learners often confuse division with subtraction, rely on guesswork, and lack strategies for checking the accuracy of their answers, especially when solving word problems.

Teaching division in a multi-grade classroom presents additional instructional challenges. Division requires conceptual understanding, procedural fluency, and logical reasoning, which are difficult to address when a single teacher simultaneously handles learners of varying grade levels and mathematical readiness. Most existing instructional materials are designed for monograde classrooms and are often abstract or developmentally misaligned for multi-grade learners. As a result, teachers are compelled to improvise lessons and activities without assurance of instructional coherence, accuracy, or effectiveness. While studies highlight the effectiveness of manipulatives, contextualized tasks, and guided practice in teaching division, few instructional interventions are specifically designed for multi-grade mathematics, and even fewer undergo formal validation for content quality and classroom usability [8].

Despite these global, national, and local challenges, there remains a limited body of research focusing on the development and validation of structured, curriculum-aligned, and context-responsive instructional toolkits specifically designed for multi-grade learners in division. This gap highlights the need for localized instructional innovations that are not only pedagogically sound but also validated for classroom usability and effectiveness

in real teaching conditions.

This study is anchored on Human Capital Theory, which views education as an investment that enhances individual capabilities and contributes to broader social and economic development [9]. Strengthening foundational numeracy skills such as division equips learners with competencies necessary for academic progression and future workforce participation. Constructive Alignment Theory further emphasizes the importance of aligning learning objectives, instructional strategies, and assessment practices to ensure meaningful learning outcomes [10]. These theoretical perspectives are reinforced by the 21st Century Skills Framework, which identifies numeracy, problem-solving, and independent learning as essential learner competencies [11], and by Policy Implementation Theory, which underscores the importance of contextualized and stakeholder-responsive educational innovations [12].

Guided by these theories and identified gaps, this study aims to develop and validate the NumberQuest multi-grade learning toolkit to improve the division skills of Grade 3 and Grade 4 learners. Specifically, it seeks to address the problem of low mastery in division—particularly division with remainders—through a structured, contextualized, and developmentally sequenced instructional toolkit aligned with the MATATAG Curriculum. The study employed a developmental research design, beginning with a diagnostic assessment of learners' division competencies, followed by the design and development of the toolkit, and concluding with expert validation and limited classroom try-out to determine its validity, usability, and instructional quality.

Guided by these theoretical foundations, this study focuses on the development and validation of NumberQuest, a localized and interactive multi-grade learning toolkit designed to improve division mastery among elementary learners. The rationale for developing NumberQuest stems from documented learning gaps in division and the absence of validated instructional materials tailored to multi-grade contexts. School-level assessment results at Balasi Elementary School indicate that more than 68% of multi-grade learners performed below the minimum mastery level in division, particularly in solving multi-step problems and division with remainders. NumberQuest is designed to address these challenges through leveled activities, contextualized tasks, and developmentally sequenced lessons that align with the MATATAG Curriculum standards [13]. The toolkit also promotes independent learning by allowing learners to progress at their own pace while enabling teachers to manage diverse learners within a shared classroom environment. Through the systematic development and validation of NumberQuest, this study seeks to provide a practical, curriculum-aligned, and evidence-based learning toolkit that supports improved numeracy outcomes in multi-grade classrooms.

METHODOLOGY

This chapter presents the research methodology employed in the development of the Contextualized Short Story-Based Reading Intervention Material.

Research Design

This study employed the ADDIE instructional design model, which consists of the phases Analysis, Design, Development, Implementation, and Evaluation [26]. The ADDIE model provided a structured, systematic, and iterative framework that supported the development and validation of instructional materials through continuous refinement based on evidence and expert feedback [27]. Its application was appropriate for the development of NumberQuest, a multi grade learning toolkit intended to enhance division mastery among elementary learners in multi grade classrooms. The model aligned with established instructional development practices and ensured that each phase of the toolkit's development was guided by data driven decision making and sound pedagogical principles [28].

The Analysis phase involved identifying the least learned competencies in division among multi grade learners. Diagnostic assessment results, curriculum analysis, and teacher inputs were utilized to determine learners' difficulties in errors in solving basic division problems, difficulties in solving division problems with remainders,

challenges in solving multi digit division problems, and weaknesses in solving division word problems. Findings from this phase served as the empirical basis for designing targeted instructional components of the NumberQuest toolkit [29].

The Design and Development phases focused on structuring and producing the multi grade learning toolkit. These phases involved organizing the content, learning activities, lesson exemplars, instructional strategies, learners' activity sheets, and assessment tasks to directly address the identified least learned competency in division with remainders. The toolkit was designed to support multi grade instruction through developmentally appropriate, engaging, and competency-based learning tasks that aligned with the MATATAG Curriculum standards and learners' readiness levels [30].

The Implementation phase involved the limited classroom use (try-out) of the developed toolkit in a multi grade setting to assess practicality and support expert review. This implementation phase is specifically limited in scope and purpose, serving only as a usability testing and field try-out for validation purposes, and not as a full quasi-experimental pretest–posttest implementation. Orientation on the proper use of the toolkit was provided to the teacher to ensure consistency during implementation and to facilitate accurate observation of its usability and instructional effectiveness in actual classroom conditions [31].

The Evaluation phase centered on expert validation of the NumberQuest toolkit. Subject matter experts and instructional material specialists assessed the toolkit in terms of learning competencies, instructional design and organization, instructional quality of text and visuals, assessment, and readability. The evaluation followed the standard criteria for instructional material validation and included the computation of weighted mean and content validity indices. The results were systematically analyzed and served as the basis for revising and finalizing the toolkit prior to its full classroom utilization [32].

LOCALE OF THE STUDY

The study was conducted at Upper Atok Elementary School, Malubibit Sur Elementary School and Balasi Elementary School, both public basic education institutions under the Department of Education (DepEd), Schools Division of Apayao, located in the Municipality of Flora, Apayao, during the School Year 2025–2026. These schools served learners from nearby rural barangays, many of whom came from economically disadvantaged households. Both institutions offered instruction from Kindergarten to Grade 6 and implemented the K to 12 Basic Education Curriculum prescribed by the Department of Education.

Upper Atok Elementary School, Malubibit Sur Elementary School and Balasi Elementary School operated under a multi-grade instructional setup, where a single teacher handled two grade levels within the same classroom. This instructional arrangement presented challenges such as varied academic readiness levels, limited instructional time, and constraints in delivering differentiated instruction. These conditions made the two school's appropriate settings for identifying learners' least learned competencies in division, particularly in basic division facts, division with remainders, multi-digit division, and division word problems, which were the focus areas of the study.

The multi-grade classroom environments of both schools provided a realistic context for the development and validation of the NumberQuest multi-grade learning toolkit. The presence of learners with diverse abilities highlighted the need for instructional materials that could accommodate varying levels of understanding, reinforce division concepts, and promote engagement in numeracy tasks. The implementation of the toolkit in actual multi-grade classrooms strengthened the evaluation of its content, format, presentation and organization, and accuracy and up-to-datedness of information, as specified in the study's objectives.

Both Upper Atok Elementary School, Malubibit Sur Elementary School and Balasi Elementary School also served as appropriate venues for expert validation of the toolkit. Teachers with experience in multi-grade instruction provided informed assessments regarding the toolkit's clarity, pedagogical relevance, and usability in real classroom settings. Their professional feedback supported a reliable evaluation of the instructional quality and effectiveness of the developed learning material.

The selection of Upper Atok Elementary School, Malubibit Elementary School and Balasi Elementary School was

purposive, as their multi-grade contexts directly aligned with the study's aim of developing and validating an instructional toolkit designed to enhance division mastery among multi-grade elementary learners. Findings from these locales contributed to improved numeracy instruction in multi-grade classrooms and may inform the adoption of similar instructional innovations in other schools within the Schools Division of Apayao.

RESPONDENTS OF THE STUDY

The respondents of the study included Grade 3 and Grade 4 multi-grade learners from Upper Atok Elementary School, Malubibit Elementary School and Balasi Elementary School, Flora District, who are enrolled during the Academic Year 2025-2026. Additionally, six (6) expert validators. Through total enumeration, all learners were included, consisting of ten (10) Grade 3 pupils and ten (10) Grade 4 pupils from Balasi Elementary School, and eighteen (18) pupils and seventeen (17) pupils of Grade 3 and Grade 4 from Upper Atok Elementary School, Malubibit Sur Elementary School, who participated in the diagnostic assessment and implementation of the NumberQuest toolkit.

The expert validators were purposively selected based on their qualifications and expertise in mathematics education and instructional materials development. They evaluated the toolkit in terms of content, format, presentation and organization, and accuracy and up-to-datedness of information, following the Department of Education standards for print resource evaluation.

RESEARCH INSTRUMENTS

This study utilized two primary research instruments to gather data on learners' division mastery and to determine the validity of the developed NumberQuest multi grade learning toolkit [33]. These instruments were systematically selected and aligned with the objectives of the study and the Statement of the Problem to ensure accurate identification of the least learned competency and rigorous evaluation of the instructional material [34].

The first instrument was the **Diagnostic Division Test in Mathematics**, a 40 item assessment lifted from the Department of Education learning competency standards and aligned with the MATATAG Curriculum in Mathematics for elementary learners in multi grade classrooms [35]. The test measured learners' performance across four division domains, namely errors in solving basic division problems, difficulties in solving division problems with remainders, challenges in solving multi digit division problems, and weaknesses in solving division word problems. It was administered prior to the development of the NumberQuest toolkit to identify the least learned competency in division. Each item carried one point, and the results were analyzed using frequency counts, percentages, and mean scores. The results of the diagnostic test served as the primary basis for the design and content focus of the NumberQuest learning activities.

The second instrument was the **Expert Validation Tool for the NumberQuest Multi Grade Learning Toolkit**, which was adapted to evaluate the instructional quality and validity of the developed material. This instrument was accomplished by subject matter experts, including mathematics teachers, instructional material validators, and curriculum specialists. The toolkit was evaluated across five dimensions, namely **learning competencies, instructional design and organization, instructional quality of text and visuals, assessment, and readability**.

Scale for the Interpretation of the Expert Validation Ratings

Range	Descriptive Value	Interpretation
4.21 to 5.00	Strongly Agree	Highly Valid
3.41 to 4.20	Agree	Valid
2.61 to 3.40	Moderately Agree	Moderately Valid
1.81 to 2.60	Disagree	Slightly Valid
1.00 to 1.80	Strongly Disagree	Not Valid

The instrument also included an open-ended portion to gather comments, recommendations, and suggestions from

the validators for the further refinement of the toolkit.

Both instruments underwent face and content validation by experts in mathematics education and instructional materials development prior to their actual administration [37]. Validators examined the instruments in terms of clarity of instructions, relevance of content, alignment with curriculum standards, and appropriateness for multi grade learners. Recommendations provided by the validators were incorporated to refine the instruments and improve the clarity, organization, and suitability of the NumberQuest toolkit. Through the use of these instruments, the study ensured that the identification of the least learned competency and the evaluation of the NumberQuest toolkit were grounded in reliable, developmentally appropriate, and pedagogically sound measures.

Data Gathering Procedure

The data gathering procedure of this study followed a systematic and organized approach to ensure the accurate and reliable collection of data necessary for identifying learners' least learned competencies in division and for determining the validity of the developed NumberQuest multi-grade learning toolkit. The procedure was carried out in four phases, namely: preparation, diagnostic assessment, validation, and data organization and analysis.

In the preparation phase, the researcher secured the necessary permissions and approvals from the Schools Division Office and the concerned school heads to conduct the study in the selected multi-grade elementary schools. Coordination with the Teacher-in-Charge and the multi-grade teacher was undertaken to explain the objectives of the study, the data collection schedule, and ethical considerations. Parental consent forms and learner assent were distributed to ensure voluntary participation. During this phase, the Diagnostic Division Test in Mathematics and the Expert Validation Tool for the NumberQuest Toolkit underwent face and content validation by experts in mathematics education and instructional materials development to ensure clarity, relevance, and alignment with the MATATAG Curriculum.

In the diagnostic assessment phase, the validated Diagnostic Division Test was administered to all participating multi-grade learners prior to the use of the NumberQuest toolkit. The test was conducted during regular class hours under standardized conditions. Clear instructions were given to the learners, and adequate time was allotted for them to complete all four parts of the test, covering basic division problems, division with remainders, multi-digit division, and division word problems. The completed test papers were collected, checked, and tabulated to determine learners' performance in each division domain. The results of this diagnostic assessment were used to identify the least learned competencies, which served as the basis for the design and refinement of the NumberQuest learning activities.

In the validation phase, the developed NumberQuest multi-grade learning toolkit was subjected to expert evaluation using the Expert Validation Tool adapted from the Department of Education Evaluation Tool for Print Resources. Selected validators, such as mathematics teachers, curriculum specialists, and instructional material evaluators, assessed the toolkit in terms of content, format, presentation and organization, and accuracy and up-to-datedness of information. Validators rated each indicator using the prescribed DepEd rating scales, and provided written comments and suggestions for improvement. The feedback gathered from this phase guided the revision and finalization of the toolkit.

In the data organization and analysis phase, the data obtained from the diagnostic test and expert validation checklist were organized, encoded, and prepared for statistical treatment. Descriptive statistical tools such as frequency counts, percentages, and mean scores were used to summarize learners' performance in each division domain and to determine the overall level of validity of the NumberQuest toolkit. All data collected were treated with confidentiality and were used solely for academic research purposes.

Through this structured data gathering procedure, the study ensured that the identification of least learned competencies and the validation of the NumberQuest multi-grade learning toolkit were conducted in a systematic, ethical, and methodologically sound manner, consistent with the objectives of the study.

RESULTS

Ratings of the Experts on the NumberQuest Multi-Grade Learning Toolkit

*Learning Competencies**Table 7. Ratings of the Experts on the NumberQuest Multi-Grade Learning Toolkit Along Learning Competencies*

Standard/Criterion Items	Mean	Descriptive Value	Interpretation
The instructional materials:			
1. Covered the targeted least learned competency in division, particularly division with remainders.	4.00	Strongly Agree	Highly Valid
2. Sufficiently developed the targeted least learned competency in division among multi-grade learners.	3.80	Strongly Agree	Highly Valid
Overall	3.90	Strongly Agree	Highly Valid

Table 7 shows that the NumberQuest Multi-Grade Learning Toolkit was rated by experts as highly valid in terms of learning competencies, with an overall mean of 3.90 interpreted as "Strongly Agree." This indicates that the toolkit effectively addresses the least learned competency in division, particularly division with remainders, and is well aligned with the curriculum. Both indicators—covering and sufficiently developing the targeted competency—received high ratings, suggesting that the toolkit includes appropriate content and supports the development of learners' skills. Although both criteria were rated positively, the slight difference between them suggests that additional reinforcement activities, differentiated instruction, and more interactive tasks may further improve its effectiveness. Overall, the findings confirm that NumberQuest is a valid and useful instructional material for multi-grade learners that can support improvement in division skills with minor enhancements.

Table 8. Ratings of the Experts on the NumberQuest Multi Grade Learning Toolkit Along Instructional Design and Organization

Standard/Criterion Items	Mean	Descriptive Value	Interpretation
The instructional materials:			
1. Has learning objectives that are anchored on the targeted least learned competency in division.	4.47	Strongly Agree	Highly Valid
2. Uses a variety of self-directed techniques, learning tasks, and formative assessments.	4.47	Strongly Agree	Highly Valid
3. Has content that is logically developed and organized, that is, lessons and activities are arranged from simple to complex and from observable to abstract.	4.47	Strongly Agree	Highly Valid
4. Contains essential instructional design elements that contribute to the achievement of learning objectives.	4.33	Strongly Agree	Highly Valid
5. Allows for review, comparison, and integration with previous lessons where applicable.	4.33	Strongly Agree	Highly Valid

6. Uses various motivational strategies to hook the learners' interest and engagement.	4.47	Strongly Agree	Highly Valid
7. Uses process questions and activities which require different levels of cognitive domain to achieve desired learning outcomes.	4.47	Strongly Agree	Highly Valid
8. Has written and performance tasks that are differentiated based on learners' readiness levels and learning needs.	4.47	Strongly Agree	Highly Valid
9. Develops 21st century skills and higher order cognition such as critical thinking, creativity, learning by doing, and problem solving.	4.33	Strongly Agree	Highly Valid
10. Integrates desirable values and traits.	4.33	Strongly Agree	Highly Valid
Overall	4.41	Strongly Agree	Highly Valid

Table 8 shows that the NumberQuest Multi-Grade Learning Toolkit was rated by experts as highly valid in terms of instructional design and organization, with an overall mean of 4.41 interpreted as "Strongly Agree." This means that the toolkit is well-structured, clearly organized, and effectively designed to support learning in division. Experts highly agreed that it has clear learning objectives, uses varied learning tasks and assessments, follows a logical progression of lessons, applies motivational strategies, and provides differentiated activities suited to learners' needs. These results indicate that the toolkit promotes active learning, engagement, and cognitive development among multi-grade learners. Although all indicators received high ratings, slightly lower scores in areas such as integration of prior lessons, development of 21st-century skills, and values formation suggest areas for further improvement. Overall, the findings confirm that the toolkit is well-designed and effective, with strong potential to support meaningful mathematics learning in multi-grade classrooms.

Instructional Quality of Text and Visuals

Table 9. Ratings of the Experts on the NumberQuest Multi Grade Learning Toolkit Along Instructional Quality of Text and Visuals

Standard/ Criterion Items	Mean	Descriptive Value	Interpretation
The instructional materials:			
1. Has all contents that are accurate.	4.00	Strongly Agree	Highly Valid
2. Is free from any social content violations.	4.00	Strongly Agree	Highly Valid
3. Is free from factual errors.	4.00	Strongly Agree	Highly Valid
4. Is free from computational errors.	4.00	Strongly Agree	Highly Valid
Overall	4.00	Strongly Agree	Highly Valid

Table 9 shows that the NumberQuest Multi-Grade Learning Toolkit was rated by experts as highly valid in terms of instructional quality of text and visuals, with an overall mean of 4.00 interpreted as "Strongly Agree." This means that the toolkit is accurate, reliable, and appropriate for classroom use. All indicators—content accuracy, absence of social content violations, freedom from factual errors, and freedom from computational errors—

received equal high ratings, showing strong expert agreement on the quality and correctness of the material. These results indicate that the toolkit is carefully developed, free from errors, and suitable for elementary learners in multi-grade classrooms. Overall, the findings confirm that NumberQuest has strong instructional quality and can be confidently used to support learners' understanding of division with minimal revisions.

Assessment

Table 10. Ratings of the Experts on the NumberQuest Multi Grade Learning Toolkit Along Assessment

Standard/Criterion Items	Mean	Descriptive Value	Interpretation
The instructional materials:			
1. Provides sufficient assessment activities that help the learner track progress and mastery of the target competency.	4.47	Strongly Agree	Highly Valid
2. Has assessments that are aligned with the specific objectives and contents of the lesson.	4.13	Agree	Valid
3. Provides variety of assessment types.	4.80	Strongly Agree	Highly Valid
4. Contains assessments that have clear demonstrations, examples, instructions, and rubrics to serve as guide on how these will be used.	4.47	Strongly Agree	Highly Valid
5. Has assessment activities that ensure active engagement of the learners.	4.47	Strongly Agree	Highly Valid
6. Has answer keys that provide exact answers for objective type assessments and discussion points for non objective types.	4.47	Strongly Agree	Highly Valid
Overall	4.47	Strongly Agree	Highly Valid

Table 10 shows that the NumberQuest Multi-Grade Learning Toolkit was rated by experts as highly valid in terms of assessment, with an overall mean of 4.47 interpreted as "Strongly Agree." This indicates that the toolkit provides effective and well-designed assessment activities that help learners track their progress and demonstrate mastery of division. Experts highly agreed that it offers a variety of assessment types, clear instructions and rubrics, engaging tasks, and useful answer keys, all of which support active learning and understanding. However, the alignment of assessments with specific lesson objectives received a slightly lower rating of 4.13, though still interpreted as "Valid," suggesting a need for minor improvement in consistency. Overall, the results confirm that the toolkit has strong assessment design and is effective in evaluating learner performance in multi-grade mathematics classrooms.

Readability

Table 11. Ratings of the Experts on the NumberQuest Multi Grade Learning Toolkit Along Readability

Standard/Criterion Items	Mean	Descriptive Value	Interpretation
The instructional materials:			
1. Uses vocabulary that is appropriate to the target learners' level of comprehension and experience.	4.67	Strongly Agree	Highly Valid
2. Has length and structure of sentences that are suited to the	4.33	Strongly Agree	Highly Valid

comprehension level of the target learners.			
3. Has paragraph structures that facilitate smooth flow of ideas and concepts.	4.47	Strongly Agree	Highly Valid
4. Has topics and ideas presented from one lesson to the next that are coherent and integrated with each other.	4.53	Strongly Agree	Highly Valid
5. Has instructions, discussion points, questions, and activities that are clear to the target learners.	5.00	Strongly Agree	Highly Valid
Overall	4.60	Strongly Agree	Highly Valid

Table 11 shows that the NumberQuest Multi-Grade Learning Toolkit was rated by experts as highly valid in terms of readability, with an overall mean of 4.60 interpreted as "Strongly Agree." This indicates that the toolkit is clear, well-written, and easy for learners to understand. Experts highly agreed that the instructions, vocabulary, organization of ideas, and flow of lessons are appropriate and effective for multi-grade learners. The highest rating was given to the clarity of instructions and activities, showing that learners can easily follow and work independently. Although all indicators received very high ratings, the sentence length and structure received a slightly lower score, suggesting minor areas for improvement. Overall, the results confirm that the toolkit is highly readable and suitable for classroom use, supporting better understanding and engagement in learning division.

CONCLUSION

Based on the findings of the study, the following conclusions are drawn:

1. Among the division competencies of Grade 3 and Grade 4 learners, difficulties were primarily observed in solving division problems with remainders, along with related challenges in basic division accuracy, multi-digit division, and division word problems. This confirms that division with remainders emerged as the least learned competency prior to the use of the NumberQuest toolkit.
2. The NumberQuest multi-grade learning toolkit was successfully developed as a structured, contextualized, and curriculum-aligned instructional material designed to address the identified least learned competencies in division. It incorporated progressive, learner-centered activities that support conceptual understanding and skill development in multi-grade classroom settings.
3. The NumberQuest toolkit was rated as highly valid by expert evaluators in terms of learning competencies, instructional design and organization, instructional quality of text and visuals, assessment, and readability. The results indicate strong expert agreement on its relevance, appropriateness, and instructional quality, confirming that it is suitable for use in multi-grade classrooms with minimal revisions.

RECOMMENDATION

In the light of the findings and conclusions of the study, the following recommendations are offered:

1. Schools implementing multi grade instruction should adopt the NumberQuest toolkit as a supplementary learning material in Mathematics to strengthen learners' mastery of division, particularly in solving division problems with remainders.
2. Teachers should integrate the NumberQuest learning activities into their daily lesson delivery and use its structured and progressive tasks to support differentiated instruction, guided practice, and independent learning among Grade 3 and Grade 4 learners.

3. School heads and instructional leaders should provide technical support and conduct in service training for teachers on the proper utilization of the NumberQuest toolkit and other contextualized intervention materials designed for multi grade classrooms.
4. Teachers should continuously enrich and localize the toolkit by incorporating additional contextualized examples, reinforcement activities, and learner appropriate strategies to further improve engagement and mathematical understanding.
5. Future researchers should conduct experimental or quasi-experimental studies to determine the effectiveness of the NumberQuest toolkit in improving learners' academic performance in division. Additionally, longitudinal and classroom implementation studies may be undertaken to assess its sustained impact and applicability in multi-grade settings, as well as its adaptation to other grade levels and mathematical competencies.
6. Teacher capability-building programs should be strengthened with a specific focus on multi-grade mathematics scaffolding strategies. Training should emphasize how to design and implement scaffolded instruction across mixed-grade levels, including the use of step-by-step guidance, leveled tasks, peer-assisted learning, and gradual release of responsibility to effectively support diverse learners in multi-grade classrooms.

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