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Literacy and Numeracy Performance of Kindergarten Learners Following MATATAG Aligned Instruction in a Philippine Public School

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ABSTRACT: Early literacy and numeracy assessment can help Kindergarten teachers identify learning needs and review classroom instruction. This study described changes in assessment scores following nine instructional sessions aligned with the MATATAG Curriculum at Ligao West Central Elementary School–Binatagan, Philippines, during School Year 2025–2026. A quantitative action research approach used a single group assessed before and after instruction. The reported participants were 208 learners from five Kindergarten sections, included through total enumeration. Researcher developed instruments assessed letter recognition, initial sound awareness, vocabulary recognition, number recognition, counting, and quantity comparison. The same instruments were administered at both assessment points. Reported numeracy means increased from 18.84 (SD = 4.56) to 28.47 (SD = 3.89), a difference of 9.63 points. Literacy means were reported as 21.36 (SD = 4.18) and 30.92 (SD = 3.74), but the latter exceeds the instrument's stated maximum of 30 points and requires reconciliation before interpretation. Although the original study proposed paired samples testing, no completed test statistics or paired learner records were available for verification. Accordingly, the findings are presented descriptively, without claims of statistical significance or curriculum effectiveness. The numeracy pattern warrants further examination, while the literacy result remains unresolved. Repeated testing, development, classroom differences, and the absence of a comparison group limit attribution of change to instruction. The study highlights the need for accurate scoring, documented assessment procedures, and continued monitoring of foundational skills. Verified learner records and a stronger evaluation design are needed before drawing conclusions about learning gains associated with MATATAG implementation in this school.

KEYWORDS: MATATAG Curriculum; Kindergarten; emergent literacy; early numeracy; classroom assessment; action research

I. INTRODUCTION

Kindergarten teachers work with children whose experiences with letters, language, and numbers differ considerably. Some learners enter school able to name familiar symbols and count small groups of objects; others need repeated opportunities to connect spoken words, printed symbols, and concrete quantities. Classroom assessment can make these differences visible and help teachers decide what to revisit, how to group learners, and when to provide additional support.

Emergent literacy includes abilities that precede conventional reading and writing. Whitehurst and Lonigan (1998) distinguished skills involving the sound and symbol system, such as phonological awareness and letter knowledge, from broader language and conceptual knowledge. This distinction matters when interpreting classroom tests: recognizing letters and identifying familiar pictures provide useful information, but neither demonstrates reading comprehension. The National Research Council (1998) similarly examined early literacy development and the conditions that place children at risk of later reading difficulties.

Early number competence also deserves sustained attention. Jordan et al. (2009) followed children over several school years and found that Kindergarten number competence predicted later mathematics achievement and its rate of growth. Their findings establish the relevance of early number learning; they do not establish that any particular short instructional program will produce the same outcomes. A classroom evaluation must therefore identify the skills actually assessed and distinguish immediate test performance from longer term learning.

In the Philippines, the MATATAG Kindergarten Curriculum Guide places emergent literacy and basic numeracy within a broader developmental program that includes physical, emotional, social, and values development (Department of Education, 2023). Its emphasis on foundational learning provides a basis for aligning instruction and assessment. A short classroom study can examine selected competencies within this framework, although it cannot represent the full curriculum or establish the effectiveness of national implementation.

At Ligao West Central Elementary School–Binatagan, teachers reported differences in learners' initial literacy and numeracy readiness. The present study examined assessment results before and after nine MATATAG-aligned instructional sessions during School Year 2025–2026. Its purpose was to describe the reported performance of the participating learners and consider what the available evidence could support about classroom learning. Specifically, it examined pretest and posttest means and standard deviations in literacy and numeracy, the arithmetic differences between those means, and the limits of interpreting those differences. This narrower focus is appropriate to the available single-group data.

II. METHODOLOGY

A Research Design and Setting

The study used quantitative classroom action research with a one-group pretest–posttest design. Assessments were administered before and after a sequence of nine instructional sessions. There was no comparison group, random assignment, or documented delayed follow-up. The design describes performance at two points in time; it does not separate the contribution of the instructional sessions from maturation, ordinary classroom learning, repeated exposure to test items, or other concurrent experiences. The intervention is therefore treated as a short sequence of MATATAG-aligned lessons rather than as an evaluation of the curriculum as a whole.

B Participants

The reported study population comprised 208 Kindergarten learners at Ligao West Central Elementary School–Binatagan during School Year 2025–2026. Learners belonged to five sections: Amiable, Admirable, Able, Affable, and Appetent. The source report described total enumeration of learners in these sections. It did not provide section counts, demographic characteristics, attendance across sessions, exclusions, or the number of learners with complete matched assessments. Accordingly, 208 is retained as the reported cohort size rather than assumed to be a verified analytic sample for every outcome. The researcher was identified as a Kindergarten teacher and the implementer of the intervention; the allocation of teaching and assessment responsibilities across the five sections was not specified.

C Assessment Instruments

Two researcher-developed instruments were used. The supplied literacy instrument contained three ten-item components: letter recognition, initial sound identification using picture cues, and vocabulary or picture identification. Each correct response received one point, giving a stated maximum of 30 points. The initial sound component sampled a limited aspect of phonological awareness; the instrument did not document a comprehensive measure of phonemic awareness, connected-text reading, or reading comprehension.

The numeracy instrument also contained three ten-item components, with one point awarded for each correct response and a maximum of 30 points. These components assessed recognition of numbers from 1 to 10, counting pictured or concrete objects, and identifying the group containing more objects. Although the original narrative mentioned basic operations, the supplied items did not directly assess addition or subtraction. Interpretation in this manuscript is restricted to the documented domains.

The source report stated that experienced Kindergarten teachers and school instructional leaders reviewed the instruments for content relevance, clarity, and curriculum alignment. It did not report the number of validators, their ratings, resulting revisions, pilot results, reliability estimates, or a competency-to-item mapping. This review is reported as an expert content review, without implying that psychometric adequacy has been established. The appended instruments list prompts and examples but do not reproduce all picture choices or a complete standardized administration script.

D Instruction and Data Collection

The pretests preceded the nine instructional sessions. The source described the sessions as structured, interactive, developmentally appropriate learning activities aligned with the MATATAG framework and focused on foundational literacy and numeracy. It did not specify session dates, duration, a lesson sequence, language of instruction, exact materials, attendance, or implementation checks. These omissions limit replication and prevent an assessment of whether exposure was comparable across sections. No additional lesson activities have been retrospectively assigned to the intervention.

After the sessions, learners completed the same instruments used at pretest. Instructions were delivered orally, with visual prompts and objects used where appropriate. The interval between the final session and posttest was not reported. Reuse of identical assessment tasks introduces a possible practice effect, particularly where learners may remember pictures, symbols, or response arrangements. The available report did not describe assessor training or independent scoring.

E Data Analysis

Means and standard deviations were transcribed from the source tables. Mean change was calculated as the posttest mean minus the pretest mean. These are aggregate descriptions; learner-level records were not available to verify score ranges, match assessments, identify missing observations, or inspect distributions. The source proposed paired samples t-tests at the .05

significance level, but its results section stated that these computations had not yet been completed. No t values, degrees of freedom, exact p values, confidence intervals, or paired effect sizes were reported. Consequently, this revision makes no claim of statistical significance.

A paired analysis requires information about within-learner differences. Separate pretest and posttest standard deviations do not provide the standard deviation of those differences without additional information about the pairing. No correlation, paired test statistic, or inferential result was assumed. The score inconsistency in the literacy results was also retained explicitly rather than corrected without access to the assessment records.

F Ethical Reporting

The supplied report did not document institutional ethics review or exemption, school research permission, parental or guardian consent, age-appropriate assent, or procedures for protecting learner records. These details must be established from the author's actual research documentation before submission. Their absence from the manuscript does not establish that safeguards were absent in practice, but neither permits an affirmative claim that approval or consent was obtained. Only aggregate results are reproduced here.

III. RESULTS

A Reported Assessment Scores

Table I brings together the reported descriptive results. The numeracy mean increased by 9.63 points. The reported literacy means differ by 9.56 points, but the posttest mean of 30.92 exceeds the stated maximum of 30. This is an unresolved inconsistency between the instrument and results, not evidence of performance beyond mastery. The literacy mean and derived change cannot be interpreted substantively until the scoring scale and underlying records are reconciled.

Table I: Reported Pretest and Posttest Scores

Skill area	Pretest M	Pretest SD	Posttest M	Posttest SD	Mean change
Literacy	21.36	4.18	30.92*	3.74	9.56*
Numeracy	18.84	4.56	28.47	3.89	9.63

Note. Reported cohort N = 208; complete matched records were not available for verification. M = mean; SD = standard deviation. *The literacy posttest mean exceeds the supplied instrument's 30-point maximum. Its associated mean change is an arithmetic difference only and remains unverified.

B Numeracy Performance

The numeracy pretest mean was 18.84 (SD = 4.56), compared with a posttest mean of 28.47 (SD = 3.89). These reported values fall within the stated score range. However, the posttest mean is only 1.53 points below the maximum, raising the possibility that the instrument offered limited scope to distinguish higher-performing learners. Item-level results and score distributions would be needed to determine whether scores clustered at the upper boundary. The aggregate results do not show which numeracy component changed most or how many learners improved.

C Variability and Statistical Interpretation

Both tables reported lower posttest standard deviations. A smaller standard deviation describes reduced dispersion in the reported scores; it does not demonstrate that every learner benefited or that initially lower-performing children improved more. Such conclusions require linked individual records or subgroup analyses. Likewise, the similar numerical size of the two mean differences does not establish equal progress across literacy and numeracy, because the instruments assess different constructs and the literacy result remains unresolved. No inferential conclusion can be reported from an analysis that was proposed but not supplied.

IV. DISCUSSION

The reported numeracy pattern is compatible with improved performance during the instructional period, but it remains a descriptive observation. Children may have become more familiar with the assessed symbols and quantity tasks through instruction, ordinary classroom experience, or repeated testing. The available design cannot estimate the separate contribution of each explanation. A claim that the MATATAG Curriculum caused the change would therefore exceed the evidence.

The emphasis on number recognition, counting, and comparison is relevant to early number competence. Jordan et al. (2009) showed why such competencies merit attention by relating early number knowledge to subsequent mathematics achievement. Their longitudinal findings provide context for monitoring these abilities, but they do not validate the present instrument or establish that the reported short-term difference will persist. Delayed assessment and tasks using unfamiliar examples would help examine retention and transfer.

The literacy domains likewise address selected aspects of emergent literacy described by Whitehurst and Lonigan (1998). However, a composite score combines different abilities and can obscure uneven development. A child might recognize familiar letters while still finding initial sounds difficult. Once the scoring discrepancy is resolved, component-level results would be more useful for instructional planning than a single total. Until then, the reported literacy gain should not be used to justify claims about improved reading readiness or curriculum effectiveness.

For classroom practice, the immediate priority is dependable assessment information. Teachers can use verified item responses to identify the letters, sound tasks, or quantity comparisons that children find difficult and plan appropriate follow-up activities. Such use is consistent with the study's action research purpose. It requires preserving the distinction between what the records show and what teachers reasonably hope to achieve. The current results do not support ranking sections, attributing benefits to particular teaching activities, or recommending system-wide changes.

The study also illustrates the importance of describing implementation alongside outcomes. Nine sessions can differ substantially in duration, teaching materials, language, and learner participation. Without these details, another teacher cannot reproduce the intervention, and readers cannot judge the relationship between instruction and assessment. Future reporting should document the actual lessons and evidence of their delivery, rather than relying on curriculum alignment as a general description.

A Limitations

The study was confined to one school and five existing sections, with no comparison group and a short instructional sequence. The complete matched sample, missing-data procedures, section-level patterns, and timing of assessments were not documented. Learners shared classroom environments, so their observations may not be independent across the entire cohort. The teacher's combined instructional and assessment roles may also have influenced administration or scoring. Identical pretests and posttests permit practice effects, while absent reliability information limits confidence in measurement precision. Most critically, the literacy mean is inconsistent with the stated scale and the claimed inferential analysis was not supplied. These limitations restrict both interpretation and generalization.

V. CONCLUSIONS AND RECOMMENDATIONS

The available tables report higher numeracy scores after nine MATATAG-aligned instructional sessions, but they do not establish a causal effect or verified statistical significance. The literacy findings cannot yet support a conclusion because the reported posttest mean exceeds the test maximum. The defensible contribution of this study is a preliminary account of classroom assessment results and the issues that must be resolved before those results can inform stronger conclusions about learning.

Before publication, the author should reconcile the test versions and scoring ranges with the original learner records, verify the matched sample, and recompute the descriptive results. If paired testing is retained, the completed analysis should include the mean and standard deviation of individual changes, an appropriate confidence interval, the test statistic, degrees of freedom, exact p value, and a clearly defined effect size. Any analysis should consider missing observations, unusual difference scores, and the grouping of learners within sections. A completed significance test would not, by itself, resolve the lack of a comparison group.

For subsequent classroom inquiry, teachers should document the instructional sequence, standardize assessment prompts, retain anonymized item-level records, and examine progress by component. A longer follow-up period and a suitable comparison design would support a more informative evaluation of MATATAG-aligned instruction. School-level decisions should draw on verified learner evidence and ongoing observation rather than on the present unconfirmed literacy result.

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AUTHOR VERIFICATION BEFORE SUBMISSION

Editorial note — This page is for the author and should be removed from the submission copy after the issues below are resolved. The manuscript and its exactly 250-word abstract have been rewritten from the supplied research, but unresolved data and reporting gaps prevent it from being treated as submission-ready.

1 Resolve the literacy score discrepancy

The attached literacy test has three ten-point parts, totaling 30. The reported posttest mean is 30.92. Provide the administered test and original score sheet to determine whether the result, maximum, or instrument version is incorrect. Do not change the mean to a plausible number or expand the scale without documentary support. Recheck all means, standard deviations, and gains after correction.

2 Complete and verify the analysis

Supply anonymized paired pretest and posttest records for both outcomes, section identifiers, attendance, and missing-data information. Confirm whether all 208 learners completed both tests. The original abstract and conclusions claimed significant effects, although the results explicitly said that t-tests had not been completed. Those claims have been removed. No statistics or individual scores have been invented.

3 Document the actual intervention and instruments

Add dates, session length, content, language, teaching responsibilities across the five sections, assessment timing, and implementation records. Supply complete pictures and answer choices, assessor instructions, validator information, and any available pilot or reliability evidence. Check the initial-sound notation /c/ for cat against the actual prompt; /k/ is the intended English initial phoneme. Document what was administered rather than silently revising the historical test.

4 Confirm ethics and consent

Provide the actual approving institution or school authority, approval or exemption reference and date if applicable, parental or guardian consent arrangements, child assent procedures, and confidentiality measures. Administrative permission and ethics review are distinct. Do not insert a generic claim of approval or consent unless it is supported by records.

5 Finalize declarations and author information

Confirm affiliation, corresponding email, and ORCID if available. Funding and conflicts of interest were not stated in the source. Use “The author received no external funding for this study” and “The author declares no conflicts of interest” only if true. State the actual conditions governing access to anonymized data; do not promise unrestricted access to children’s records. Confirm author contributions and acknowledgments from actual participation.

6 Verify references and update the abstract

This version retains a concise set of traceable sources supporting the rewritten argument. Unverified citations from the original review were not carried forward. Additional literature may be restored when full publications can be checked. After correcting the results, revise the abstract while retaining its 250-word length. The present abstract transparently reports the unresolved data issue.

7 Check the final journal submission package

Formatting follows the downloadable IJSSHR manuscript template: Times New Roman, 10-point single-spaced body, 16-point centered title, A4 dimensions, justified indented paragraphs, numbered section headings, and no page headers or footers. Six keywords are included. Journal guidance and template were consulted on 21 October 2026 at https://ijsshr.in/authordesk.php and https://ijsshr.in/Doc/manuscript.doc. Prepare any cover letter, copyright form, separate identifying page, and anonymized review copy required at submission. No submission has been made.

Suggested disclosure for author review: Generative AI was used to assist with language editing and manuscript organization. The author reviewed the revised text and is responsible for verifying the data, references, interpretations, and final manuscript. Use this statement only after completing that review and adapt it to the journal’s applicable requirements.

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