

# Enhancing Teaching –Learning Engagement Among Preschool Learners Through Innovative Learning Materials

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**Abstract:** This study examined the use of instructional materials in preschool education, focusing on their types, effectiveness, challenges, and possible innovations to enhance teaching-learning engagement. Specifically, it sought to determine the different instructional materials employed by preschool teachers, how they assess effectiveness, the level of effectiveness of such materials, the challenges encountered, and the innovative materials that may be proposed. Using a descriptive research design, data were gathered from ten preschool teachers through survey questionnaires and supported by related studies. Results revealed that flashcards, charts, and storybooks were used by all teachers (100%), while posters, digital tools, worksheets, and real-life objects were employed by nine teachers (90%), videos and songs by eight teachers (80%), and manipulatives by six teachers (60%). Teachers assessed effectiveness through learner participation, intended outcomes, and developmental appropriateness, with high mean scores ranging from 4.03 to 4.56, all interpreted as “Often Done.” The level of effectiveness of instructional materials was also high, with visual materials obtaining an overall mean of 4.57, manipulatives 4.51, and digital tools 4.38, all rated “Effective” to “Very Effective.” Despite this, challenges included limited preparation time (100%), frequent damage (100%), insufficient financial resources (90%), unstable internet connectivity (80%), lack of training (70%), classroom management difficulties (70%), limited administrative support (50%), and difficulty in finding appropriate resources (40%). To address these, the study proposed interactive storybook kits, durable modular manipulatives, offline digital resource banks, culturally localized realia boxes, classroom learning stations, and professional development resource packs to ensure sustainable, engaging, and developmentally appropriate preschool learning experiences.

**Keywords:** *Innovative Learning Materials, Enhancing Teaching, Challenges, Effectiveness, Learning Engagement.*

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## I. INTRODUCTION

The researcher views teaching-learning engagement as an important factor in improving the overall performance of preschool learners because it lays the foundation for a child’s lifelong love for learning. When young learners are actively engaged through play, exploration, conversation, and hands-on activities, they develop critical early skills such as curiosity, attention, communication, and problem-solving. The researcher believes that the engaged learning environments allow children to connect new ideas with real-life experiences, helping them understand concepts more deeply and meaningfully. Moreover, strong engagement supports social and emotional development, as children learn to collaborate, express themselves, and build confidence. Fostering engagement in preschool is vital because it not only enhances academic readiness but also nurtures holistic growth, ensuring that children enter formal schooling with

enthusiasm, resilience, and a strong sense of belonging in the learning community.

Learning engagement plays a crucial role in the success of early childhood education, most especially in pre-school settings wherein young learners start in developing their foundations skills. Learners’ engagement bound emotional, behavioral, and cognitive dimension that, when developed early, results to better holistic development and academic performance (Fredricks et al., 2018). In pre-school classrooms, activities that are interactive, hands-on, and supported by engaging and instructional materials help sustain the learners’ focus and uplift deeper exploration of concepts. According to Zimmerman et al. (2017), strong teacher and student relationships significantly contribute to engagement, particularly when the instructional tasks are emotionally supportive and developmentally appropriate. These findings implies that the integration of appropriate

learning materials can positively influence the motivation, curiosity, attention, and participation levels of pre-school learners.

Beyond individual growth, learning engagement contributes to the overall quality of the classroom environment. Hamre et al. (2014), explain that the teacher and child connections or interactions characterized by responsiveness, warmth, and instructional support foster sustained engagement among young learners. In addition, Mashburn et al. (2008), found that a classroom that is open for the utilization of engaging instructional materials enhances learners' language, academic, and social development. These studies highlight the essence of recognizing how instructional materials and strategies affect learning engagement outcomes. Therefore, it becomes significant to discover how innovative instructional materials can be crafted and utilized to improve the teaching and learning engagement among pre-school learners.

In the Philippine setup, pre-school learning engagement faces both contextual and systematic challenges that affect negatively the children's participation and readiness. According to Philippine Star (2024), and UNICEF Philippines (2023), the Philippine Institute for Development Studies revealed data that only 20% to 30% of 3- to 4-year-old children attend preschool, with significant disparities in rural areas because of lack of parental awareness and limited facilities. This low participation rate weakens the potential of early childhood education to nurture learning engagement, as enrollment is the first step toward accessing engaging, developmentally appropriate instructional activities. According to Ulep et al. (2021), the absence of the early learning opportunities because of unequal distribution of facility and health and nutrition issues significantly hampers children's social and cognitive readiness for meaningful engagement. These findings emphasize the wider educational environment in which pre-school learners must navigate, 3 underscoring the need for school-level interventions that foster engagement for all children regardless of location or background.

According to Manongdo et al. (2023), different proof from local classroom-based interventions shows that thoughtful and appropriate instructional design can meaningfully boost pre-school engagement. In addition, they found that utilizing appropriate instructional materials significantly enhanced preschoolers' emotional, behavioral, and cognitive engagement in a Quezon City sample. Similarly, the instructional materials of Telesforo (2023) used in General Santos City successfully enhanced kindergarten's numeracy and reading skill, suggesting different instructional materials both online and offline can improved engagement when aligned with learners' developmental stages. These studies reinforce the power of innovative, context-sensitive instructional materials in encouraging active participation and deeper learning.

Similarly, Tan et al. (2023), mentioned that Innovative instructional materials play a critical role in enhancing student engagement by making lessons more interactive,

relevant, and visually appealing. Their study found that using locally contextualized tools such as animated videos coupled with worksheets significantly improved students' retention of scientific concepts and deepened their understanding. By aligning instructional materials with students' experiences and needs, teachers were able to bridge gaps caused by limited resources and low prior knowledge. These materials also encouraged active participation as students engaged more meaningfully with content delivered through multimedia rather than purely lecture-based formats. Overall, the study highlights those innovative instructional materials are crucial in fostering comprehension, sustaining interest, and improving learning outcomes in remote or resource-limited settings.

Unfortunately, teachers face significant challenges in creating and using instructional materials, especially in remote and resource-poor settings. A study Cayabas and Sumeg-ang (2023) in Bauko District II, Mountain Province, revealed that heavy teaching workloads leave educators with insufficient time to develop quality materials, while limited digital literacy hampers their ability to keep pace with technological advancements. Similarly, mathematics teachers in Sorsogon reported difficulties in utilizing locally developed materials due to their limited availability and lack of systematic support for production and implementation (Mendiola & Estonanto, 2023). In "last-mile" schools in Negros Occidental, teachers often resort to creating self-made instructional aids owing to inaccessible printing services, weak internet or power, and inefficient fund distribution systems (Cabradora & Abello, 2023). These studies highlight how logistical constraints, technical limitations, and organizational barriers collectively impede teachers' capacity to effectively use instructional materials in their classrooms.

Furthermore, during the COVID-19 shift to flexible learning, teachers in the Bicol region encountered severe obstacles like unreliable internet connectivity, lack of suitable devices, module quality issues, and time-consuming material preparation (Tupas et al., 2023). Educators reported spending unusually long hours developing materials on personal devices and shouldering financial burdens by purchasing supplies out-of-pocket, all while managing distractions in shared home environments. Professional support was inconsistent, with many teachers lacking proper training to adapt to digital platforms and multimedia methods. These compounded challenges contribute to teacher stress and reduce instructional effectiveness, underscoring the urgent need for systemic support, training, and infrastructure to ensure that instructional materials serve their pedagogical purpose.

The benefits offered by the use of instructional materials are undeniable not only in developing learning engagement but also in many other aspects. However, it is also an undeniable truth that teachers have faced and continue to face various challenges, from planning and creating instructional materials to their actual use in the classroom. Therefore, the researcher conducted a study aimed at identifying various innovative instructional materials that can effectively enhance teaching-learning engagement among pre-school

learners in Magallanes, Sorsogon. The study also assessed the level of effectiveness of these instructional materials, explore how pre-school teachers evaluate their impact, and identify the challenges they encounter during their use. Based on the data gathered, a list of innovative learning materials intended to improve teaching and learning engagement was developed.

➤ *Statement of the Problem*

This study titled enhancing teaching-learning engagement among pre-school learners through innovative instructional materials, determined various instructional materials and its contribution in improving learning engagement. Specifically, this study answered the following questions:

- What are the different instructional materials employed by pre-school teachers during the teaching-learning engagement?
- How do teachers assess the effectiveness of these innovative instructional materials?
- What is the level of effectiveness of different innovative instructional materials employed during the teaching-learning engagement?
- What are the challenges encountered by the pre-school teachers in using innovative instructional materials during the teaching-learning engagement?
- What innovative learning materials can be prepared to enhance the teaching-learning engagement in pre-school classes?

**II. METHODOLOGY**

A mixed-method research design was employed in this study to provide a comprehensive understanding of how innovative instructional materials enhanced teaching-learning engagement among pre-school learners. Quantitative methods were used to determine the level of effectiveness of instructional materials through measurable data, such as teachers’ assessments and reported outcomes, while qualitative methods were utilized to gather in-depth descriptions of teachers’ experiences, perceptions, and challenges in designing and implementing these materials. The integration of numerical data and narrative accounts allowed the researcher to triangulate findings and strengthen the validity of the results. This approach was appropriate

because the study aimed not only to measure the effectiveness of instructional materials but also to explain how and why these materials influenced learner engagement in real classroom contexts.

In selecting the respondents, the study employed purposive sampling, a non-probability sampling technique commonly used in qualitative research. This method involves deliberately choosing individuals who are most knowledgeable and experienced in relation to the research topic. In this case, the selected pre-school teachers are those who have direct teaching responsibilities in the identified schools and are actively engaged in planning and implementing instructional materials in their classrooms. Purposive sampling ensures that the data collected were rich, relevant, and aligned with the specific focus of the study, which explore the effectiveness and challenges of using innovative instructional materials in pre-school settings.

**III. REPRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA**

This discusses the findings of the study. specifically, it presents the different instructional materials employed by the pre-school teachers during the teaching-learning engagement, the process on how teacher assess its effectiveness, its level of effectiveness, the challenges encountered by the pre-school teachers in using innovative instructional materials, and the proposed innovative learning materials that can enhance the teaching-learning engagement in pre-school classes.

*A. Different Instructional Materials Employed by the Pre-School Teachers During the Teaching-Learning Engagement*

In preschool education, instructional materials play a vital role in shaping children’s early learning experiences. These resources not only capture learners’ attention but also support the development of foundational skills in literacy, numeracy, creativity, and social interaction. Since young children learn best through concrete, visual, and engaging experiences, preschool teachers often employ a variety of materials to stimulate curiosity and sustain active participation. To better understand the practices of teachers, the study identified the different instructional materials they commonly use in their teaching-learning engagement. The results are presented in the table below 1.0

Table 1 Different Instructional Materials Employed by the Preschool Teachers in their Teaching and Learning Engagement

<b>Instructional Materials</b>	<b>Frequency</b>	<b>Percentage (%)</b>	<b>Descriptive Rating</b>
Flashcards	10	100	Consistently Used
Charts	10	100	Consistently Used
Storybooks	10	100	Consistently Used
Posters	9	90	Frequently Used
Digital learning tools (phonics- based reading activities with animation)	9	90	Frequently Used
Printed worksheets/activity sheets	9	90	Frequently Used
Real-life objects (realia)	9	90	Frequently Used
Videos and song/song collections	8	80	Popularly Integrated
Manipulatives (Puzzles, blocks...)	6	60	Regularly Employed

The results show that preschool teachers employed a wide range of instructional materials to enhance classroom engagement and facilitate learning. All ten teachers or 100% of the respondents reported consistently using flashcards, charts, and storybooks, reflecting the strong reliance on visual and literacy-based materials in preschool settings. These materials are effective in building foundational skills such as letter recognition, vocabulary, and comprehension.

A flashcard is a small note card used as an instructional tool to test and improve memory. It typically features a question, term, or prompt on one side and the corresponding answer or definition on the reverse. Flashcards aid learning through the practice of active recall and are commonly used for memorizing facts, vocabulary, and formulas. They are effective when incorporated into study methods like spaced repetition to enhance long-term retention. Soleimani and Hajghani (2013) investigated the effect of pictorial flashcards on sight word recognition among kindergarten pupils. The results showed that students exposed to pictorial flashcards performed significantly better in word recognition compared to those taught with traditional methods. Flashcards proved to be highly effective in strengthening vocabulary acquisition and improving learners' literacy skills. This finding is relevant to the present study because it supports the consistent use of flashcards by preschool teachers, as shown in the data, where all teachers employed flashcards to help learners build foundational skills such as letter recognition and vocabulary development.

A chart is a graphical representation used for data visualization, where information is displayed by symbols such as bars, lines, or slices, or organized in a tabular format. Its purpose is to present complex numerical or qualitative data in a concise and visual way, making it easier to understand trends, relationships, and patterns than by examining raw data alone. It can also refer to a specialized map used for navigation. Çetin and Özdemir (2021) explored the use of technology-supported graphical organizers, including charts, to aid preschool children problem-solving. The results showed that charts helped scaffold children's thinking processes, improve sequencing and organization of ideas, and promote classroom interaction. This underscores the effectiveness of charts as visual aids in enhancing comprehension and active learning. The present study relates to this finding as all preschool teachers reported the use of charts in their teaching-learning engagement, confirming that charts remain a vital instructional material in developing preschoolers' cognitive and communication skills.

A storybook is a book containing a narrative or collection of stories, typically created for children. The term is often associated with tales that are romantic, idealized, or fantastic, like a storybook ending. O'Fallon et al. (2020) examined preschoolers' word learning during storybook reading interactions by comparing repeated and elaborated input of new words. The study revealed that repeated exposure to storybooks significantly enhanced receptive vocabulary learning, even when elaboration was minimal. This indicates that storybook reading is an effective tool for language development and comprehension in early

childhood. The relevance to the present study lies in the finding that all preschool teachers consistently used storybooks in their classrooms, highlighting their importance in fostering comprehension, vocabulary growth, and engagement among preschool learners.

In addition, 9 teachers or 90% of the respondent also used posters, digital learning tools, printed worksheets, and real-life objects (realia). The use of realia, in particular, highlights the teachers' effort to provide concrete experiences that connect learning with the children's immediate environment, thereby making lessons more meaningful and relatable.

Posters, when utilized as instructional materials, are defined as visual aids that present a brief, constant, and visually engaging message to students. These tools are placed in the learning environment to reinforce educational content, serving as a non-verbal reference point that helps students especially visual learners, to grasp and retain information. A study by Njoroge and Gathigia (2017) examined the use of visual aids such as posters in early childhood classrooms in Kenya and found that they significantly enhanced children's retention and comprehension of literacy concepts. Teachers reported that posters attracted learners' attention, simplified abstract ideas, and supported letter and word recognition. This is relevant to the present study, as preschool teachers in your data also frequently used posters to make lessons visually stimulating, reinforcing concepts through constant exposure.

Digital learning tools encompass a wide variety of software applications, websites, and technology resources designed to support and enhance educational activities for students and teachers. Primarily accessed via the internet, these tools facilitate learning by providing dynamic and interactive experiences, such as Learning Management Systems (LMS) like Google Classroom, gamified quizzes, video creation platforms, and assistive technology. Alotaibi (2019) investigated the impact of digital learning applications on preschool children's literacy development in Saudi Arabia. The study revealed that digital tools, especially phonics-based applications with animations and interactive features, improved learner motivation, participation, and retention of reading skills. This supports the findings of the present study that a majority of preschool teachers integrated digital tools into their teaching, showing that technology enhances engagement and fosters early literacy acquisition.

Printed worksheets are paper-based instructional materials, often consisting of questions, exercises, or prompts, that students complete with a writing instrument. They serve as a physical resource for practicing, reinforcing, and assessing specific skills or concepts learned in class, and are valued for their tangible nature and accessibility without reliance on digital devices or internet connectivity. Suleiman and Ismail (2020) conducted a study on the effectiveness of printed activity sheets in Malaysian preschools and found that worksheets supported skill reinforcement, handwriting practice, and guided application of classroom lessons. Teachers highlighted that worksheet provided structured

opportunities for independent learning while allowing assessment of children’s progress. This aligns with the gathered data showing preschool teachers’ frequent use of printed worksheets, emphasizing their role in reinforcing concepts taught through interactive activities.

Realia, also referred to as a real-life object, are authentic, real-world objects, artifacts, or materials used by educators as instructional aides to enrich students' learning. Examples include everyday items like currency, clothing, menus, plants, or tools. They are used to make lessons more tangible, concrete, and relevant, helping students connect abstract concepts to real-life situations and improving vocabulary acquisition and comprehension through multi-sensory engagement. Rahmayani (2022) explored the use of realia in vocabulary acquisition among young learners in Indonesia and found that introducing concrete objects helped students better understand abstract vocabulary, increased motivation, and made lessons more memorable. Learners retained new words more effectively when they were tied to real-life objects they could see and touch. This relates to the present study as preschool teachers’ use of realia demonstrates their effort to connect lessons to learners’ immediate environment, making learning meaningful and engaging.

Meanwhile, videos, songs, and song collections were also popular, with 80% of teachers integrating them into their teaching. These materials are known to sustain attention, promote language development, and encourage active participation through rhythm and movement.

Similarly, Indah et al. (2024) conducted a study titled “An Analysis of Songs on Videos by Early Childhood in Retaining Vocabulary” among 3- to 7-year-old young learners enrolled in an English class at RainbowKids BPI in Indonesia. The research found that incorporating videos paired with songs helped children retain English vocabulary more effectively. Students were observed to memorize the vocabulary items taught through songs in videos, and they also improved in using correct grammatical forms such as pronouns, auxiliary verbs, adjectives, and even adverbs of degree. Making videos also promoted active participation and speaking, as the children were not just listening but also engaging with the content. This supports the findings that using videos, songs, and song collections helps sustain

attention, promote language development, and encourage active participation among preschool learners.

Finally, manipulatives such as puzzles and blocks were used by 60% of the teachers, providing opportunities for hands-on exploration, problem-solving, and motor skill development. Although not used by all teachers, manipulatives remain essential in fostering cognitive and social development. Overall, the data suggest that preschool teachers recognize the importance of employing a variety of instructional materials ranging from traditional print to digital tools, to cater to diverse learning styles and developmental needs of young learners.

Parallel to this finding is the study of Wang et al. (2019) about Building Blocks of Mathematical Learning: Virtual and Tangible Manipulatives Lead to Different Strategies in Number Composition. They explored how young children use both virtual and physical manipulatives such as blocks, to support mathematical learning and number composition. Children in the tangible manipulatives group who used actual blocks showed greater improvement in mathematical understanding compared to those using only virtual representations. The hands-on interaction with blocks enabled better engagement with problem solving and number composition tasks. This aligns with the findings of the present study showing that 60% of preschool teachers use manipulatives like puzzles and blocks, which foster hands-on exploration, problem-solving, and motor skill development. The study underscores how manipulatives contribute both to cognitive development and to more meaningful, interactive learning experiences, particularly suitable to learning styles of young children.

*B. Strategies of Teachers in Assessing the Effectiveness of Different Instructional Materials*

In early childhood education, instructional materials are not only tools for teaching but also benchmarks of how learning is achieved. Teachers, therefore, employ various strategies to evaluate whether these materials truly support learners’ development. Assessing effectiveness is crucial because it allows teachers to refine their approaches, ensure alignment with learning objectives, and respond to the needs of diverse learners. Table 2.0 presents the strategies employed by preschool teachers in assessing the effectiveness of different instructional materials, along with their corresponding mean scores and interpretations.

Table 2 How Preschool Teachers Assess the Effectiveness of the Instructional Materials Employed in their Teaching -Learning Engagement

Indicators	Weighted Mean	Description	Descriptive Rating
<b>A. Learners’ Participation</b>			
Observe whether learners are physically involved, such as raising hands, responding to prompts...	4.56	Often Done	Very Effective
Assess how learners express themselves through the creative outputs	4.53	Often Done	Very Effective
Monitor how learners use the materials to interact with classmates	4.34	Often Done	Very Effective
<b>B. Achievement of Intended Outcomes</b>			
Observe whether learners demonstrate understanding of key concepts, such as identifying shapes, letters, etc...	4.52	Often Done	Very Effective

Determine how learners apply learned skills in new or playful contexts, such as storytelling	4.41	Often Done	Very Effective
Monitor how learners respond appropriately to prompts, questions	4.26	Often Done	Very Effective
<b>C. Developmental Appropriateness</b>			
Observe whether learners' developmental needs are met, such as using large print, simple sentence structure	4.48	Often Done	Very Effective
Assess how learners engage through sensory-rich and imaginative experiences with the materials	4.31	Often Done	Very Effective
Determine how the materials reflect the local contexts or indigenous references	4.03	Often Done	Very Effective
<b>Average</b>	<b>4.38</b>	<b>Often Done</b>	<b>Very Effective</b>

Teachers assessed the effectiveness of instructional materials by observing the level of learners' participation. With a mean of 3.75, interpreted as "Very Effective," it shows that children's active involvement through answering, asking questions, or interacting with peers, serves as a strong indicator of the suitability of the materials. This implies that when learners are participative and responsive, teachers recognize the instructional materials as successful in sustaining engagement and promoting collaboration inside the classroom.

This also suggests that participation serves as an immediate and practical feedback mechanism for teachers. When children are enthusiastic, attentive, and willing to contribute during class discussions or activities, it reflects that the instructional materials are meeting their developmental interests and capacities. On the other hand, when participation is low or children appear disengaged, teachers are able to identify the need to modify or replace the materials being used. In this way, participation not only measures the effectiveness of the resources but also guides teachers in making timely instructional adjustments. Furthermore, consistent engagement fosters a more interactive classroom atmosphere where learners feel encouraged to express themselves and collaborate with others. Ultimately, the high mean score underscores that children's participation is not just an outcome of effective instructional materials but also a foundation for creating a dynamic, learner-centered environment.

This is supported by the study of Onditi (2018) on the effect of use of Instructional Materials on Learner Participation in Science Classroom in Preschool in Rongo Town. In this descriptive survey research, preschool teachers were asked about the instructional materials they use and how these influence children's participation in science lessons. Although the study found that some constraints such as large class size, lack of confidence, and limited teacher skills, hindered usage, results showed that where instructional materials were effectively used, learner participation improved, children exhibited more asking of questions, engagement in experiments, and peer interaction. These findings parallel on the present data were high levels of learner participation (mean of 3.75, interpreted as "Very Effective") are linked to the materials used. It confirms that teachers see children's active involvement, answering, peer interaction, asking questions, as a strong indicator that the instructional materials are suitable, effective, and engaging.

Another indicator is the achievement of intended outcomes. The achievement of intended outcomes also emerged as a primary strategy in assessing materials, reflected in a mean of 3.82, rated "Very Effective." Teachers measured effectiveness based on whether students demonstrated comprehension, mastered skills, and applied concepts in practical activities. This suggests that instructional materials are valued not only for capturing attention but also for their contribution to reaching learning goals. The implication is that IMs directly linked to competencies are regarded as more effective in ensuring meaningful learning.

Beyond academic comprehension, the achievement of intended outcomes also reflects how instructional materials support the holistic growth of preschool learners. When children are able to transfer newly acquired skills into real-life contexts such as applying counting skills in play, identifying letters in their environment, or retelling stories using their own words, it shows that the materials are not only effective for classroom tasks but also meaningful for everyday application.

This indicates that well-chosen instructional materials bridge the gap between theoretical learning and practical experience, allowing children to demonstrate mastery in authentic ways. For teachers, such evidence provides assurance that their instructional strategies are aligned with the developmental goals of early childhood education and that the materials used are instrumental in shaping both cognitive and functional competencies.

Abaya (2017) investigated how various categories of instructional materials such as audio-visual materials, printed materials, and community resources, affect preschool children's learning in number work. The research found that preschools with adequate instructional materials showed significantly higher mastery of number concepts: learners were better able to perform number work tasks, apply counting, and grasp concepts more easily, compared to those from schools with limited or no materials. When printed materials and visual resources were plentiful, children could practice more, receive feedback, and reinforce concepts, leading to higher achievement. This finding is relevant to the present study because it similarly shows a very high mean (3.82, "Very Effective") for "achievement of intended outcomes" when assessing instructional materials. It confirms that instructional materials linked directly to competencies

aren't only attention-grabbers; they actually help students reach learning goals including mastery, comprehension, and application. In both studies, effectiveness is not deduced from mere exposure to materials, but from measurable outcomes in learners' performance, which supports the findings of the present study that materials tied to specific competencies are valued as most effective.

The last identified indicator is the developmental appropriateness. Developmental appropriateness was another key criterion, with a mean of 3.80, likewise rated "Very Effective." Teachers ensured that materials were age-appropriate, culturally relevant, and aligned with the sensory and imaginative needs of preschool children. This implies that teachers place great importance on selecting and creating materials that fit learners' developmental stages, making lessons more relatable and accessible. By aligning IMs with children's context and growth levels, teachers maximize the effectiveness of their teaching strategies.

Developmental appropriateness also highlights the importance of sensitivity to children's varied learning styles and developmental milestones. Teachers observed that when instructional materials matched children's cognitive, emotional, and social abilities, learners became more engaged and confident in participating in classroom tasks. For example, materials with large prints, bright visuals, and simple instructions were better understood and enjoyed by young learners, while culturally familiar images or objects encouraged them to connect school lessons with their daily experiences at home. Such alignment not only fosters comprehension but also promotes a sense of belonging and relevance, which is essential in early childhood education. This indicates that instructional materials become most effective when they bridge developmental needs with

meaningful cultural and contextual references, ensuring that learning remains both age-appropriate and learner-centered.

Similarly, Hoisington (2024), emphasizes that effective preschool science instruction must be designed to respect the unique developmental characteristics of children aged 0-8. She points out that materials and learning experiences aligned with young children's cognitive, emotional, social, and physical development lead to better engagement and understanding. Teachers using developmentally appropriate practices (DAP), such as those integrating familiar contexts, sensory experiences, and play, observed stronger interest, deeper understanding, and higher retention of scientific concepts among preschoolers. This directly supports the finding of the present study that developmentally appropriate materials (with a mean of 3.80, "Very Effective") are critical: when materials match the learners' growth levels and environment, lessons become more accessible, enjoyable, and effective.

*C. The Level of Effectiveness of Different Instructional Materials Employed during the Teaching-Learning Engagement*

Instructional materials play a crucial role in early childhood education as they help simplify abstract concepts, capture children's interest, and support the development of essential skills. To determine their value in the classroom, preschool teachers assessed the level of effectiveness of different types of instructional materials they commonly used, namely visual, manipulative, and digitalized materials. The results provide insight into how these resources contribute to children's engagement, comprehension, and overall learning experience. The summary of findings is presented in the table 3.0

Table 3 Level of Effectiveness of the Different Instructional Materials Employed by Preschool Teachers in their Teaching-Learning Engagement

Indicators	Weighted Mean	Description
<b>A. Visual Instructional Materials</b>	<b>4.57</b>	<b>Effective</b>
Capture learners' attention during activities	4.62	Very Effective
Illustrate concepts, enabling learners to recognize patterns	4.56	Effective
Stimulate verbal responses or storytelling based on visual prompts	4.54	Effective
<b>B. Manipulative Instructional Materials</b>	<b>4.51</b>	<b>Effective</b>
Facilitate hands-on exploration for motor development	4.65	Very Effective
Encourage problem-solving, sorting, and sequencing	4.53	Effective
Promote collaboration and turn-taking during group-based manipulative activities	4.35	Effective
<b>C. Digitalized Instructional Materials</b>	<b>4.38</b>	<b>Effective</b>
Enhance learners' motivation through interactive features	4.60	Very Effective
Support differentiated learning	4.42	Effective
Improve retention because of animation	4.12	Effective
<b>Average</b>	<b>4.48</b>	<b>Effective</b>

Visual materials, such as flashcards, charts, posters, and storybooks, obtained an overall mean of 4.57, described as "Effective." Among the indicators, capturing learners' attention had the highest mean of 4.62, interpreted as "Very Effective," showing that visuals play a vital role in sustaining interest and focus in preschool classrooms. Illustrating concepts (mean = 4.56) and stimulating storytelling or verbal

responses (mean = 4.54) were also rated effective, demonstrating that visual prompts not only enhance recognition and comprehension but also encourage expressive language development. These results suggest that visual instructional materials remain indispensable in early learning for simplifying abstract concepts and making lessons engaging and memorable.

The findings further imply that visual materials are highly versatile, as they address multiple areas of development at once such as cognitive, linguistic, and even socio-emotional. For instance, charts and posters provide constant visual reinforcement that aids memory retention, while storybooks not only build vocabulary but also stimulate imagination and empathy through narratives. Flashcards, on the other hand, allow for interactive drills that strengthen recognition skills and quick recall. The consistently high mean scores indicate that preschool teachers view these materials as reliable tools that effectively capture children's curiosity and channel it into meaningful learning experiences. Overall, the data affirm that visual materials are not merely supplementary aids but essential components of effective preschool instruction, ensuring that lessons remain both understandable and enjoyable for young learners.

Similarly, Milosavljevic and Reynolds (2024) compared two instructional approaches: visual arts activities which include illustrations, images, and other visual-arts-based prompts, and traditional flashcard instruction, both implemented within a comprehension-based framework, with preschool/very young English learners. They found that while both methods significantly improved vocabulary acquisition and retention, the visual arts-based method led to higher retention over time. Learners exposed to richly illustrated and visually supported contexts showed stronger long-term recall compared to learners who worked with flashcards alone. This finding reinforces the result in the present study where visual instructional materials like flashcards, charts, posters, and storybooks, were rated highly effective (overall mean ~4.57), particularly in capturing learners' attention, illustrating concepts, and stimulating verbal responses. It supports the claim that visual materials do not simply draw initial interest but have lasting impact on comprehension, expressive language development, and memory, a confirmation that your participants' high ratings are well grounded in recent empirical literature.

Another indicator is the manipulative instructional materials. Manipulatives such as puzzles and blocks recorded an overall mean of 4.51, interpreted as "Effective." Facilitating hands-on exploration for motor development was rated the highest at 4.65, or "Very Effective," underscoring the importance of tactile experiences in strengthening fine motor skills and cognitive growth. Encouraging problem-solving, sorting, and sequencing followed with a mean of 4.53, while promoting collaboration and turn-taking in group activities scored slightly lower at 4.35, both rated effective. These results highlight that manipulative foster both individual exploration and cooperative play, making them vital tools in promoting problem-solving skills, logical thinking, and social interaction.

The results further suggest that manipulatives serve as powerful tools for experiential learning, allowing children to engage actively with concrete objects that make abstract concepts more understandable. By handling puzzles and blocks, learners not only strengthen fine motor coordination but also practice essential skills such as pattern recognition, spatial awareness, and sequencing. These activities encourage

curiosity and experimentation, which are key to developing higher-order thinking skills at an early age. Although the promotion of collaboration and turn-taking scored slightly lower, the data imply that with proper facilitation, manipulatives can also become effective resources for fostering teamwork and social interaction. Overall, the consistently high ratings confirm that manipulatives provide a balanced learning experience, supporting both cognitive growth and social development, which makes them indispensable in preschool classrooms.

Byrne et al. (2023) conducted a scoping review of over 100 studies involving physical manipulatives such as blocks, shape sorters, counters, and figurines, in early childhood and primary education settings. Their findings showed that physical manipulatives can positively impact children's learning in domains like mathematics, literacy, and science, particularly in developing spatial skills, pattern recognition, and problem solving. While not all interventions showed large effects, owing sometimes to differences in guidance, learning domain, or learner readiness, the review confirmed that hands-on, tactile experiences with manipulatives often enhance engagement, deeper conceptual understanding, and cognitive development. This aligns closely with the results of the present study where manipulatives like puzzles and blocks, were rated "Effective" (with high mean scores like 4.51 overall, 4.65 for motor development) for fostering problem-solving, logical thinking, and social interaction. It provides additional evidence that the use of manipulatives is not only beneficial in isolated tasks but also across learning contexts, confirming that preschool teachers' strategies to include these materials are well grounded in current empirical research.

Another indicator is the digitalized instructional materials. Digital instructional tools earned an overall mean of 4.38, interpreted as "Effective." Enhancing learners' motivation through interactive features scored the highest mean of 4.60, described as "Very Effective," indicating that technology significantly boosts engagement and interest among preschool children. Supporting differentiated learning (mean = 4.42) and improving retention through animation (mean = 4.12) were also rated effective, showing that digital tools cater to varied learning styles while reinforcing concepts in creative ways. These findings suggest that when accessible, digitalized instructional materials enrich learning by combining fun and functionality, though their effectiveness may still be limited by challenges in availability and connectivity.

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manipulatives can also become effective resources for fostering teamwork and social interaction. Overall, the consistently high ratings confirm that manipulatives provide a balanced learning experience supporting both cognitive growth and social development, which makes them indispensable in preschool classrooms.

Parallel to the findings of the present study, Magnusson and Öhman (2023) explored how preschool children engage with digital technology integrated into atelier (studio-like) settings, particularly in learning literacy and mathematics. They found that when digital tools are used alongside traditional play and learning experiences, they significantly enhance children’s motivation, allow for differentiated learning, and enable creative expression. Children using tablet applications, interactive games, and digital storytelling were more engaged, showed greater willingness to try out new tasks, and demonstrated improved retention of mathematical and literacy concepts compared to settings without such digital integration. This aligns closely with the findings of the present study, in which digitalized instructional materials earned high mean scores for effectiveness (overall mean ~4.38), especially in motivation (4.60), differentiated learning (4.42), and retention (4.12). The study supports the present study’s conclusion that when digital tools are accessible and well-integrated, they enrich preschool learning by adding interactivity, fun, and adaptability, not just novelty. It also underscores that availability and teacher skill in using technology affect how strong those outcomes become.

The numerical values in the present study indicate that digitalized instructional materials were perceived as highly effective by preschool teachers, with an overall mean of 4.38. Specifically, indicators such as motivation (4.60), support for differentiated learning (4.42), and retention of concepts (4.12) show that these materials strongly enhance key aspects of teaching– learning engagement. These values imply that when digital tools are properly integrated into classroom activities, they not only capture learners’ interest but also facilitate individualized learning and improve concept retention. The high mean scores provide quantitative evidence that supports the notion that accessibility and teacher competence in using technology are critical factors in maximizing the benefits of digital instructional materials in preschool education.

*D. The Challenges Encountered by the Pre-School Teachers in Using Innovative*

*Instructional Materials during the Teaching-Learning Engagement* Innovative instructional materials play a significant role in enriching preschool teaching and learning by making lessons more engaging, interactive, and meaningful. However, their use is not without challenges, as teachers often face difficulties in preparing, utilizing, and sustaining these materials in classroom practice. Identifying these barriers is essential in understanding the realities of preschool instruction and in formulating appropriate interventions to support teachers. The following table presents the challenges encountered by preschool teachers in using innovative instructional materials during their teaching-learning engagement. Table 4.0

Table 4 Different Instructional Materials Employed by the Preschool Teachers in their Teaching and Learning Engagement

<b>Challenges</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Lack of financial resources to purchase materials	10	100
Lack of time to prepare creative materials	10	100
Limited availability of technology-based resources	10	100
Inadequate training on how to use or create materials	10	100
Materials not suited for learners’ age or needs	10	100
Difficulty in managing materials during class	10	100
Lack of support from school administration	10	100
Limited access to reliable electricity or internet	10	100

All ten teachers or 100% of the respondent identified limited preparation time as one of the greatest challenges in using innovative instructional materials. Since many of these materials require planning, designing, or adapting before classroom use, teachers often struggle to balance preparation with other tasks such as lesson planning, classroom management, and administrative work. This implies that while teachers value creativity in developing materials, time constraints hinder them from maximizing their potential in producing and using innovative resources.

which are time-consuming tasks. With most of their time consumed by teaching loads, paperwork, and supervisory duties, teachers are left with fewer opportunities to innovate. As a result, they may resort to reusing old materials or relying on simpler, less creative alternatives that may not fully address learners’ developmental needs. This situation underscores the importance of institutional support, such as allotting dedicated preparation periods or providing ready-made resources, to help teachers sustain the use of innovative instructional materials effectively.

The challenge of limited preparation time also reflects the heavy workload preschool teachers carry, as they are expected to juggle multiple responsibilities beyond classroom instruction. Preparing innovative instructional materials often demands extra effort, such as researching child-appropriate designs, sourcing materials, or incorporating digital tools,

Harrison et al. (2024) examined how early childhood educators allocate their working day across different activity domains, including planning, assessment, evaluation, and administration. The study found that educators, particularly those with higher qualifications, reported spending comparatively more time in administrative and support tasks

and less time in planning and preparation of instructional materials. This imbalance meant that limited time remained for tasks such as designing new learning resources or adapting materials to better suit children's needs. These findings align closely with present study's data where all ten preschool teachers highlighted "limited preparation time" as a significant barrier. It reinforces the point that although teachers recognize the importance of creative and innovative instructional materials, the lack of dedicated preparation time undermines their capacity to develop, adapt, or fully utilize such materials in ways that enhance learning.

Another challenge cited by all respondents (100%) was the frequent damage and gradual deterioration of instructional materials. Given the active and often hands-on nature of preschool activities, materials such as flashcards, posters, or manipulatives are prone to wear and tear. This becomes a recurring problem for teachers, as it requires constant repair or replacement, which can be costly and time-consuming. The result shows the need for more durable, child-friendly materials that can withstand repeated use.

The issue of frequent damage and deterioration also highlights the practical realities of teaching in preschool classrooms, where young learners are naturally curious, energetic, and exploratory. Materials that are frequently handled, such as puzzles, blocks, posters, and flashcards, often suffer from torn edges, faded prints, or broken parts after repeated use. For teachers, this means investing additional time and personal resources in repairing or replacing worn-out materials, which can add to their already heavy workload and financial strain. Moreover, the constant need to maintain materials may discourage some teachers from introducing more innovative or creative resources, limiting the variety of experiences offered to learners. This situation underscores the necessity of providing schools with high-quality, durable, and child-safe instructional materials designed for intensive and repeated classroom use, ensuring both sustainability and continued engagement in the learning process.

Pageni and Rimal (2017) examined the condition and usage of physical instructional materials in early childhood learning centers in Nepal and found that while many centers had a variety of physical materials such as blocks, shapes, geometric forms, and learning center items, a substantial number of these materials were in poor condition. Teachers reported that torn shapes, faded colors, broken parts, and other signs of wear limited the materials' usefulness and decreased children's interest. The study also highlighted how the poor state of materials sometimes led to their discontinuation in certain activities due to safety concerns or ineffectiveness. This aligns closely with the present study's finding that all teachers (100%) cited frequent damage and gradual deterioration as a major challenge: it confirms that durability is not only a local issue but a common concern in preschool settings globally. It supports the conclusion that ensuring the availability of child-friendly, durable materials is essential for sustaining engagement and making innovative instructional materials truly effective over time.

Nine teachers (90%) reported insufficient financial resources as a major barrier to acquiring quality instructional materials. Many teachers had to personally shoulder the expenses for printing, purchasing, or improvising materials, which adds to their financial burden. This limitation often forces them to settle for low-cost or improvised alternatives that may not be as durable or effective. The data suggest that financial constraints directly affect the quality and availability of materials in preschool classrooms.

The issue of financial constraints reflects a broader systemic challenge, where the responsibility of providing instructional materials often falls on individual teachers rather than being adequately supported by schools or local education authorities. With limited budgets allocated for early childhood programs, teachers are compelled to improvise with low-cost or recycled resources, which, while creative, may not always meet the standards of durability and effectiveness needed for sustained use. This constant out-of-pocket spending not only creates financial strain but can also affect teachers' morale and limit their ability to introduce innovative or technology-based materials in the classroom. Moreover, the reliance on improvised tools highlights the inequity between schools with stronger funding support and those in under-resourced areas, further widening the gap in learning opportunities available to young learners. Addressing these financial barriers requires more consistent institutional support, ensuring that teachers have access to both the funds and materials necessary to deliver quality early childhood education.

Similarly, Casimiro et al. (2025) examined the challenges faced by early childhood education teachers in Zamboanga City (Philippines) in accessing and using educational materials. They found that many teachers reported having to use personal funds to procure materials and frequently resorted to improvising resources due to budget shortages. The quality, durability, and variety of instructional materials suffered as a result. This aligns closely with present study's finding that 90% of teachers face financial constraints which force them to settle for low-cost or improvised alternatives. It reinforces the idea that financial limitations are a serious barrier to material effectiveness, availability, and longevity, and suggests that recommended interventions must include funding or resource allocations to support teachers in maintaining and accessing quality instructional materials.

Eight teachers (80%) identified unstable internet connectivity as a challenge when using digitalized instructional materials. Since many modern tools rely on online platforms, poor connectivity disrupts lessons, limits access to digital resources, and reduces the effectiveness of technology-based instruction. This highlights the digital divide present in some preschool settings and underscores the need for more reliable infrastructure to support digital learning.

The problem of unstable internet connectivity not only hinders teachers' ability to integrate digital resources into their lessons but also limits learners' exposure to technology-

based instructional experiences that could enhance engagement and skill development. Teachers often experience interruptions when using online videos, interactive applications, or virtual platforms, which disrupt the flow of teaching and can frustrate both teachers and learners. In some cases, poor connectivity discourages teachers from preparing digital materials altogether, further widening the gap between schools with strong infrastructure and those in under-resourced areas. This digital divide is especially critical in early childhood education, where consistent exposure to interactive tools can foster digital literacy and enrich the learning environment. The situation emphasizes the urgent need for investment in reliable internet access and ICT infrastructure to ensure that digitalized instructional materials can be maximized as effective teaching tools in preschool settings.

The challenges posed by unstable internet connectivity in preschool settings are well-documented in recent literature. Akmad and Abatayo (2024) examined the effects of unstable internet connectivity on accessing educational resources and collaborative learning among tertiary students. The research highlighted that students experienced task submission delays due to the erratic nature of internet connectivity. They also found accessing online resources to be time-consuming, and poor internet connection reduced students' enthusiasm and ability to participate, resulting in communication challenges and affecting the promptness of finishing group projects. Seven teachers (70%) reported lacking sufficient training in the use and development of innovative instructional materials, which reduces their confidence in integrating digital tools and maximizing their pedagogical potential. This highlights the urgent need for continuous professional development programs that equip teachers with the skills to create and effectively use instructional resources. Additionally, the same number of teachers (70%) cited difficulty in managing instructional materials during class, as preschoolers' natural curiosity often leads to disorder or damage. Such challenges disrupt lesson flow and make it harder to balance structure with free exploration in early learning environments. These findings emphasize the dual importance of enhancing teachers' competencies through training and strengthening classroom management strategies tailored to preschool settings.

A relevant recent study by Mengstie et al. (2024) found that although preschool teachers generally held strong beliefs in child-centered instructional practices, actual classroom observations showed lower levels of classroom organization and instructional support, indicating a gap between what teachers believe and what they are able to do in practice. This supports the present study's findings that many teachers lack sufficient training (which likely impairs their confidence and skill in designing and using innovative instructional materials) and struggle with managing instructional materials during class. The observed discrepancy between belief and practice signals that training alone may not be enough; hands-on, context-specific support such as coaching, and modeling of classroom management strategies is necessary. Thus, Mengstie et al. (2024) substantiate the need for capacity-building programs that not only teach how to create digital or

new materials but also how to manage them in active preschool environments.

Five teachers (50%) reported limited administrative support in acquiring or developing instructional materials. This lack of institutional backing leaves teachers to rely heavily on personal effort and community support, which may not always be sufficient. Such limited support can dampen teachers' motivation and affect the consistency of using innovative IMs. Strengthening administrative involvement is necessary to sustain quality teaching resources.

The issue of limited administrative support directly reflects broader findings in educational research, where institutional backing has been shown to significantly influence teachers' ability to implement innovative practices. When school leaders provide resources, training opportunities, and recognition, teachers are more motivated and consistent in integrating new instructional materials. Conversely, insufficient support not only burdens teachers financially and emotionally but also hinders the long-term sustainability of innovations in the classroom. Studies emphasize that strong administrative involvement fosters a culture of collaboration and ensures equitable access to quality resources. Therefore, addressing this gap is crucial to empower teachers and enhance the overall effectiveness of instructional delivery in preschool education.

A relevant recent study by Li et al. (2020) in China examined, finding that organizational resources such as funding, instructional management, and leadership support—had a significantly positive association with classroom quality, and that effective instructional management mediated the relationship between organizational resource inputs and observed quality practices. This supports the statement above by showing that when administrators provide institutional backing through resources, management, and support systems, teachers are better able to sustain and utilize instructional materials and innovations in their classrooms.

Lastly, four teachers (40%) mentioned the challenge of finding or creating materials that are developmentally appropriate for preschool learners. Some available resources are either too advanced or too simplistic, which makes it difficult to match them to children's actual developmental stages. This indicates the need for careful selection, contextualization, and even localization of instructional materials to ensure they meet the specific needs of young learners.

This challenge highlights the critical importance of aligning instructional materials with principles of developmentally appropriate practice, as mismatched resources can either overwhelm or under-stimulate learners, limiting their growth. Teachers often need to adapt or localize materials to reflect not only age-appropriate skills but also the cultural and contextual realities of their learners. Without access to a diverse pool of well-designed resources, educators may struggle to maintain engagement and foster meaningful learning experiences. Providing teachers with training and

access to repositories of adaptable, developmentally suitable materials can bridge this gap. Ultimately, ensuring appropriateness in instructional resources supports both equity and effectiveness in early childhood education.

A study by Mengstie (2023)108 examined preschool teachers' beliefs and practices regarding Developmentally Appropriate Practice (DAP) and found that although many educators hold strong beliefs about DAP, their actual classroom practices often lag behind, particularly in selecting and using instructional materials that are well-aligned with children's cognitive, social, and physical developmental stages. In particular, the study noted that teachers frequently relied on resources that were either too advanced, requiring skills beyond the children's current developmental level, or too rudimentary, failing to stimulate growth. This mismatch undermines both learner engagement and effectiveness of instruction, echoing the finding that four teachers in your sample cited difficulty finding or creating developmentally appropriate IMs. The relevance is clear, to improve preschool learning, teacher training should include skills for evaluating, adapting, and localizing instructional materials so they better suit the developmental levels of their learners.

*E. Proposed Innovative Learning Materials to Enhance the Teaching-Learning Engagement in Pre-School classes*

Based on the findings of the study, several challenges emerged in the use of instructional materials, including insufficient teacher training, limited administrative support, unstable internet connectivity, frequent damage to learning resources, and difficulties in contextualizing materials for the developmental needs of preschool learners. In response to

these gaps, several innovative learning materials are proposed to strengthen preschool teaching and learning engagement. Interactive Storybook Kits combining print and digital elements are recommended to promote multisensory literacy experiences through storybooks embedded with QR codes linking to animated narrations or short video reenactments.



Fig 1 Sample Interactive Story Book Combining Print and Digital

Durable Modular Manipulatives, such as magnetic shapes, interlocking blocks, and puzzle boards, offer long-lasting, child-safe tools that support hands-on learning while addressing the persistent issue of resource breakage.

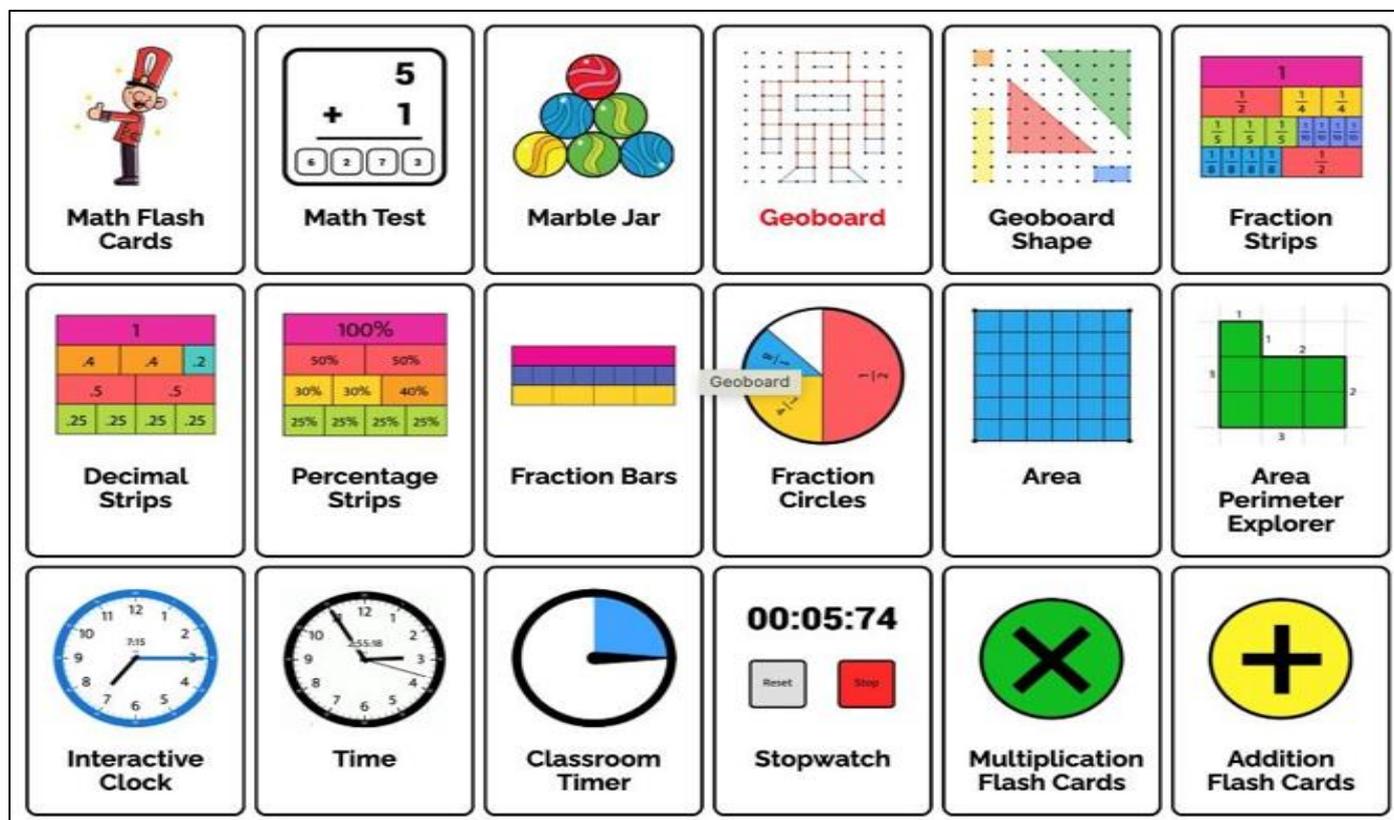


Fig 2 Sample Durable Modular Manipulatives

A Teacher-Friendly Digital Resource Bank with offline-accessible worksheets, games, and videos is also proposed to ensure learning continuity despite unreliable internet connectivity. To enhance contextual learning, Culturally-Localized Realia Boxes containing familiar community items such as miniature fruits, traditional objects, and everyday tools will allow learners to connect academic concepts with real-life experiences.



Fig 3 Sample Culturally-Localized Realia Boxes

Classroom Management-Friendly Learning Stations, including structured corners like Reading Nooks, Math Corners, and Creativity Tables, are recommended to support independent exploration, reduce clutter, and ease teachers' organizational workload. Finally, a Professional Development Resource Pack for Teachers is suggested to equip educators with practical guides on developing low-cost innovative materials, managing active learning environments, and integrating technology effectively.



Fig 4 Sample Classroom Management-Friendly Learning Stations

Collectively, these proposed materials aim to resolve existing barriers while enriching instruction, enhancing engagement, and providing developmentally appropriate and culturally relevant learning experiences for preschool children.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing findings, the following conclusions are drawn:

- Preschool teachers consistently used a variety of instructional materials, with flashcards, charts, and storybooks being the most commonly employed.
- Teachers regularly assessed the effectiveness of instructional materials through learners' participation, achievement of intended outcomes, and developmental appropriateness
- Visual, manipulative, and digital instructional materials were found to be highly effective in engaging learners and supporting learning outcomes.
- Teachers faced multiple challenges in using instructional materials, including limited preparation time, material damage, financial constraints, unstable internet, insufficient training, and classroom management difficulties.
- The study proposed several innovative learning materials to address identified challenges and enhance teaching-learning engagement in preschool classes.

Based on the result of the study, the following are recommended to enhance the teaching-learning engagement in pre-school classes:

- Teachers should continue using a variety of instructional materials and share best practices to sustain learner engagement and development.
- Training programs must be provided to help teachers assess effectiveness through learner participation, outcomes, and developmental appropriateness.
- Schools should ensure continuous provision and updating of effective instructional materials, balancing visual, manipulative, and digital tools.
- Administrators and policymakers should address challenges by allocating funds, improving internet connectivity, and giving teachers preparation support.
- Schools are encouraged to adopt the proposed innovative learning materials, including interactive storybook kits, durable modular manipulatives, culturally-localized realia boxes, classroom management-friendly learning stations, and offline digital resource banks, while ensuring sustainability through the implementation of the professional development resource pack and strengthened partnerships with stakeholders.
- Future research be conducted on the following specific titles:

- ✓ The Impact of Interactive Storybook Kits on Literacy Development and Engagement Among Preschool Learners
- ✓ Teacher Preparedness and Competency in Integrating Digitalized Instructional Materials in Resource-Limited Settings
- ✓ The Effectiveness of Culturally Localized Realia and Community-Based Resources in Enhancing Conceptual Understanding in Early Childhood Education

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