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Enhancing the reading performance in English of Grade 3 learners using the Validated Literacy Manipulatives: Basis for a proposed action plan

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ABSTRACT

The study focused on enhancing the reading performance of English 3 learners using validated literacy manipulatives. Specifically, it determined the learners' reading levels before and after the utilization of the literacy manipulatives and the significance of any difference. Additionally, it aimed to assess the effectiveness of the literacy manipulatives as perceived by grade 3 teachers in terms of replicability and usability. This study employed a descriptive-evaluative design, with a descriptive component aimed at identifying the reading performance of the learners, and an evaluative component focused on assessing the usability and replicability of the manipulatives. The researcher developed an evaluation tool given to the English teacher to evaluate the literacy manipulatives in terms of replicability and usability. An evaluation form from LRDMS was used to validate the literacy manipulatives developed by the researcher. The material used in assessing the reading level of the learners was based on the FLAT (Functional Literacy Assessment Tool). This research determined the reading level of the learners before and after the utilization of the literacy manipulatives. Results of the pre-test and post-test were analyzed through mean, standard deviation, and a paired t-test. The paired t-test was employed to determine the significant difference in the levels of reading performance of the pupils before and after the utilization of the literacy manipulatives. The result showed that the null hypothesis was rejected. The findings from the research showed that the use of literacy manipulatives enhanced the reading performance of the learners.

Keywords: Literacy Manipulatives, reading performance, assessment, replicability, usability

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INTRODUCTION

The ability to read at an early age forms the foundation for lifelong learning and academic success. Yet, despite global and national interventions, illiteracy remains one of the most persistent social challenges today. Across classrooms, there are still many learners who struggle to decode and comprehend texts effectively. This reality calls for educators to become increasingly innovative in their teaching strategies, acknowledging that learners differ in their cognitive capacities, learning styles, and motivational factors. By employing creative and responsive approaches, teachers can make reading instruction more engaging and adaptive to the individual needs of their students, thereby enhancing literacy development and overall learning outcomes.

Globally, literacy levels among young learners have shown alarming declines in recent years. Studies indicate that approximately one-third of children in the earliest grades are not meeting expected reading benchmarks—a notable increase compared to pre-pandemic levels. In Virginia, for instance, a 2022 report revealed that early reading skills had fallen to a 20-year low, a development described by experts as "alarming" due to its potential long-term implications on students' academic trajectories (Goldstein, 2022). This pattern reflects a broader global concern regarding the impact of educational disruptions on foundational learning.

In the Philippine context, the situation is particularly concerning. According to the World Bank's 2021 statistics, nine out of ten Filipino children aged ten struggle to read and understand simple text. This finding underscores a critical level of learning poverty in the country. Furthermore, in the 2018 Programme for International Student Assessment (PISA), the Philippines ranked lowest among 79 participating nations in reading literacy. In her 2023 Basic Education Report, Education Secretary Sara Duterte acknowledged the severity of the problem, citing the increasing number of struggling readers nationwide (PhilStar, 2023). Such data reflect deep-seated systemic challenges, including inadequate instructional materials, limited access to engaging reading resources, and varying teacher competencies in reading pedagogy.

Low literacy rates in the Philippines can be attributed not only to socio-economic disparities but also to the scarcity of contextualized and appealing reading materials. Many learners lose interest in reading due to their perception that it is difficult or irrelevant to their daily lives. This disinterest, compounded by limited exposure to books, hinders the development of comprehension and fluency. The 2022 National Report of the Philippines on PISA further highlights these disparities. Filipino students achieved an average reading literacy score of 347, substantially lower than the OECD average of 472. More than 80% of learners failed to reach the minimum proficiency level in reading, placing the country among those with the highest shares of low-performing students. In CARAGA Region, where the present research was conducted, the mean score of 321 points fell below the already low national average, reflecting the urgent need for targeted reading interventions.

At Ong Yiu Central Elementary School, teachers have reported persistent challenges in improving reading outcomes, particularly among Grade 3 learners. Data from the Functional Literacy Assessment Tool (FLAT) pre-test showed that 59 out of 192 learners were categorized as "nothing," indicating a complete lack of readiness for grade-level reading tasks. These learners struggled with basic word recognition and decoding skills, signaling the necessity for structured remediation. To address this issue, the study investigated the effectiveness of literacy

manipulatives—hands-on materials designed to enhance engagement and understanding—in improving reading skills and motivation among struggling readers.

The study was anchored on the Constructivist Learning Theory proposed by Piaget (1952), which posits that children construct knowledge through concrete experiences and sensory engagement before grasping abstract symbols and concepts. Manipulatives bridge this developmental gap by allowing learners to interact with tangible objects that represent linguistic or cognitive concepts. According to Hurst and Linsell (2020), Piaget's framework emphasizes three stages of knowledge acquisition—concrete, pictorial, and abstract—each essential in building deeper comprehension. Similarly, John Dewey's philosophy of "Learning by Doing" (1899) supports experiential learning, asserting that authentic understanding emerges from active participation and practical engagement with materials. Dewey regarded teaching as an art that requires skillful use of tools and techniques to make learning meaningful and purposeful.

Grounded in these theoretical perspectives, the present study explored how literacy manipulatives can transform abstract reading concepts into concrete, interactive experiences for Grade 3 learners. Through the manipulation of word cards, sentence strips, and other tactile materials, learners actively construct meaning, think critically about text structures, and develop comprehension skills in a supportive, hands-on environment. This aligns with Dewey's belief that education should connect theory with practice and content with real-world applications. Furthermore, manipulatives allow for differentiation, accommodating various learning styles—visual, tactile, or kinesthetic—thereby promoting inclusivity and engagement.

The study also draws support from the Department of Education's "Hamon: Bawat Bata Bumabasa (3Bs Initiatives)" outlined in DepEd Order No. 173, s. 2019. This national program emphasizes the creation of supplementary print and non-print reading materials to improve reading proficiency and foster a culture of literacy among Filipino learners. By providing accessible and varied resources, the initiative aims to cultivate reading motivation and bridge learning gaps across different regions.

Assessing reading performance among Grade 3 learners thus becomes a crucial step toward identifying and addressing literacy challenges. In this study, learners underwent pre-assessment, remediation using literacy manipulatives, and post-assessment to measure progress. The effectiveness of these tools was further evaluated in terms of their replicability and usability, leading to the formulation of an action plan. The ultimate goal is to enhance literacy instruction through evidence-based interventions that not only improve reading performance but also empower teachers with innovative, learner-centered methodologies tailored to the Philippine educational context.

Statement of the problem

The study focused on the utilization of the validated literacy manipulatives to enhance the reading performance of Grade 3 learners. Specifically, the study sought to answer the following:

1. What is the level of reading performance of the learners in English 3 before and after the utilization of the validated literacy manipulatives?
2. Is there a significant difference in the learners' level of reading performance before and after the utilization of the literacy manipulatives?

3. How effective are the literacy manipulatives as perceived by the English 3 teachers in terms of their replicability and usability?
4. Based on the findings of the study, what action plan for literacy skills improvement may be proposed?

METHODOLOGY

This study employed a descriptive-evaluative research design to determine the effectiveness of literacy manipulatives in enhancing the reading performance of Grade 3 learners. The descriptive component of the study focused on identifying the learners' reading performance before and after the intervention, while the evaluative component assessed the replicability and usability of the developed literacy manipulatives. To measure the learners' reading levels, the researcher utilized the Functional Literacy Assessment Tool (FLAT) for Grade 3 learners, as outlined in Regional Memorandum No. 674, series of 2021, entitled Regional Online Retooling on Beginning Reading and Literacy Instruction Cum Orientation on Functional Literacy Assessment Tool (FLAT). This tool was administered before and after the reading intervention to evaluate progress. In addition, the researcher developed a teacher-made literacy manipulative, which served as the core instructional material used during the reading intervention sessions.

The study was conducted at Ong Yiu Central Elementary School, located in Purok 8, Barangay Ong Yiu, Butuan City, near the Langihan Public Market. The school was selected as the research locale because it represents a public elementary school setting that reflects common reading challenges among primary learners in the region. The accessibility of the location also enabled the researcher to implement and monitor the reading intervention effectively throughout the study period.

The population of the study consisted of 192 Grade 3 learners enrolled during the school year 2022–2023 at Ong Yiu Central Elementary School. From this population, a total of 25 learners who exhibited the lowest reading performance levels based on the FLAT pre-test results were purposively selected to participate in the reading remediation program. Among these participants, 15 were male and 10 were female, representing 60% and 40% of the total sample, respectively. The purposive sampling technique was deemed appropriate for this study as it allowed the researcher to focus on learners who demonstrated the most significant need for intervention. This technique, also known as judgmental or selective sampling, involves the deliberate choice of participants based on specific characteristics relevant to the study's objectives.

To gather the necessary data, the researcher utilized the Functional Literacy Assessment Tool (FLAT) to determine the reading proficiency levels of the learners in both the pre- and post-assessments. Additionally, an evaluation tool was developed and validated to assess the effectiveness of the literacy manipulatives in terms of their replicability and usability, as rated by English teachers. Prior to data collection, the researcher sought written permission from the principal of Ong Yiu Central Elementary School to conduct the study. After obtaining approval, a pre-assessment was administered to determine the learners' initial reading levels. This was followed by a three-week reading intervention period during which literacy manipulatives were employed as instructional tools. Upon completion of the intervention, a post-assessment was

conducted to measure the learners' progress. The results were collected, tallied, and subjected to statistical analysis for interpretation.

The FLAT Rating Scale was used to quantify the learners' reading levels. Learners categorized under the "Nothing Level" could recognize fewer than four out of five letters, while those at the "Letter Level" could correctly read at least four out of five letters. Learners at the "Word Level" could recognize at least four out of five common words, and those at the "Paragraph Level" demonstrated the ability to read a simple paragraph of four sentences with no more than five mistakes. These categories provided a clear framework for measuring literacy progress before and after the intervention.

For statistical analysis, the arithmetic mean and standard deviation were computed to determine the learners' reading performance levels in the pre-test and post-test assessments. To examine whether there was a significant difference in reading performance before and after the use of literacy manipulatives, the paired sample t-test was employed. This test allowed for the comparison of the learners' scores across two time points, providing evidence of the intervention's effectiveness. All data collected were analyzed objectively to draw conclusions and formulate recommendations that could contribute to future literacy enhancement programs.

RESULTS AND DISCUSSION

Learners' level of reading performance

The study involved twenty-five (25) Grade 3 learners from Ong Yiu Central Elementary School, who were purposively selected based on their low reading performance levels identified through the Functional Literacy Assessment Tool (FLAT) pre-test. These learners underwent a three-week reading remediation program using validated literacy manipulatives designed by the researcher. The purpose of this intervention was to improve the learners' reading skills in English and determine the extent of progress achieved after the utilization of the manipulatives.

The findings revealed a remarkable improvement in the learners' reading performance following the intervention. Prior to the use of literacy manipulatives, all 25 learners, or 100 percent, were at the letter level, indicating that their reading skills were limited to recognizing individual letters and basic phonemes. After the intervention, however, a significant shift was observed: 3 learners (12%) remained at the letter level, 11 learners (44%) advanced to the word level, and another 11 learners (44%) reached the paragraph level. This clear progression demonstrates that literacy manipulatives effectively enhanced learners' reading abilities by transitioning them from basic letter recognition to higher levels of reading comprehension and fluency.

Before the intervention, most learners focused solely on identifying letters, struggling to form and read words. However, after the introduction of literacy manipulatives, their engagement and comprehension levels improved notably. Learners were able to read words and even short paragraphs with fewer errors. This improvement suggests that the tactile and visual engagement offered by manipulatives played a key role in helping learners internalize letter sounds, form connections between symbols and meanings, and ultimately develop smoother reading fluency. As Rojas (2020) similarly found in a study involving Grade 2 Indigenous

People's Education (IPEd) learners, teacher-made manipulative materials—such as letter cards and interactive multimedia activities—significantly improved word recognition and comprehension. The present findings affirm that manipulative-based learning approaches are particularly beneficial for early-grade readers struggling with foundational literacy skills.

Test of significant difference

To determine whether the observed improvement in reading performance was statistically significant, a paired sample t-test was conducted comparing the learners' pre-test and post-test results. The mean reading performance before the use of manipulatives was 2.12 with a standard deviation of 0.833, while the mean performance after their utilization increased to 4.12 with a standard deviation of 1.166. The computed t-value of 13.093 and p-value of 0.000 indicated a highly significant difference at $p < 0.01$, leading to the rejection of the null hypothesis. This confirms that the literacy manipulatives had a substantial and positive impact on the learners' reading performance in English.

The lower standard deviation before the intervention suggested that most learners were clustered at the same low reading level, whereas the higher deviation after the intervention indicated greater variability, reflecting the advancement of several learners to higher reading categories. The improvement can be attributed to the interactive and engaging nature of the manipulatives, which encouraged participation and sustained learners' interest. Throughout the intervention, learners were observed to be more motivated, active, and cooperative during reading sessions. The tactile experiences and group-based activities made learning both enjoyable and memorable, promoting collaborative interaction and retention of reading concepts.

These findings are consistent with the study of Jones and Risner (2017), who explored the use of literacy manipulatives in early childhood classrooms and found that such materials increased student engagement, motivation, and comprehension. Their research highlighted that manipulatives provided tactile and kinesthetic learning opportunities that complemented traditional reading instruction, allowing students with varying learning styles to benefit equally. Similarly, the present study demonstrates that literacy manipulatives effectively bridge theory and practice, transforming passive learning into active, hands-on experiences that foster significant literacy gains.

Experts' evaluation of the literacy manipulatives in terms of replicability

The experts' evaluation revealed that the literacy manipulatives developed for this study were highly satisfactory in terms of replicability. Four out of five indicators received a rating of very satisfactory, while one was rated satisfactory, resulting in an overall weighted mean of 3.84 and a verbal interpretation of very satisfactory. Teachers strongly agreed that the materials were cost-effective and made from readily available resources (mean = 4.00), required minimal preparation time (mean = 3.80), and were easy to use and durable (mean = 4.00). They also affirmed that the size and format of the letters were appropriate for the learners (mean = 4.00), making the manipulatives practical and effective for classroom use. Only one indicator—simplicity and movability of the materials—was rated satisfactory (mean = 3.40), suggesting a minor area for improvement.

These findings highlight the teachers' recognition of the manipulatives' practicality, adaptability, and relevance to classroom instruction. The emphasis on using eco-friendly and cost-efficient materials aligns with sustainable teaching practices that promote resourcefulness. Similar results were observed in the study of Martinez and Thompson (2019), who reported that teachers incorporating manipulatives in reading instruction showed increased creativity and flexibility, resulting in enhanced student engagement. The present evaluation supports this observation, affirming that the replicable nature of literacy manipulatives makes them an accessible and valuable resource for improving early literacy outcomes across various educational settings.

Experts' evaluation of the literacy manipulatives in terms of usability

In terms of usability, the experts also rated the literacy manipulatives very satisfactory, with an overall weighted mean of 3.96. Teachers strongly agreed that the manipulatives were easy to maneuver and store (mean = 4.00), provided a hands-on learning approach (mean = 3.80), and catered to different types of learners by enhancing comprehension and memory retention (mean = 4.00). They also strongly agreed that the manipulatives incorporated multisensory experiences suitable for diverse learning styles and encouraged peer interaction and cooperation (mean = 4.00).

These results indicate that the manipulatives were not only functional but also pedagogically sound, supporting differentiated instruction and learner-centered approaches. According to AWE Learning Staff (2018), manipulatives—traditionally associated with mathematics—are equally beneficial in literacy instruction because they allow learners to interact physically with language elements. This perspective is reinforced by Smith and Johnson (2020), who found that literacy manipulatives provided tangible, hands-on experiences that improved phonics, vocabulary, and comprehension outcomes among early learners. Thus, the present study demonstrates that manipulatives are versatile tools that promote engagement, collaboration, and understanding in reading instruction.

Proposed action plan for literacy skills improvement

Based on the findings, a proposed action plan was formulated to further enhance literacy instruction using manipulatives. The plan focuses on improving two key areas: providing a more hands-on approach that allows learners to physically interact with letters and words, and developing simpler, more movable manipulatives for ease of classroom use. The proposed activities include researching innovative and practical approaches in literacy education, collaborating with literacy experts and instructional designers, and conducting pilot testing to refine manipulative prototypes. Materials such as paper, cardboard, and 3D printing tools are suggested for prototype development.

The expected outcomes of the plan include the production of revised prototypes, improved literacy manipulatives tailored to learners' needs, and evaluation reports assessing their classroom effectiveness. One specific enhancement proposed was the revision of the Long Vowel Puzzle, emphasizing word groupings according to vowel categories to strengthen

learners' phonemic awareness. By implementing this plan, the study aims to ensure the sustainability, adaptability, and continuous improvement of literacy manipulatives, ultimately fostering greater reading proficiency among Grade 3 learners in English.

CONCLUSION

This study examined the effectiveness of literacy manipulatives in enhancing the reading performance of Grade 3 learners at Ong Yiu Central Elementary School. Employing a descriptive-evaluative design, the research aimed to determine the learners' reading performance before and after the use of manipulatives, as well as to assess the replicability and usability of the developed materials. Twenty-five (25) learners who demonstrated the lowest levels of reading proficiency based on the Functional Literacy Assessment Tool (FLAT) pre-test were purposively selected to undergo a three-week reading remediation program. Statistical analyses, including weighted mean, standard deviation, and paired sample t-test, were used to evaluate the significance of the learners' improvement after the intervention.

The findings revealed a substantial improvement in the learners' reading performance following the utilization of literacy manipulatives. Before the intervention, all 25 learners (100%) were at the letter level, indicating limited ability to recognize and read basic letters. After the use of manipulatives, 11 learners (44%) advanced to the word level, another 11 learners (44%) progressed to the paragraph level, and only 3 learners (12%) remained at the letter level. These results clearly demonstrate that the literacy manipulatives were instrumental in helping learners transition from basic letter recognition to reading words and short paragraphs with comprehension. The statistical analysis supported these findings, yielding a t-value of 13.093 and a p-value of 0.000, which indicated a highly significant difference between the learners' pre-test and post-test performance. This confirms that the improvement in reading proficiency was not due to chance but rather to the effectiveness of the literacy manipulatives as a learning tool.

In addition to the learners' performance outcomes, the study also evaluated the literacy manipulatives in terms of their replicability and usability as perceived by English teachers. The replicability of the materials achieved a weighted mean of 3.84, interpreted as very satisfactory, while usability garnered a slightly higher weighted mean of 3.96, also rated as very satisfactory. Teachers strongly agreed that the manipulatives were cost-effective, easy to prepare, durable, and adaptable to different learning contexts. Moreover, the manipulatives were designed using simple and locally available materials, making them practical for classroom use. Teachers observed that these materials not only engaged learners but also made instruction more interactive and enjoyable. These findings underscore the pedagogical value of literacy manipulatives in supporting differentiated learning and in fostering a hands-on approach to literacy development.

The development of a proposed action plan emerged as a significant output of this study. The plan focused on improving the design and functionality of literacy manipulatives by making them more movable, engaging, and learner-centered. It also emphasized the creation of simpler prototypes that promote active learner participation through tactile and visual interaction with reading materials. One of the proposed enhancements was the revision of the Long Vowel Puzzle, which would emphasize the categorization of words based on vowel groupings to strengthen phonemic awareness. The implementation of this action plan is expected to refine

existing literacy tools, enhance learner engagement, and sustain improvements in reading proficiency.

Overall, the study concludes that literacy manipulatives serve as effective instructional resources for improving the reading performance of Grade 3 learners. The findings validate that their use leads to measurable gains in reading comprehension and fluency, as well as increased learner motivation. Teachers also affirmed the manipulatives' effectiveness, noting that their ease of replication and usability make them a practical solution to classroom literacy challenges. Furthermore, the creation of an action plan signifies a forward step toward addressing identified areas for improvement and ensuring the continued development of effective literacy interventions.

Based on these conclusions, several recommendations are put forth. Grade 3 learners are encouraged to continue using the validated literacy manipulatives to sustain and further improve their reading performance. Teachers are likewise encouraged to incorporate these manipulatives into reading remediation programs to provide learners with a more interactive and engaging learning experience. It is also recommended that teachers develop and adapt different types of manipulatives suited to the varied reading levels of learners to ensure inclusivity and differentiated instruction. Finally, future researchers are encouraged to conduct similar studies in other educational settings or with larger populations to validate and expand upon the findings of this research, contributing to the broader goal of improving literacy outcomes among Filipino learners.

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