

Applying Explicit Play Strategies to Support Kindergarten Teachers in Enhancing Children's Cognitive Competency

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THE PROBLEM AND ITS BACKGROUND

Introduction

Almost all experts agree that early childhood education (ECE), especially at the preschool level, is a crucial time for brain development and starting the learning process that will continue through life. It is also a key time for a child's whole development (UNICEF, 2021). Actually, during this age children develop the basic brain, social, and emotional skills that will determine their learning success and personal growth for their whole lives. High-quality early childhood education is a very important factor in the ability to learn, that is why a good preschool education is highly recommended. For instance, quality education at this level leads to the acquisition of key cognitive skills such as memory, reasoning, problem-solving, etc., which are the very first steps towards school success and further development of other areas of the child's life. Play-based learning is a fun and very effective way of teaching children. Studies show that structured and targeted play can promote the cognitive development of young children (Yee et al. 2022; Gica et al. 2025; Gaffar et al. 2021).

In fact, play-based learning (PBL) has become a kind of educational staple, with many educators and researchers alike advocating it as a natural way for children to learn through play and also an enjoyable method of instruction that caters to a child's different developmental levels. Totally in line with this, some major international organizations like UNESCO (2023) recognize play as the main, direct, and one of the few universal means by which children gather knowledge about their surroundings and, at the same time, develop their emotional, social, and intellectual capacities. Besides, contemporary studies point out that children's engagement, associative thinking, recall, and problem-solving skills can be effectively supported through guided play (Etokabeka, 2024; Golden Age Journal, 2024). The fact is, play's tremendous educational abilities remain largely unnoticed in the teaching methods even though there are numerous pieces of evidence to support its advantages. This issue becomes even more glaring in resource-poor settings where, besides the teachers' lack of organized guidance, the insufficient training and shortage of teaching materials are also common. These challenges indeed raise a good argument for the existence of a methodical, research-based set of interventions that are easy to use and could aid preschool teachers by enabling them to make play a part of their learning activities in a deliberate and premeditated way. This paper leads to teachers' usage of a guidebook that is bilingual and learning materials that are culturally suitable through a framework of activities that include assessment design implementation, and revision of Explicit Play Strategies (EPS). Besides advocating the implementation of play-based education in day-to-day classroom scenarios, this initiative intends to improve children's cognitive functions memory, reasoning, and problem-solving through play. It strives to provide educators with a systematic tool to design, carry out, and appraise play-based activities (Yee et al. 2022; Gica et al. 2025; Etokabeka, 2024).

Globally, educational systems have turned more and more towards learner-centered and play-based approaches following the rising popularity of child-centered education. Generally, these models are considered highly appropriate and effective for early childhood education (Gica et al. 2025; Yee et al. 2022). Theoretically, play-based learning is well justified but to keep on implementing these ideas in class is still an issue most of the time. The major drawbacks being shortage of good quality educational material and unclear ways of showing teachers how to integrate play activities with a mindfulness goal (Richard et al. 2025; Etokabeka, 2024). Consequently,

a great number of preschool teachers are unable to purposefully use play to enhance children's memory, reasoning, and problem-solving skills.

Several research works on play's contribution to cognitive development show that play, especially when the activities are specifically designed to achieve certain learning objectives (explicit play strategies), can be a well-structured teaching method through which teachers plan and lead play experiences to develop critical cognitive skills (Gica et al. 2025; Yee et al. 2022). Although the advantages of play have been recognized for ages, educators frequently encounter a number of practical issues that hinder the effective use of play. These include insufficient teacher training, poor material availability, lack of comprehensive and evidence-based guidelines, etc. (Fajinmi, 2025; Richard et al. 2025). Consequently, play is infrequently done, not properly connected to cognitive measurable goals, thus limiting its overall efficacy.

Many preschool teachers, especially those working in under-resourced areas, are struggling to implement play-based learning effectively because they are unable to locate materials that are cheap, accessible, physically tangible, and culturally relevant. Most adults think that play is a very effective method to help children learn (i.e. remember things, think through, and figure out problems), but in fact, it usually doesn't produce the desired effect. This is a clear indication that the well-researched and culturally appropriate teaching resources that make the use of Explicit Play Strategies (EPS) successful and meaningful are sorely missing (Ramirez et al. 2025; Kenya LtP Study, 2025).

The same kind of problems can be found in the Philippine setting as well. Richard et al. (2025) revealed that kindergarten teachers in Indigenous Peoples' Education (IPED) institutions regard play as an essential component; however, they are confronted with major problems not only in terms of resources but also teaching of explicit instructional support. Similarly, Mahampang et al. (2023) found that Filipino teachers are quite creative in modifying their teaching approaches but a large number of them depend on makeshift resources when they have no formal play-based instructions. Within the context of the Kindergarten Education Program, the Department of Education (DepEd, 2022) pointed out that there are still significant differences in the use of play-based teaching approaches, especially in public schools that have few resources. Looking at these pieces of evidence together, they point to the pressing demand for community-oriented and research-supported measures to enable the educators in the effective deployment of well-structured and coherent play methodologies in their classrooms.

This research paper reports on a project aimed at designing, enhancing, and assessing Explicit Play Strategies (EPS) while also offering additional teaching materials that go hand in hand with EPS. Part of these materials is a detailed guide for teachers, together with dual-language (English and Filipino) learning aids that are not only understandable and useful but also culturally connected to the learners. The main goal is to produce clear and step-by-step instructions for kindergarten teachers on how to purposefully embed EPS into their everyday teaching activities so as to improve children's mental faculties, especially memory, reasoning, and problem-solving.

Specifically, this research is limited to kindergarten teachers of public schools under the administrative supervision of Schools Division Office (SDO) of Malolos, Bulacan for the Academic Year 2025-2026. Besides being the focus of the study, this place highlights the problem that teachers in less privileged schools are severely limited in terms of teaching materials, effective methods, and professional development in guided play techniques (Richard et al. 2025; Mahampang et al. 2023) It is the aim of this project to bridge the strong theory of play-based learning and its application in the classroom. On the other hand, the research looks into explicit play strategy teaching and children's cognitive performance as the two main variables, along with the sufficiency, cost-effectiveness, and availability of materials used for play-based learning. Taking into account the local aspects shows that these educational resources are not only theoretically capable but also practically feasible in the local settings. This study intends to lay down a research-supported model that would equip teachers, encourage purposeful play, and raise the level of cognitive skills among preschool-aged children. It will help to bring about changes in the field of early childhood education in the Philippines.

The primary aim of this study is to develop and implement Explicit Play Strategies (EPS) designed specifically to address the teachers' weaknesses, lack of resources and the actual use of play-based pedagogy based on the

analysis of these factors. As a result of this initiative, kindergarten teachers will have a set of systematically organized and research-based guidelines to help them promote children's cognitive development in a more straightforward manner. Furthermore, the study will provide teachers with easy-to-follow strategies for guiding and facilitating play sessions that will significantly contribute to the improvement of children's memory, reasoning, and problem-solving abilities. This research, through the incorporation of EPS in the normal teaching routines, is not just intending to bridge the divide between the theoretical foundation of play-based learning and its successful and effective utilization, but especially in circumstances where there is a lack of resources.

This study will be very beneficial to different types of stakeholders. Firstly, it offers kindergarten teachers a research-based model for the effective inclusion of play-based learning activities; so, they will feel more assured and be experts in this teaching technique. Apart from being a teacher's handbook, the bilingual guide walks teachers step by step in carrying out the play activities thereby facilitating learning continuity and mental development of children. At the end, it leads to the enhancement of teachers' expertise and competencies. On the contrary, intentional and thorough use of EPS through play will indicate a boost in students' attentiveness, a raise in their level of thinking as well as an overall school readiness by the development of both cognitive and non-cognitive abilities. In addition, the research will offer educators simple methods to help and encourage the children's play times which will largely lead to the enhancement of memory, reasoning, and problem-solving skills of children. In fact, by integrating educational play/simulative learning (EPS) into usual teaching practices, this study aims to not only close the gap between the theory of play-based learning and its practical and effective use, but especially the situation when resources are scarce.

Statement of the Problem

The general problem of the study is: How do kindergarten teachers integrate explicit play strategies into their lessons to support children's cognitive growth despite limited resources?

Specifically, the study seeks answers to the following questions:

1. What challenges do kindergarten teachers encounter in implementing play-based learning in terms of:
 - 1.1. adequacy;
 - 1.2. affordability; and
 - 1.3. accessibility?
2. What explicit play strategies can be designed to enhance preschoolers' cognitive skills, specifically in the areas of:
 - 2.1. memory;
 - 2.2. reasoning; and
 - 2.3. problem-solving?
3. How can a bilingual (English and Filipino) Explicit Play Strategies Manual be developed and evaluated to determine its:
 - 3.1 content;
 - 3.2 prints;
 - 3.3 illustrations;
 - 3.4 design & layout; and

3.5 overall satisfaction & dissemination?

4. How may the implementation of the manual be carried out by kindergarten teachers through classroom orientation and application of selected play activities?

5. What is the level of acceptance of the manual among users regarding the application of explicit play strategies and resources in enhancing preschoolers' cognitive competency in terms of:

5.1 content & relevance;

5.2 clarity & organization;

5.3 cognitive enhance through play;

5.4 practicality & usability; and

5.5 overall acceptability

Significance of the Study

This study's findings are anticipated to make a substantial contribution to early childhood education by addressing the practical and pedagogical problems educators encounter in implementing play-based instruction to improve children's cognitive abilities. Its outcomes will benefit the following stakeholders:

To Kindergarten Teachers, the study acts as a bilingual and structured reference to help them incorporate explicit play strategies in their day-to-day teaching. This guidebook is a great tool to help teachers provide meaningful and cognitively stimulating play activities even when materials are limited as it contains step-by-step instructions, playable activities that can be changed according to the needs, and resource ideas. Also, it is intended to build teachers' instructional skills and boost their confidence in using play-based teaching methods successfully.

To Preschoolers, the study can contribute to children's cognitive development since the play activities are meaningful and engaging, allowing them to improve memory, reasoning, and problem-solving skills. Fruitful play allows children to improve their curiosity, creativity, and independent thinking, all of which are essential for being a lifelong learner.

To Parents, the research will provide parents with knowledge on the role of play-based learning in the cognitive development of their children. It will also be easy for parents to do at home the same play activities found in the study with the help of inexpensive materials and simple directions. This way the learning will not have to stop at school children will be exposed to continuous support, stimulation of their key areas.

To School Administrators, the study offers a practical evidence-based model that can be adopted to improve kindergarten instruction. The findings will help administrators not only in scheduling professional development but also in using their resources effectively and encouraging teachers to implement structured play approaches that promote children's cognitive development.

To Curriculum Developers, the study provides important insight that can help the incorporation of explicit play strategies in kindergarten curriculum. The findings can direct the creation of educational models that highlight affordable, intentional, and age-appropriate play exercises that enhance cognitive skills in early children.

To Future Researchers, the study will most likely be one of the pioneers in the field. As such, other researchers will be able to use it as a point of reference for their own work, especially if they want to understand and study the learning and development of children in early childhood education. The research could be used to explain and make people realize the importance of learning through play which is a very effective way of inculcating the development of thinking skills and problem solving among young learners. Findings from this research might

also trigger more research into the creation of innovative learning through play strategies, tools, and programs that provide deep interesting well-guided play experiences.

Scope and Delimitation

This study was conducted to find out how explicit play strategy instruction contributed in developing preschoolers' cognitive competencies, especially in the aspects of memory, reasoning, and problem-solving. The study also aimed to come up with a bilingual teachers' manual that will give structured guidance for facilitating purposeful and play-based learning experiences in the situation of limited learning resources. The aspects of analysis design development, implementation, and evaluation of the manual were kept in view.

The research focused on the ADDIE Model's phases, which are:

- (1) Analyzing whether the play-based learning materials are adequate, affordable, and accessible;
- (2) Designing cognitive development enhancing activities by means of a deliberate play method.
- (3) Developing and evaluating the Explicit Play Strategies Manual through expert evaluation.
- (4) Implementing the manual through teachers' orientation and classroom application of selected play activities; and
- (5) Evaluating the manual's level of acceptance among teachers.

These parts together established the research's scope and direction, making sure that the teaching materials created were based on research, validated, and used effectively in the classroom.

The implementation phase was carried out in January and February 2026. During January, teachers used the manual's activities for around four weeks, and in February, data collection was done to measure the results and get teachers' feedback. The research was conducted at a few public kindergarten schools under the Schools Division Office (SDO) of Malolos Bulacan with thirteen kindergarten teachers participating. These teachers were the ones who both implemented and rated the manual to find out how much they accepted it.

The focus of this research was limited to public kindergarten teachers only in SDO Malolos. Hence, private preschools and other grade levels that are not kindergarten were not included. Also, it did not trace the long-term impact of explicit play strategy instruction or generalize its results to other grade levels or schools outside those that were identified.

Definition of Terms

To ensure clarity and a common understanding, the following key terms are defined conceptually and operationally as they are used within the context of this study.

Accessibility. Refers to the extent to which preschool teachers can get and employ play-based learning resources in their classrooms, as assessed during the Analysis phase of the ADDIE Model.

ADDIE Model. Refers to a systematic instructional design framework that was used in the development of the Explicit Play Strategies Manual. It includes five phases: Analysis Design Development, Implementation, and Evaluation, each phase being a step-by-step process to guarantee the manual's acceptability, relevance, and quality.

Adequacy. Refers to how well the available play-based learning resources can help preschool teachers in carrying out explicit play strategies, based on the Evaluation phase of the ADDIE Model.

Affordability. Refers to how much play-based learning materials are friendly in terms of cost and budget-wise for teachers and schools, as looked into the Analysis phase of the ADDIE Model.

Bilingual Teacher's Manual. Refers to a teaching aid in English and Filipino that gives detailed play strategies and sample activities to guide teachers in using play strategies to develop children's cognitive skills.

Cognitive Competency. Refers to a child's capacity to think, comprehend and effectively carry out mental activities such as memory, reasoning and problem-solving.

Explicit Play Strategy (EPS). Refers to a method that involves direct teaching through play, where the teacher intentionally orchestrates playtime to target specific measurable outcomes in the development of children's memory, reasoning and problem-solving skills.

Kindergarten Learners. Refers to boys and girls who go to kindergarten classes in the public schools under the administrative supervision of the School Division Office of Malolos, Bulacan. They are the main focus of explicit play strategy instruction.

Kindergarten Teachers. Refers to people who have licenses to teach young children. They are the teachers in a public kindergarten school run by the School Division Office of Malolos, Bulacan. These teachers will be the ones who respond to and carry out explicit play strategies in the classroom.

Learning Resources. Refer to the materials, tools, and equipment, whether improvised or supplied, that assist teachers in facilitating play-based and cognitively oriented learning activities.

Level of Acceptance. Refers to how much preschool teachers think about the usefulness, practicality, and relevance of the developed bilingual teacher's manual when they use it in the classroom.

Limited Resources. Refer to the lack of materials, tools, and funds that make it hard to carry out play-based learning activities effectively.

Memory. Refers to the preschoolers' ability to remember and recall information or experiences through play-based activities, as discussed in the Design phase of the ADDIE Model when planning explicit play strategies to improve cognitive skills.

Play-Based Learning. Refers to a teaching style that uses play as the main way to teach, letting children learn, explore, and create in a natural way while also improving their social, emotional, and cognitive skills.

Problem-Solving. Refers to preschoolers' ability to find problems and come up with good solutions while they are playing, which is part of the Design phase of the ADDIE Model to improve critical thinking skills.

Reasoning. Refers to preschoolers' ability to think logically and see connections and patterns during structured play activities, as stressed in the Design phase of the ADDIE Model to encourage higher-order cognitive growth.

THEORETICAL FRAMEWORK

This chapter offers the theoretical and conceptual basis of the study. It consists of the pertinent theories, literature studies, conceptual framework, and assumptions that form the basis and giving the direction of the study on the use of explicit play strategies to improve children's cognitive competency.

Relevant Theories

Humanistic Learning Theory, also known as the Person-Centered Approach was formulated by Carl R. Rogers during the early 1950s. In this theory, it is stated that human learners by their very nature have the capacity to understand themselves, solve problems and grow independently, and that learning is more effective when the learner is in a support environment with empathy, unconditional positive regard, and congruence (Rogers, 1951). Play strategies meeting these propositions of humanistic learning theory can be a great fit in the early childhood education context that focuses on the preparation of the play-based pedagogical environment. That is, explicit play strategies have great potential to organize play activities around the targeted skills while also allowing children to have fun and freely discover and learn through their own experiences. Actually, explicit play

strategies guide learners in a structured manner at the same time they are used to empowering learners and therefore can be thought of as having a double benefit: on the one hand, they guarantee active involvement of the learners, deep level of reflection, and knowledge generation; on the other hand, they enable using the cognitive tools such as reasoning memory attention, and problem-solving which are among the very essential components of cognitive competence.

Humanistic learning theories focus on the whole person and the significance of personal relationships and learning conditions. These ideas can be used together with structured or explicit play to promote children's cognitive development. For instance, the studies on person-centered education à la Rogers in relation to student engagement reveal, among other things, that by creating supportive, child-centered environments, schools can assist learners in experiencing motivation that is internal, maintaining attention for a longer period, and engaging in deep cognitive activities (Swan et al. 2020). Moreover, research targeted at the use of play-based pedagogical approaches with special-education students indicates that, if introduced in a manner that respects individual learners' abilities and interests, the children's cognitive skills such as sequencing categorization pattern recognition, and logical thinking get a significant enhancement (Patrick et al. 2025).

Based on these collective findings one could say that deliberately using play as a method not only depends on humanistic pedagogy but also gets a great boost from it whereas at the same time it can be a children's gateway to actively acquiring knowledge, exercising higher-order thinking, and becoming capable of solving problems in a highly engaging and contextually relevant manner. For instance, one may argue that homeschooling for kindergarten kids by linking Humanistic Learning Theory and play methods, is quite a powerful and comprehensive way of helping children develop thinking skills. Essentially, anyone who educates kids can easily create play experiences that enhance the development of memory attention reasoning, and analytical skills while, at the same time keep the context nurturing and supportive so as to allow exploration, curiosity, and self-directed learning (Rogers, 1951; Swan et al. 2020; Patrick et al. 2025). Actually, not only does this approach lead to the acquisition of the first cognitive skills building blocks but also significantly contributes to a child's emotional well-being, creativity, and self-esteem which in turn places explicit play strategies among the most potent and yet research-validated teaching tools for the entire early childhood development.

The **Sociocultural Theory**, developed by Lev S. Vygotsky (1978), is a major theoretical model in educational psychology that describes how social interactions and cultural backgrounds influence learning and intellectual development. In this theory, knowledge is a product of sharing ideas and working with more experienced individuals such as teachers, parents, and peers. The key concept of this theory is the Zone of Proximal Development (ZPD) which is the difference between a learner's independent performance level and the level of achievement possible when the learner is helped by a more knowledgeable person. The teacher's temporary support or scaffolding is the most common way of helping the student to move towards mastery. By engaging in social interactions, children learn new skills and ideas through imitation and collaborative problem solving. As a result, they develop more advanced mental functions (Vygotsky, 1978).

Recently, research has been devoted to the implementation of Vygotsky's Sociocultural Theory in early childhood and play-based education. Weisberg et al. (2016) argue that guided play, which gives children freedom to act while adults are there as support, is in fact a way of learning behind Vygotsky's ZPD concept and it results in kids' higher cognitive achievements. Likewise, Yin L et al. (2021) carried out a study on Hong Kong teachers' beliefs and practices in play-based classrooms and discovered that when teachers scaffolded play at the moment that was appropriate, the children managed to improve their problem-solving and communication skills. Furthermore, Etokabeka (2024) observed that playful activities with a teacher's guidance foster executive function in preschoolers, thereby showing how significant teacher's role in a child's learning is. All these studies support Vygotsky's view that learning is inherently a social activity and teachers can be main facilitators of children's cognitive development.

Sociocultural Theory greatly shapes the current study by providing a detailed outlook on how play, especially when it is intentionally directed, can be a tool for enhancing children's cognitive skills. The play strategies manual with explicit instructions that is proposed is grounded in Vygotsky's principle of learning whereby children achieve most of their competence when they interactively partake in guided experiences within their ZPD. The study, through the delivery of well-outlined and culturally valid play-based methods of teaching to

kindergarten teachers, embraces Vygotsky's idea of scaffolding, which is a mechanism through which children can do active exploration, reasoning, and discovery with the help of teacher-child interactions that are meaningful. Hence, this theory is in line with the very aim of the research which is to allow the teacher to create play-rich environments that stimulate thinking, promote social collaboration, and support children's all-around cognitive development.

The **Cognitive Development Theory**, developed by Jean Piaget (1952), explores how children gain knowledge step by step through playing with their environment. According to Piaget, learning occurs when a child interacts with the world and is able to alter old concepts to new ones. Children have four main stages of mental development: sensorimotor preoperational concrete operational, and formal operational. Preschoolers who are in the preoperational stage can be stimulated to develop cognitively and grasp abstract concepts through symbolic play, imagination, and hands-on experience.

Several researchers in the past have taken inspiration from Piaget's theories to develop today's play-based learning techniques. For instance, Smith et al. (2021) have noted that guided play can significantly improve children's memory and conceptual reasoning. In the same vein, Cruz (2022) who did a study on the effects of problem-solving games and puzzles as modes of structured play among preschoolers, revealed that the kids' logic and problem-solving skills were highly facilitated through such activities. On the other hand, Daniels et al. (2023) have recorded that children's capacity to assess situations and invent new solutions was considerably increased through play experiences that encouraged researchers and explorers (discovery). These results align with Piaget's idea that children, through play, become the main agents in the co-construction of mental structures.

This study mainly draws on Piaget's Theory of Cognitive Development for the formulation of direct play methods that can effectively facilitate memory, reasoning and problem-solving skills of nursery children. The Manual of Explicit Play Strategies being proposed is an interpretation of Piaget's thoughts into detailed activity plans which, at the same time, allow children to think independently and to learn experientially. When play is meaningful, a teacher, not only shows children the way, but also occasionally helps them to logically arrange their thoughts, to correctly reason and to find solutions creatively. Thus, Piaget's theory very much supports that the major aim of this research is to propose that cognitive development is achieved through play experiences that are intentionally designed and the play experiences that are appropriate to children of that age and have a meaningful purpose.

The **Guided Play Theory**, which was first developed by Kathy Hirsh-Pasek, Roberta Michnick Golinkoff and their research team, focuses on the notion that children can reach their highest level of learning if their play experiences are a mix of child-initiated and adult-directed interactions. One of the distinctions between free play and guided play is that guided play continues to hold the fun and interest of play but simultaneously introduces the teacher's intentional learning moments. Apart from making the environment fun, adults also supply fascinating materials and warmly invite or question children which assists them in grasping their concepts and ideas at a deeper level. This mixture gives children a chance to share themselves through their play experiences while simultaneously gaining from the subtle guidance that encourages cognitive, language, and social development.

Guided play is closely linked to research evidence as an initiative working for the development of learning at an early age. Weisberg et al. (2016) through their study found that children who had guided play were better at reasoning and problem-solving than those who had direct instruction or free play. Similarly, Hirsh-Pasek et al. (2020) pointed out that play guided by adults brings about the growth of children in vocabulary, creativity, and social skills among preschoolers. The major finding of Etokabeka (2024) is that guided play facilitates executive function, engagement, and the formation of positive attitudes toward learning by combining structured and free elements. These different writings are in agreement that guided play is a very effective and well-researched method through which learning is made fun, motivating, and teaching is purposeful.

The study "Applying Explicit Play Strategies to Support Kindergarten Teachers in Enhancing Children's Cognitive Competency" is grounded in the concepts of Guided Play Theory. It suggests that using playful learning scenarios and livening up the environment with cheap and easily available play items in the local area could be a powerful tool for kindergarten teachers to inspire children's thinking and profound exploration. A

manual with Explicit Play Strategies is based on the premise that when teachers lead children during their playtime, it turns out to be a very productive method for boosting children's reasoning, problem-solving, and creativity which form the core of cognitive competencies in early childhood education.

Related Literature

Play-based learning refers to a teaching approach that enables preschoolers to acquire knowledge through hands-on discovery, imagination, and socializing that carries significance. Organizations like UNESCO and UNICEF have published studies showing the effectiveness of play-based learning and have highlighted its various advantages, such as aiding in language development, enhancing one's ability to solve problems as well as the overall intellectual growth of a person. While children can process the world around them on their own through play, it is much more effective and powerful when done with the support and guidance of a teacher (Kang et al. 2023). Apart from instruction from a teacher, the presence of play things that are well thought out and readily available also goes a long way in helping educators deliver captivating experiences that respond to the happen diverse developmental needs of children.

Apart from the improvement of cognitive and language capabilities, play-based learning is also a way to encourage development in other areas like social, emotional and physical growth. Children through play learn how to cooperate, understand other people's feelings, regulate their own emotions, and recover after failures. Besides these, through playing they engage in physical exercises requiring the use of their body, which helps them not only to perform and master these physical activities but also to develop the motor skills that they will need for school. In addition, play can be a great tool for training executive functions like working memory, cognitive flexibility and problem solving. This is achieved by teachers who deliberately incorporate cognitive challenges, assist (scaffold) children's interactions and provide reflective prompts that transform play into meaningful learning experiences, thereby equipping children for formal education and the development of 21st-century skills.

When play is planned and purposeful, it helps to equalize opportunities for all children. Especially, if it is aligned with their abilities, language, and life experiences. Teachers by nature shape how children learn through hands-on exploration observing providing open-ended challenges, and promoting collaboration. Therefore play structured, is more than just fun - it is a means of achieving fairness across different backgrounds and supporting diverse developmental paths. An Explicit Play Strategies Manual offers kindergarteners clear instructions for designing, guiding, and evaluating developmentally appropriate activities that enhance higher-order thinking skills. Furthermore, children become increasingly curious as their learning is active rather than passive. Incidentally, this method fosters both intellect and a sincere interest in discover

The availability and challenges of play-based learning resources

One of the most significant aspects affecting how well children's education can be through play-based learning is that of having suitable resources. Research shows that preschool teachers face challenges like the sufficiency of materials, the cost of materials, and even the availability of materials to them. Plan International (2022) unveiled that even very cheap recycled and local materials could be used for play-based learning, which is one of the ways of getting around lack of traditional resources. Besides, the Institute of Education Sciences (2021) highlights that having the right materials is almost indispensable when using play as a teaching tool, especially when the locations are remote or there is a shortage of resources. Therefore, both these references consider that the quality or quantity of materials present greatly determines the extent to which teachers can create enjoyable, developmentally appropriate learning experiences.

Of course, the issue is not just having enough material; price and availability are still posing challenges to the kindergarten teachers. According to UNICEF Uganda (2021), Karamoja kids have nowhere to get play-based learning materials easily because the main causes of their going from one place to another and the lack of distribution show the problem of different schools receiving different amounts of resources. Gurgel (2025) is a document that gives one the tools to work in a new environment and shows good examples/illustrations even with very little money and the limitation of physical. Similarly, the IDRC (2024) document highlights that foreign help combined with local resource support ensures that the resources would be made only available and

then only use of low-resource settings would follow save jam, in its words. In summary these findings seem to indicate that financial and infrastructure-related concerns are major factors in determining the degree to which teachers can engage in play-based learning.

These problems are also very applicable to the present study that explores how preschool educators respond to the adequacy, affordability, and accessibility of play-based learning resources. It is through discovering what teachers do to compensate for the scarcity of materials, budget constraints, and unequal distribution that the study aims to provide the community with practical ways of developing play-based learning environments. This knowledge, in turn, can be instrumental in devising clear play methods that stimulate children's cognitive abilities so as not to allow the lack of resources to result in a deterioration of the quality of early childhood education.

Explicit play strategies that enhance children's cognitive competency

Play-based learning has, for a long time, been recognized as one of the best methods to introduce and stimulate cognitive skills and behaviors in young children. According to Child Development Journal (2024), play acts as a medium through which children can deeply engage in problem-solving, memory training, and logical reasoning. Researchers have discovered that during play, children are not only grasping new ideas but also interacting with a variety of potentialities and, through this, they are able to establish logical linkages - all of which are essential skills for critical thinking. Besides being engaging, play provides children the opportunities to refine their thinking processes. This consequently leads to learning and memory improvements. The article further remarked that varieties of play, particularly those that are teacher-directed, with clear goals, and carefully designed materials, offer more reliable improvements in cognition compared to free play.

Child Mind Institute, (2024) argues that play is the main mode by which children naturally learn to develop the essential cognitive skills that will be very useful to them throughout their lives. It is quite well-known that even if play is done alone, it does not yield children with the means to enhance their working memory, planning, and logical thinking skills. However, the presence of an adult not only makes play more engaging in terms of fun but also transforms it into a learning moment where adults can ask children challenging questions about their brains, give them the chance to think deeply about their play, and help them solve problems in a creative manner. As a result, children become more flexible in their thinking, and stronger brain connections that will help advanced forms of thinking are made. Apart from the cognitive benefits, play is a source of emotional involvement and curiosity that facilitates the deeper and longer-lasting learning of cognitive skills, according to studies.

Based on these analyses and findings, this paper firstly seeks to identify direct play strategies that intentionally engage children's memory, reasoning, and problem-solving capabilities. Producing a Manual of Explicit Play Strategies generally takes theoretical research as a starting point and offers children through play activities that help develop their cognitive skills and areas. This paper however through a series of experiments, decides to double the features of play as: a) an intellectual growth source and b) a fun activity by combining teacher-directed sessions with inquiry-based learning. Individually and collectively, the reviewed papers and the related research literature provide support for the view that-play-based interventions that are highly purposeful and very well-designed-play are the most effective for children's cognitive development.

The creation of affordable and bilingual instructional materials to support teachers in resource-limited settings

Research Institute for Teacher Quality (RITQ, 2021) in a study disclosed that quality education mostly depends on the level of equipping and support of teachers to build productive learning environment. RITQ explains that teachers are not only instructors; actually, they shape pupils' experiences and results. It also happens that access of teachers to proper training, resources, and teaching methods determines the level of the lesson quality in the classroom. The current research is very much in line with these issues as it attempts to prepare a kindergarten teachers' Explicit Play Strategies Handbook as a tool for enhancing children's cognitive abilities through play that is guided and intentional. Both works of literature are on the same page that teacher empowerment and instructional support are the main factors. Provision of resources that are inexpensive practical simple, and comprehensible to teachers brings about success in these aspects. With such a provision, teachers are able to lead meaningful and inclusive learning activities even in case of scarcity of resources.

Studies reveal that one key factor for teachers to effectively meet the needs of individual students in diverse classrooms is the ready availability of materials and teacher support. In fact, to provide effective teacher mentoring in linguistically and economically diverse settings, the availability of inexpensive and bilingual resources is a significant element of early childhood education. With DepEd releasing a statement that starting from 2025, teaching from kindergarten to Grade 3 would be conducted in both Filipino and English, the creation of bilingual teaching materials not only becomes necessary to harmonize with the latest educational policies but also beneficial in pupils' language barrier elimination in the classroom. In fact, the delivery of teachers' lessons can be made better by furnishing them with materials that are not only culturally appropriate but also linguistically and economically attainable, at the same time, helping the students gain a better comprehension.

Overall, these studies highlight the importance of designing teaching resources which are not only inexpensive but also bilingual. Besides focusing on the low cost, the inclusion of bilingual features helps this project in dealing with the shortage of present educational materials for preschools teachers in poor areas. The Explicit Play Strategies Manual, a research output, is consistent with these views and equips educators with easy-to-implement, culturally aligned, and developmentally authentic tools that contribute to children's cognitive development through play with guidance. Besides, the paper intends to support fair, open, and lasting early children education not only for the instructors but also for the pupils.

Evaluation and Acceptance of an Explicit Play Strategies Manual for Enhancing Cognitive Competency

Recent studies highlights how essential it is to equip teachers with comprehensive training and adequate teaching resources as a means of not only enhancing their pedagogical skills and students' output but also increasing their job satisfaction. A Manila-based education rights advocacy group contends that apart from teacher training and competency development, ongoing teacher motivation and openness to changes introduced by new methods can also be achieved through well-crafted teacher guides, modules, and professional development training. Agreeing with this perspective, teaching websites emphasize that besides assisting teachers in the preparation of lessons and management of classes, teacher manuals are also a way of sustaining an acceptable standard level of content delivery which consequently increases the usability and raises the level of teacher acceptance. All these different perspectives combined make a strong argument for instructional materials that are easy to understand, culturally relevant and well-matched to the level of teachers as the major contributors to teacher satisfaction, acceptance, and effectiveness - the three main factors that drive student quality learning experiences.

Research and teacher experiences have consistently shown that it is very important to develop instructional manuals that are aligned with the changing needs of teachers and students. In fact, TeacherPH (2024) found out that teachers still mainly use manuals to guide them but it is actually up to them as to which parts they will use to meet the needs of their students. In this regard, instructional materials that are not only teacher-friendly but also capable of being used in different situations, promote teacher acceptance and motivation should be the top priority. For example, developing teacher professional training in Ghana which includes play-based learning, teacher training, pilot testing feedback revision and final production of teaching materials has been a positive example of ensuring teachers' positive reception without compromising on the usefulness of the program (IPA, 2023). Also, research in Ghana and Sierra Leone is consistent with the fact that students perform better and teachers are more satisfied, confident, and keen to use play methods when materials for students are chosen to represent their culture and everyday life (Quartey et al. 2025). This is a good example of our research on the development and evaluation of a Play-based Learning

The study results give us strong evidence on how the lead story impacts the production and evaluation of a Detailed Play Strategies Handbook for Filipino elementary teachers. The researchers' understanding of teacher preferences for direct, simple, and flexible materials resulted in the handbook design being not only theoretically sound, culturally specific, and practically feasible at home and in school. Teacher engagement, through giving feedback and measuring the level of acceptance, are crucial processes of making sure that the handbook is being used properly and that the highest results are attained; the problem of teacher resistance or non-use can be largely alleviated. By addressing aspects such as usability, content clarity, classroom compatibility, teacher acceptance, etc. alongside providing cognitive and socio-emotional competencies this ultimately leads to enhancement of teacher confidence, engagement, and overall effectiveness in play-based learning facilitation (Rogers, 1951; Swan et al. 2020; Patrick et al. 2025).

Related Studies

Leading early childhood education think that play is a big reason why children get involved, come up with creative ideas, and develop their brains. Play, no matter if it is free or guided, has some effects. When it is deliberately combined with schoolwork, it can boost children's skills of problem-solving memorizing reasoning, and their overall learning. Studies not only in the country but also globally show that the key factor behind the success of play-based learning is the teachers' pedagogical knowledge, planning, and skills to carry out direct play strategies, apart from having play resources available.

Having well-planned, simple, and locally fitting teaching materials is indispensable to assist teachers as well, especially in low-resource settings. Apart from the fact that good-quality play items and teacher's guides give educators a feeling of being professionals, they also contribute to better classroom execution and stimulate higher-order thinking as well as children's engagement. Moreover, studies indicate that educational materials need to be subjected to checks for their user-friendliness, suitability, and overall effectiveness before they are finally accepted and have a real impact in the classrooms.

This literature review only addressed four major topics: (1) the availability and limitations of play-based learning resources, (2) the effects of structured play on the development of children's cognitive competencies, (3) the development of low-cost bilingual instructional materials, and (4) the evaluation and acceptability of play-based manuals. This review, by integrating these research works, has paved the way for the current study, which, through the design, development, and testing of a bilingual Explicit Play Strategies Manual, aims to assist preschool teachers in the effective implementation of play-based learning in order to promote, among other things, children's cognitive skill enhancement and overall development.

Availability and limitations of resources for play-based learning

Play-based learning greatly influences children's involvement, creativity and brain development. Actually, Mercy (2021) discloses that teachers in kindergarten Wenchi Municipality regard play as the main medium through which learning is carried out with kids' engagement, problem solving, and social interactions. Besides, Dela Cruz et al. (2023) revealed that play-based pedagogy in schools highly influences students' enrollment and their academic achievements, i.e. the deliberate use of play activities during the day not only enhances children's desire to learn by cooperating with peers but also results in children's innovating. The above play studies highlight that play should be the major element of the curriculum in early childhood education centers.

To some extent, the role of play has to be considered along with other factors that are being highlighted for change. Lin et al. (2021), for example, found that most Chinese preschool teachers preferred the guided play approach to free play and their educational background and beliefs in classroom management had a major impact on their decision-making, among other things. Likewise, Carulla et al. (2021) showed that mixing science concepts with play led to the children's executive functions development and communication with other subjects was seen as a very effective strategy. Abebe et al. (2023) found that teacher planning, creativity, and play pedagogy expertise, quite apart from the availability of materials, play a major part in the implementation of play and different learning materials. In the end, it is the teacher's disposition, educational tactics and methods of the use of resources that have a significant bearing on the quality of learning through play.

After making these revelations, the current study thought it relevant to find out to what extent preschool teachers use play-based learning, how they reorganize the available resources and whether or not they try to strike the right balance between structured and free play. In other words, the study wants to identify effective ways through which children's participation, creativity, and cognitive development can be stimulated, by focusing on the techniques used in the community setting. Moreover, the instrument comes up with a method for evaluating the sufficiency, the ease of use, and the actual deployment of teaching materials, by comparing the teacher's methods with the children's results and recommending science-based interventions for the improvement of play-based pedagogy in childhood education settings.

Explicitly structured play approaches that support the development of children's cognitive capacities

Coelho and his colleagues (2021) carried out a study to find out how a structured play program affects the executive functions development in preschoolers. A series of play sessions guided served as a tool for intervention for the targeted cognitive functions, i.e. working memory, cognitive flexibility, and inhibitory control. The result indicates that actively engaging the children in the structured play program, they significantly improved their planning, reasoning, and problem-solving faculties over those who only played their own ways (freely or unstructured). The authors concluded that conscious and carefully planned play activity is actually capable of enhancing higher-order thinking and thus, cognitive development through play experiences that are guided by teachers or caregivers is indeed a possibility.

Similarly, a local study conducted by Ongcachuy et al. (2025) investigated the correlation between teachers' ability to use play-based learning and the comprehensive development of students in different Filipino preschools. The results showed that teachers who were proficient in using indirect play methods could develop learning environments that were cognitively more challenging. Children in these environments exhibited higher levels of recall, reasoning, and creative problem-solving skills. The research underscored the critical role of teacher training in designing and implementing effective play activities that not only support developmental objectives but also foster learning. Besides, it recognized that play is not just a means of relaxation but an essential channel for intellectual development.

Both studies have demonstrated that structured and guided play is an incredibly effective method of enhancing children's cognitive skills. It gives more reasons to develop a Manual on Explicit Play Strategies. The global and Philippine results both agree with the primary objective of this research which is to make intentional play activities that aid in the development of memory, reasoning, and problem-solving which are the major cognitive skills. Actually, when we analyze our research with Coelho et al. (2021) and Ongcachuy et al. (2025), we see that we are also in the same line of thought that teacher play which is carefully planned and properly guided can indeed be a potent means of boosting children's cognitive development at the early ages.

The development of cost-effective, bilingual instructional materials to support educators in resource-constrained environments

It is through well-structured and practical teaching materials that teachers especially those who deal with resource-poor classrooms in fact, achieve better performance as several research papers share. Apart from that, some papers uncover that these materials contribute to teachers' motivation and the children's learning through the teacher's contact and play together. A study by Cadungog et al. (2024), a local research, used qualitative research with 15 kindergarten teachers. The purpose was to examine the level of explicit instruction implementation in kindergarten. The findings of the study revealed that teachers who had well-arranged and instructionally clear materials in their hands carried out lessons effectively and children were actively engaged in the learning process. The authors emphasized very much that well-made and easily accessible teaching resources will bring about an improvement in teacher performance and in the overall classroom results, especially in those places where resources are limited.

Amongst foreign literature, Siller et al. (2023) carried out a quasi-experimental study with thirty preschool teachers to assess the effectiveness of using professional development interventions with few resources. Their result revealed that a time when the only thing available (could be used) was very cheap, very simple, and made completely manually (without even the use of tools materials), not only the capacity (teachers' ability) but also the willingness (teachers' attitude) to change their behavior and apply strategies significantly increased. On the other hand, through a research method focused on meaning, Etokabeka (2024) explored with twenty South African preschool teachers among other things, the possibility of structured play to be used for children to develop their executive function. The results indicated that teachers who were instructed in a step-by-step and detailed manner how to execute play-based activities were indisputably the ones best able to do the activities, which for children, according to the report, involved memory, reasoning, and problem-solving skills.

Regarding various global and local studies, these research writers hence come up with a clear evidence that all the teachers majorly benefitted from a well-structured, practical, and cheap set of instructional materials,

especially when the classrooms are the least well-resourced ones. Actually, such pieces of evidence really serve as a direct and firm argument in favor of this work which is the draft of a bilingual teacher's manual featuring clear play strategies. The manual is thought to be a detailed guide that not only help teachers feel more confident and capable but also children show greater cognitive development through teacher-directed play in the kindergarten classrooms with very limited resources by providing a step-by-step and cost-effective materials, giving more opportunities.

Enhancing Cognitive Competency in Kindergarten: Evaluation and Acceptance of a Play-Based Instructional Manual

Studies highlighted that kindergarten teachers, particularly those without formal Early Childhood Education (ECE) training, still face difficulties in implementing developmentally appropriate and play-based pedagogies effectively. Dela Cruz et al. (2025) conducted a qualitative case study of non-ECE teachers and found that many of them suffered from pedagogical mismatch and resorted to unstructured, self-directed approaches. This paper emphasized the pressing need for structured professional development programs and high-quality instructional resources. One major factor limiting teachers' ability to effectively deliver play-based instruction is the lack of play-based, ready-to-use, comprehensive teaching manuals. The study supports the call for institutional support, targeted professional development, and instructional materials. These not only enhance the teacher's confidence but also their engagement and acceptance of innovative teaching methods.

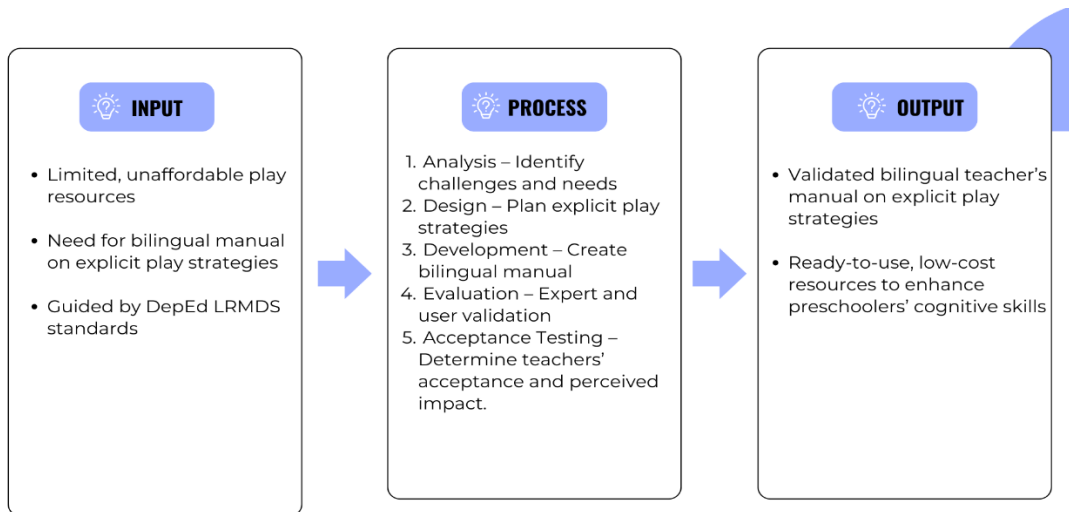
Other scholars have raised the issue that teacher training and educational resource availability are the major problems. For example, Bongalon (2025) noted that the kindergarten teachers are in need of a very precise and thorough guidance on how to implement the DAP (developmentally appropriate practices) since the dearth of well-structured resources is a great limitation both from the perspective of the quality and the faithfulness of instruction. Jaca and the rest of the authors (2021) showed that even though teachers could rely on the materials that are localized or second-hand, the enormous amount of time required for making the teaching materials was the main problem to the efficiency and the regularity. Overall, these researches argue for providing the teachers with the resources that are easy to reach, locally relevant and time-saving, so that not only the teacher performance is uplifted but also the instructional innovations are put to use and are acceptable.

In fact, the success of students and the happiness of teachers depend on the quality and appeal of educational resources. For example, Balaria and team (2021) found in their work that students liked best instructional materials that changed the main emphasis of practical application, while the main focus was also on the development of higher order thinking skills (HOTS). However, the costs and the design elements limited the attractiveness of the visuals. Velasquez and co-workers (2025) state that due to time constraints and too much paperwork, not only were teacher efforts at fully exploiting resources less effective but also these factors hampered the resources' monitoring. This points towards the acquisition of ready-made, pre-packaged materials that are less demanding of teacher efforts yet are capable of producing maximum impact in the classroom as an escape route from these problems. In fact collectively these studies demonstrate the ongoing need for instructional materials that are accurate, user-friendly and modifiable not only to win teachers' approval of the materials but also to enable them to conduct direct play activities which will significantly enhance the cognitive competence and overall development of kindergarten children.

Conceptual Framework

The conceptual framework of this study is a developmental design model that visually and practically the systematic process of making a Bilingual Teacher's Manual on Explicit Play Strategies. At its core, it is built around the ADDIE instructional design model and directs the production of the manual one step at a time from recognizing the teachers' needs to the evaluation of the finished product. The type of model the paper presents is even a conceptual metaphor of the main idea that children's cognitive gains, such as in memory, reasoning, and problem-solving, can be effectively augmented through the deliberate use of explicit play strategies that are supported by well-designed instructional materials. Therefore, the framework follows the belief that if ADDIE is correctly implemented at each stage of the manual development, the end product would most probably be research-based, context-specific, and capable of truly meeting the needs of the kindergarten teachers who are offering the children meaningful learning experiences.

Figure 1



Conceptual Framework

The conceptual framework illustrates the approach taken by the study to develop a bilingual guidebook outlining clear play techniques for preschool teachers. Inputs consist of relevant literature, teachers' experiences, and classroom challenges mainly due to the scarcity of resources when conducting play-based learning. These inputs firstly, help to point out the deficiencies in the current practice and secondly, lead to the formulation of the new strategies development guide. During the research, the work follows the ADDIE instructional design model, to start with the analysis of the teachers' needs, then design, and develop well-defined play strategies, distribute the guidebook in selected areas, and finally, evaluate its effectiveness and potential for use. With this, the guidebook is not only research-based but also practical and reflective of the real classroom situations. The product of this project is a bilingual guidebook which has been validated and consists of detailed play activities and materials guides. Thanks to this guidebook, preschool teachers will be equipped with a readily accessible and methodically arranged reference to the skillful use of play to enhance children's cognitive skills like memory, reasoning, and problem-solving.

Assumption of the Study

Like most of the research, this one also relies heavily on several assumptions that not only serve as its driving force but also as its unique features. For this paper, the primary assumption is that developing and using a Bilingual Teacher's Manual on Explicit Play Strategies will equip kindergarten teachers with a systematic, easy-to-use, and always available guide through which they can effectively carry out play-based learning in their classes.

This research merely aims at producing an organized manual of explicit play strategies that will always be a guide for kindergarten teachers in using play as a tool for the cognitive, social, emotional, and physical development of the children. In fact, the research very largely assumes that the finished bilingual manual on explicit play strategies will be published and utilized by kindergarten teachers as an expertly arranged guide for the implementation of play-based education that is purposeful. In giving teachers explicit, step-by-step activities and simple learning materials, the manual desires to facilitate them in moving beyond merely letting children play to intentionally developing their enhanced cognitive skills in such areas as memory, reasoning, and problem-solving.

Moreover, it is also anticipated that other kindergarten teachers who are outside the location of the study will be able to obtain and use the manual as a guide and experience its benefits in their teaching context. Introducing the manual is intended to result in the improvement of the kindergarten curriculum by offering clear play strategies that help young children's cognitive development to be significant, well-organized, and comprehensive.

METHODOLOGY

This chapter describes the research design and methods employed in the creation and validation of the Bilingual Teacher's Manual on Explicit Play Strategies. It gives a thorough account of the steps taken during the study, such as the research design, the people who took part, the tools used, the way the data was collected, and the ways the data was analyzed. The chapter also talks about the statistical methods used to test the developed manual and the ethical standards that were followed to make sure that all parts of the research were accurate, honest, and private. These parts work together to make sure that the study is methodologically sound and in line with its goal of helping kindergarten teachers improve children's cognitive skills through structured and purposeful play.

Methods and Techniques of the Study

The research utilized an exploratory sequential mixed-methods design based on the ADDIE instructional design model. This model consists of the five phases: Analysis Design Development, Implementation, and Evaluation. With this design, the research commenced with a qualitative phase to thoroughly investigate and comprehend the needs, experiences, and perspectives of the target participants, kindergarten teachers, with regard to explicit play strategies and instructional materials. The qualitative phase provided valuable information that led to the next quantitative phase where evaluation tools were used to measure the usability, applicability, and acceptability of the developed teachers' manual in a structured manner.

This design was perfect to transferring the concept of the study that is the creation of a Bilingual Teachers' Manual on Explicit Play Strategies featuring step-by-step play-based learning activities for kindergarten teachers. It was decided to take a descriptive developmental approach, which targets the development and enhancement of the learning materials and the evaluation of their acceptability, usability, and teacher satisfaction rather than the direct measurement of children's learning outcomes. In essence, mixing qualitative investigation and quantitative measurement the design made sure that the manual was not only relevant to the context but is also supported by evidence.

During the qualitative stage, interviews using semi-structured format and classroom observations were used to collect the data from kindergarten teachers. This step enabled to grasp the teachers' experience in the classroom and their needs in implementing play-based learning. The understanding was then used to design and develop the bilingual guide. Hence, the materials were aligned to the teachers' needs in the real world.

During the quantitative stage, the newly developed manual and learning resources were assessed with a questionnaire having a Likert scale. This survey explored the acceptability usability clarity, and practicality of the manual as well as the overall teacher satisfaction, and thus, it showcased to what extent the manual was able to fulfill the needs of kindergarten teachers. The sequential integration of qualitative and quantitative data ensured that the bilingual manual and explicit play strategies were evidence-based, contextually grounded, and tailored to kindergarten teachers.

The ADDIE Model was the main framework used to create the Explicit Play Strategies Manual in a systematic way. The five stages made sure that the process was based on research and met the real needs of kindergarten teachers.

Analysis. This step spotted the requirements, issues, and ongoing classroom practices of kindergarten teachers in the implementation of play-based learning. Besides interviews, semi-structured and classroom observations were made to check the adequacy, affordability, and accessibility of play materials. The findings of this phase were used as a basis for the design and content of the bilingual manual.

Design. The framework and structure of the manual were planned out based on the information that was collected. The researchers figured out the learning goals, the order of the material, the bilingual format (English and Filipino), and the play activities that fit with the kindergarten curriculum. The activities were carefully planned to help children improve their memory, reasoning, and problem-solving skills, making sure they were

in line with the learning goals that had been set. The design also included making a framework and standards for judging the quality and usability of the manual.

Development. During this phase, the Bilingual Teachers' Manual on Explicit Play Strategies was written, formatted, and put together. The manual had detailed descriptions of explicit play strategies, activity guides, and cheap materials that teachers could easily use in class. The draft was checked by experts to make sure the content was accurate, relevant, and appropriate for teaching. This was done using an evaluation tool that was based on the Department of Education Learning Resource Materials Development and Standards (LRMDS, 2009). Changes and improvements were made based on feedback from experts.

Implementation. After being checked for accuracy, the manual was tested with thirteen chosen kindergarten teachers from the Schools Division Office of Malolos City, Bulacan. Teachers used the manual in their real classrooms by using its play-based activities in their lessons every day. Their experiences during implementation were documented via observations and teacher reflections to evaluate the manual's effectiveness in actual instructional settings.

Evaluation. The last step was to see how well the teachers who took part liked the manual and how happy they were with it. The assessment utilized a Likert-scale questionnaire modified from the research Development, Validation, and Acceptability of a Guidebook in Writing Investigatory Projects by Butron (2018). We used descriptive statistics like the weighted mean and standard deviation to figure out how useful, relevant, and acceptable the manual was for teachers.

The manual ended up being both practical and deeply rooted in classroom reality. It followed a clear sequence of steps, tested changes along the way, and relied on data from real teacher experiences. For better or worse, every stage focused on how children learn best through guided play, not just theory, but actual outcomes observed in early learning settings.

Participants and Respondents of the Study

The bilingual teachers' manual underwent a developmental validation phase before its implementation to ensure quality and effectiveness. Three expert validators meticulously assessed the manual utilizing the Learning Resource Development and Management System (LRDMS) tools, concentrating on its pedagogical validity, cultural pertinence, and linguistic precision. The panel of validators included: (1) a professor from Bulacan State University, (2) a Master Teacher with expertise in kindergarten education, and (3) a Filipino professor who assessed and validated the Filipino version of the manual. Their combined expertise guaranteed that the manual was academically rigorous, compliant with curriculum standards, and attuned to the instructional requirements of both educators and students.

The selection of validators was informed by explicit criteria to guarantee relevance and credibility. The professor from Bulacan State University was selected for expertise in early childhood education, specifically in play-based learning, which directly corresponded with the manual's focus. The Filipino professor was chosen due to extensive experience in early childhood education and proficiency in validating instructional materials in Filipino. The Master Teacher came from a public school outside of the one we chose, which made sure that feedback was not biased and solely based on real classroom experiences. Validators were chosen based on their proximity and accessibility, as well as their professional reputation, expertise, and practical experience, which greatly enhanced the manual's credibility and rigor. The meticulous selection process guaranteed that the manual was endorsed by experts with pertinent backgrounds and experiences, thereby augmenting its reliability as a resource for implementing Explicit Play Strategies in kindergarten classrooms.

During the evaluation phase, the study's respondents were kindergarten teachers from public schools providing kindergarten services within the Schools Division Office of the City of Malolos, Bulacan, for the Academic Year 2025–2026. The participants were chosen based on the proximity and accessibility of their schools to the researchers to ensure the feasibility and efficiency of data collection. Their insights, pedagogical experiences, and instructional methodologies yielded valuable and authentic data for evaluating how kindergarten educators incorporated Explicit Play Strategies into their teaching to foster children's cognitive development, particularly

in memory, reasoning, and problem-solving skills, despite resource constraints. Their involvement was essential in producing pertinent and significant outcomes that aided in the development and validation of the bilingual teachers' manual.

The researchers utilized a convenience sampling method to identify participants, choosing respondents who were easily accessible, cooperative, and willing to engage in the study. This method was considered suitable for small-scale educational research where accessibility and voluntary participation were crucial. Only thirteen kindergarten teachers were included in the study because they all gave informed consent after fully understanding what the study was about and how it would be done. Their participation was an important part of the evaluation phase because it made sure that data collection stayed manageable while also allowing for in-depth interviews, classroom observations, and evaluations of the bilingual teachers' manual on Explicit Play Strategies. This level of participation was enough to provide useful information while keeping the study's focus, credibility, and overall manageability.

Table 1. Selected Public Schools and Number of Kindergarten Teachers in SDO Malolos

School Name	Total Number of Teachers	Male	Female
Bangkal Elementary School	7	0	7
Tikay Elementary School	3	1	2
Mambog Elementary School	3	0	3
Total	13	1	12

Table 1 shows how many kindergarten teachers work at three public schools in Malolos that are part of the Schools Division Office (SDO). There were 13 teachers in the study. Bangkal Elementary School had the most respondents (7), while Tikay Elementary School and Mambog Elementary School each had 3 teachers. The data shows a big difference between the genders: 12 of the respondents were female and only 1 was male. This shows that most of the teachers in the selected schools are women. The researchers chose the schools based on their proximity and accessibility. These factors made it easier to collect data and made sure that teachers who could give useful feedback on the evaluation of the Bilingual Teacher's Manual on Explicit Play Strategies were able to take part.

The selection of schools for this study was decided by a combination of practicability and relevance to the context. Geographically, the chosen schools were near both the researchers and Bulacan State University, which facilitated the researchers visiting and conducting the games and activities regularly. In addition, these schools had previously been used by the researchers as teacher training sites, the working relationships there had already been established, and the teaching contexts were known. Some schools were also considered because they had fewer play materials, as pointed out by the teachers themselves, which made them ideal places for testing the effectiveness of the manual. The fact that most kindergarten teachers in SDO Malolos are females is consistent with the situation not only in the Philippines but also worldwide, where kindergarten teaching is often associated with motherly qualities and hence considered a woman's job. Studies in the Philippines point out that male teachers are very scarce in kindergarten and, in fact, they experience difficulties because of the community's and society's perception of men as not suitable for working with young children and other related issues such as exclusion and gender stereotypes (De La Cerna & Abapo, 2025). Besides Sebastian Banate, and Saquin (2022) have documented that the division of labor according to gender among public school teachers keeps to the old norms, with women making up most of the workforce in the early childhood teaching. All these findings imply that although the Bilingual Teacher's Manual evaluation will mainly be from the standpoint of females, subsequent projects might explore with different male kindergarten teachers giving their views on the teaching profession to bring about gender inclusiveness and a variety of role models in the initial stages of education.

Table 1.1 Distribution of Teachers According to Age

Age	Frequency	Percentage
26-30 (2)	2	15.38%
31-35 (3)	5	38.46%
36-40 (4)	3	23.08%
41 and above	3	23.08%
TOTAL	13	100.00%

Table 1.1 illustrates the age distribution of the thirteen kindergarten educators who took part in the study. The predominant cohort of respondents is situated in the 31–35 age range, comprising five educators, which accounts for 38.46 percent of the overall total. Subsequently, there are two equal groups: teachers aged 36–40 and those aged 41 and above, each comprising three respondents, both representing 23.08 percent. Simultaneously, two educators (15.38 percent) are included within the 26–30 age demographic. The data indicate that most teachers are predominantly in middle age, with a significant lack of very young professionals joining kindergarten teaching in the surveyed schools.

Referring to the recent survey results, the largest percentage of teachers belongs to the 31–35 age group. This age range typically corresponds to early to mid-career, which means that most of these teachers are settling their careers and becoming experienced professionals. Besides that, this group of teachers is supposed to have enough exposure to the teaching environment to critically evaluate the Bilingual Teacher's Manual on Explicit Play Strategies that the study was focusing on. Other age groups contribute different values to the review activity. To illustrate, younger teachers are likely to offer the most up-to-date and innovative approaches whereas older teachers who have had abundant encounters with teaching offer their opinions from the standpoint of seasoned experience. When combined, the differences in ages and experience levels make a wholesome base for determining the acceptance and usefulness of the manual in kindergarten teaching that goes hand in hand with research highlighting the impact of teacher demographics on pedagogy effectiveness (Sebastian, Banate, & Saquin, 2022; De La Cerna & Abapo, 2025).

Table 1.2 Distribution of Teachers According to Number of Teaching Years

Teaching Years	Frequency	Percentage
1-5 years (1)	0	0.00%
6-10 years (2)	7	53.85%
11 years or more (3)	6	46.15%
TOTAL	13	100.00%

Table 1.2 shows how kindergarten teachers are distributed based on years of teaching experience. Seven of the thirteen respondents reported that they have been teaching for 6 to 10 years, which is 53.85% of the sample. On the other hand, six teachers have been teaching for 11 years or more, making up 46.15% of the group. There were no respondents in the 1–5 years category, implying that none of the participants were beginning teachers. Such a distribution indicates a group composed solely of mid-career and veteran teachers, with the majority falling within the 6-10 year period and a significant number representing long-term service.

The data draws attention to the fact that most of the educators are experienced teachers, having six years of teaching or more, which is a sign of a reliable and mature staff, one which could have a great impact on

instruction and the review of educational resources. Studies show that effectiveness of teachers and their trust in instructional methods usually increase with the passage of time, which is why the environments where learning takes place are not only consistent but also effective (Pitkäniemi et al. 2024). On the contrary, the lack of newly qualified teachers may be interpreted as a loss of generational diversity scenario since younger teachers are known to be able to bring in innovations as well as fresh ideas. Having experienced teachers on the team certainly adds to the quality and trustworthiness of instruction but, on the other hand, the absence of early-career teachers may mean limited flexibility and the difficulty to keep up with latest pedagogical styles. The present work confirms the fact that aging of the teaching staff brings certain merits; at the same time, it stresses the necessity of enrollment policies before which the desire for long-term success in early childhood education remains paramount (Early Childhood Workforce Index, 2024).

Research Instrument

The main research tools in this paper were adapted and validated instruments designed to collect both qualitative and quantitative information to create and assess the Bilingual Teacher's Manual on Explicit Play Strategies. These tools drew on recognized theories, especially the Department of Education's Learning Resource Management and Development System (LRMDS, 2009), which was the reference for the evaluation of the produced manual, and the acceptance survey used in the study Development, Validation, and Acceptability of a Guidebook in Writing Investigatory Projects by Butron (2018), which was the basis for measuring the teachers' level of acceptance of the manual. Each tool was intended to collect particular data that was needed for the research.

Phase 1: Semi-Structured Interview Guide.

The semi-structured interview guide is the first instrument, and it was used in the qualitative phase of the research. Through the guide, the teacher's experience with and their implementation of play-based learning needs were identified. It was mainly based on open-ended queries that led to areas like how teachers evaluate the adequacy, affordability, and accessibility of play materials. It also led to the various techniques educators use to develop children's memory, reasoning, and problem-solving. The qualitative information obtained by this tool was the main resource for the phases of analysis and design in the ADDIE model. The tool ensured that the manual accurately reflected the actual classroom circumstances.

Phase 2.A.: Bilingual Manual Evaluation Tool

The second instrument used in this study was an evaluation tool that was adapted and modified from the DepEd Learning Resource Materials Development and Standards (LRMDS), (2009). The purpose of this evaluation tool is to provide an assessment of the different aspects of the developed Bilingual Teacher's Manual on Explicit Play Strategies such as content, print quality illustrations design and lay-out, and overall satisfaction and dissemination. Each criterion corresponds to the set of standards of the Department of Education for evaluating the quality, relevance, and appropriateness of the instructional materials developed locally.

The evaluation form consists of 17 items divided into five key sections: Content (Indicators 1-4); Prints (Indicators 5-8); Illustrations (Indicators 9-11); Design & Layout (Indicators 12-14); and Overall Satisfaction & Dissemination (Indicators 15-17). Each item is rated by using a four-point Likert scale with 4 as the highest level and 1 as the lowest level. The scale is as follows: "Strongly Agree" = 4, "Agree" = 3, "Disagree" = 2, and "Strongly Disagree" = 1. This rating system encourages individuals to take a definite stand, thereby reducing the number of neutral or ambiguous answers and thus increasing the reliability and accuracy of the assessment.

Participants, through this tool, supply essential commentary on the manual's design arrangement instructional alignment, and readiness for school use. The orderly evaluation guarantees that the manual's efficiency, usefulness, and overall acceptance are thoroughly targeted in measurements, yielding an all-inclusive structure for confirming its quality and educational significance in facilitating the deployment of Explicit Play Strategies.

Phase 2.B.: Teacher's Level of Acceptance Survey

The third instrument used in the study was the Teacher's Level of Acceptance Survey. This instrument was adapted and modified from the evaluation tool used in the study Development, Validation, and Acceptability of

a Guidebook in Writing Investigatory Projects by Butron (2018). The survey was meant to gauge the teachers' satisfaction and acceptance of the Bilingual Explicit Play Strategies Manual after its use. The instrument had fourteen structured items grouped into five sections: Content and Relevance (Items 1–3), Clarity and Organization/(Items 4–6), Cognitive Enhancement Through Play (Items 7–8), Practicality and Usability (Items 9–11), and Overall Acceptability (Items 12–14). The sections aimed to evaluate various facets of the manual, encompassing content relevance, presentation clarity, contribution to children's cognitive development via play-based activities, and practicality for classroom implementation.

Participants gave their level of agreement with each item on a four-point Likert scale: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The responses were first converted to a numerical scale and then a weighted mean was computed to find the overall degree of acceptance of the manual. To interpret the findings, mean scores of 3.50 to 4.00 were taken as Strongly Agree and were considered Highly Acceptable, 2.50 to 3.49 as Agree and Acceptable, 1.50 to 2.49 as Disagree and Moderately Acceptable, and 1.00 to 1.49 as Strongly Disagree and Not Acceptable. Based on these indicators, the overall acceptability, usability, and readiness of the manual for classroom implementation were established.

All research instruments used in the study were first content-validated by the panel of experts consisting of early childhood education specialists. They examined every item for clarity and relevance to the study objectives. Their remarks and suggestions were considered and integrated into the final version of the instruments to assure validity, reliability, and suitability for the kindergarten teaching environment.

Data Gathering Procedure

The researchers collected the data for this study in a well-organized and ethical manner to ensure the integrity of the research process and the confidentiality of all participants. First, the researchers have formally secured permission to conduct the study from the schools under the Schools Division Office (SDO) of the City of Malolos, Bulacan. The researchers also sent letters to the school heads asking for their consent for the research and explaining the study's objectives, scope, and procedures. After receiving approval, the researchers contacted the selected kindergarten teachers to obtain their participation in the study.

The qualitative phase of data collection was conducted after all the required permissions have been secured. Selected kindergarten teachers were interviewed through a semi-structured format, and classroom observations were done. Such techniques were utilized to explore their experiences and practices in using play-based learning. Different issues in the discussion were about the adequacy, affordability, and accessibility of play materials. Also, ways that teachers are implementing children's cognitive development were asked about. The interviewees' answers were recorded and then transcribed for a thorough analysis to find out the themes and common patterns. The results were a reference in the making of the Bilingual Teacher's Manual on Explicit Play Strategies.

After the manual was created, it was validated by experts through the Bilingual Manual Evaluation Tool which is adapted and modified from the Department of Education's Learning Resource Management and Development System (LRMDS). The evaluation was done by three experts: a professor currently teaching at the researchers' campus, a Master Teacher from an elementary school, and an evaluator who checked the Filipino version of the research. Their comments and suggestions were thoroughly considered and used to enhance the clarity, content, and overall quality of the manual.

Manual after revision according to the expert criticism, the material was piloted-tested with thirteen kindergarten teachers of the chosen schools of the Schools Division Office of Malolos, Bulacan. Researchers first showed the manual to the teachers and gave them a demonstration of the play-based activities in the material to make sure that they really understood how each activity should be done during the pilot phase. This orientation gave the teachers an opportunity to get acquainted with the procedures and aims of the explicit play strategies before applying them in their classrooms. After the demonstration, the teachers used the manual in their classroom activities and carried out the play-based strategies with their pupils.

Lastly, the Teachers' Level of Acceptance Survey was utilized to assess the extent to which the Bilingual Teacher's Manual on Explicit Play Strategies was accepted by the teachers. The survey was based on and adjusted

from Butron's (2018) research, development, validation, and acceptability of a guidebook for writing investigatory projects. The survey gauged the teachers' opinions on the manual in terms of content and relevance, clarity and organization, cognitive enhancement through play, practicality and usability, and overall acceptability.

By adopting such measures, the researchers ensured that the data collection was done in a systematic and responsible manner, thus yielding reliable results for determining the effectiveness and acceptability of the Bilingual Teacher's Manual on Explicit Play Strategies.

Data Processing and Statistical Treatment

After successfully collecting data, all qualitative and quantitative responses were systematically organized, tabulated, and analyzed to address the study's specific research objectives. To ensure a coherent integration of qualitative insights and quantitative validation results, the data was analyzed sequentially using the Exploratory Sequential Mixed Methods Design, guided by the ADDIE Instructional Design Model.

Data from semi-structured interviews and classroom observations were first transcribed, then coded, and finally theme-analysed for the qualitative research phase. Such a theme-based analysis unveiled common themes, recurrent patterns, and teacher insights describing their current practice, problems, and needs within play-based learning implementation. Multiple qualitative research theories guided the analysis to maintain both depth and quality. Grounded Theory (Glaser & Strauss, 1967) helped to identify main categories and themes from the data itself, thus making sure that findings truly reflected the experiences of the teachers. Phenomenology (Husserl, 1931; van Manen, 1990) was the method used to really get to the heart of what teachers went through, Symbolic Interactionism (Blumer, 1969) was employed to understand how meanings were generated through classroom communication. Besides that, Thematic Analysis (Braun & Clarke, 2006) guaranteed that the process of recognizing patterns, from initial coding to the emergence of overall themes, was systematic and thorough. Using these various bases together, the findings helped to create the Bilingual Teacher's Manual on Explicit Play Strategies in a way that the book is not only credible and scholarly sound but also representative of real teacher experiences and classroom situations.

Regarding the quantitative phase, descriptive statistical methods, such as frequency percentage, weighted mean, and standard deviation, were used to analyze the data collected through the Bilingual Manual Evaluation Tool and the Teacher's Level of Acceptance Survey. The two instruments were adapted and modified from the DepEd Learning Resource Management and Development System (LRMDS) and Development, Validation and Acceptability of a Guidebook in Writing Investigatory Projects that was proposed by Butron (2018). They assessed the manual's quality based on its validity, reliability, and conformity to the research objectives.

The DepEd LRMDS Evaluation Rating Scale, which measures content, print quality, illustrations, design and layout, and overall satisfaction and dissemination, will be analyzed using the scale below:

Scale	Description
3.50 – 4.00	Strongly Agree
2.50 – 3.49	Agree
1.50 – 2.49	Disagree
1.00 – 1.49	Strongly Disagree

The Development, Validation, and Acceptability of a Guidebook in Writing Investigatory Projects by Butron (2018) will be examined through the Teacher's Acceptance Survey, which assesses teachers' satisfaction and acceptance of the Bilingual Explicit Play Strategies Manual post-implementation, utilizing the following scale:

Scale	Description	Interpretation
3.50 – 4.00	Strongly Agree	Highly Acceptable
2.50 – 3.49	Agree	Acceptable
1.50 – 2.49	Disagree	Moderately Acceptable
1.00 – 1.49	Strongly Disagree	Not Acceptable

To find the overall and categorical levels of validity and acceptability of the bilingual manual, the weighted mean was calculated. Using a four-point Likert scale, responses were interpreted and the descriptive equivalents were used to indicate the level of acceptability (e.g. 3.26–4.00 = Highly Acceptable; 2.51–3.25 = Acceptable; 1.76–2.50 = Moderately Acceptable; 1.00–1.75 = Not Acceptable). The standard deviation was used to measure how consistent the responses were among the participants.

The results were all documented and reported in the form of tables and narrative interpretation, which enabled an understandable and factual assessment of the manual's quality, usability, and overall level of teacher acceptance. Ultimately, the synthesis of qualitative and quantitative data was used as the scientific basis for the Evaluation and Revision Phase of the ADDIE Model, helping to make final adjustments to the Bilingual Teacher's Manual on Explicit Play Strategies so that it was in accordance with the set standards of quality, usability, effectiveness, and teacher acceptability before it was implemented in the classroom.

Ethical Considerations

This study maintained the highest ethical standards at every stage of its execution, conforming to the principles of voluntary participation, informed consent, confidentiality, and data integrity. Before data collection, formal consent was secured from the public kindergarten educators at the Schools Division Office of Malolos City, Bulacan, along with the school administrators of the involved institutions.

All of the kindergarten teachers who took part in the study were given a clear explanation of its purpose, goals, and steps. Each participant signed an informed consent form that made it clear that they were taking part in the study of their own free will and could leave at any time without any consequences. The form also said that all answers would only be used for school and personal growth.

During the qualitative phase, interviews and classroom observations were carried out with complete transparency, honoring the participants' time, privacy, and viewpoints. Audio recordings and transcriptions were utilized exclusively for thematic analysis and were maintained in strict confidentiality.

During the quantitative phase, survey instruments such as the Bilingual Manual Evaluation Tool and the Teachers' Level of Acceptance Survey were distributed anonymously. No personal identifiers, such as names or school affiliations, were included in any report or dataset. All collected data was securely stored and only accessible to the researchers, and it was properly disposed of once the study was completed.

Moreover, the research guaranteed that the creation, validation, and assessment of the Bilingual Teachers' Manual on Explicit Play Strategies did not inflict any harm or disadvantage upon the participants. The manual and its accompanying materials were employed exclusively for educational enhancement and not for commercial use.

Finally, the study got ethical clearance from the right research ethics authority to make sure it followed all the rules for research that are set by institutions, professionals, and ethics.

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter reports a thorough examination of the data collected and analyzed from the evaluation and acceptance forms filled out by the selected evaluators of the Explicit Play Strategies Manual. It discusses at length the findings in relation to the specific research questions originally set out in Chapter I of the study.

Essentially, two instruments were employed to gather the required data. Firstly, the Learning Resource Management and Development System (LRMDS) evaluation tool was utilized to evaluate the quality of the developed manual against the criteria of content prints illustrations, design and layout, and overall satisfaction and dissemination. The LRMDS evaluation was then carried out by three experts: a professor at the researchers' university, a Master Teacher from an elementary school, and an evaluator who reviewed the Filipino version of the research. Their combined expertise has allowed a thorough and professional evaluation of the instructional material. Secondly, the tool used in this research was the Acceptance Evaluation Form which aimed to identify the acceptability level of the manual in terms of implementing Explicit Play Strategies.

There are two main parts of the data presentation. In the first part, the Explicit Play Strategies Manual was reviewed using the LRMDS tool, including aspects like content prints illustrations, design and layout, and overall satisfaction and dissemination. This part gives a breakdown of the technical and instructional qualities of the manual according to the evaluators' scores. In the second part, the acceptability level of the manual in the context of Explicit Play Strategies is presented. This part analyzes content and relevance, clarity and organization, cognitive development through play, practicality and usability, and overall acceptability. This part's findings show the degree to which the manual is acceptable and can be implemented in early childhood classrooms.

Table 2 Challenges of Preschool Teachers in terms of Adequacy, Affordability and Accessibility

RESPONDENTS	CATEGORIES	THEMES AND SUBTHEMES
1-5	IN VIVO: "some materials are useful"	Theme: Insufficiency of Play Materials Subthemes:
6-10	IN VIVO: "and more variety is needed."	- Heavy reliance on flashcards, puzzles, and blocks - Materials often inadequate for large classes
11-13	IN VIVO: "they are insufficient, especially for larger groups"	- Need for more diverse, updated, and engaging resources (e.g., literacy/numeracy tools, manipulative toys, creative play materials)
1-5	IN VIVO: "Cost is a major barrier"	Theme: Financial Constraints in Acquiring Materials Subthemes:
6-10	IN VIVO: "limited budgets"	- Some materials affordable (locally available, recycled, improvised)
11-13	IN VIVO: "teachers often improvise or recycle due to expensive educational toys"	- Educational toys often expensive and difficult to replace - Teachers cope by improvising, printing, or relying on parent/school support
1-5	IN VIVO: "Materials are arranged to be learner-friendly"	Theme: Challenges in Availability and Organization Subthemes:
		- Materials generally accessible through shelves,

6-10	IN VIVO: "storage issues"	containers, and learning corners - Limited supply requires sharing or borrowing
11-13	IN VIVO: "classroom space constraints reduce efficiency"	Problems include lack of storage, damaged/missing materials, and inadequate classroom space

Table 2 outlines three major themes extracted from preschool teachers' answers: insufficiency of play materials, financial constraints, and difficulties in availability and organization. Statements reflecting respondents 1-13 that were repeated and quoted directly, e.g. "some materials are useful" and "they are insufficient", reveal a strong dependence on a handful of resources such as flashcards, puzzles, and blocks which are not enough for large classes. Financial limitations were also shown, teachers making statements like "cost is a major barrier" and "limited budgets", which imply that although some materials can be made or recycled, educational toys are still very expensive and hard to replace. Organizational problems have also been mentioned very frequently, e.g. teachers saying "storage issues" and "classroom space constraints", which indicate that there are problems both in terms of the accessibility of resources and their overall management. These repeated patterns throughout several respondents are very indicative of the issues facing the adequacy, affordability, and accessibility of play materials in the system.

Research findings indicate that preschool teachers encounter structural and systemic issues, which in turn limit their capacity to satisfactorily conduct play-based learning. The shortage of materials, for example, limits the ways in which the children can be engaged in playful activities while the teachers' financial struggles point to more significant inequities in resource distribution and level of support from the institution. Besides this, organizational problems still remain despite material availability which might create inadvertent bottlenecks thereby reducing overall effectiveness. Thereby, the grounding interpretation based on established theories, grounded theory elucidates the manner in which various themes find their expression from the very experiences of teachers in their everyday activities whereas phenomenology delineates the very nature of their problems in their real life practice. To wit, the incorporation of newly introduced paradigms, e.g. critical realism sheds light on how the deeper structural variables like extremely tight public budgets and very substandard infrastructure are determining factors of the very realities that are noticeable in the classroom while social constructivism helps in locating how teachers collectively invent ways of coping e.g. improvisation and reliance on community support. On the whole, the findings highlight the requirement for interventions at systemic level which may comprise of increased funding, policy reforms, and better classroom organization to guarantee equitable access to sufficient, affordable and well- managed play materials. To consider these problems is vital not only to raise the quality of teaching but also to facilitate the overall development of the child through play-based strategies.

Part II. Design of Explicit Play Strategies to Enhance Preschoolers' Cognitive Skills

The explicit play strategies created through this study are based on three sources: (1) recent research on play based learning and cognitive development, (2) the Focused Group Discussion (FGD) with kindergarten teachers results, and (3) the competencies in the MATATAG Curriculum, especially the Alfabasa program.

Considering literature, cognitive psychologists in the field of play and cognition emphasize that specific cognitive abilities can be improved through structured play activities. Wang and Oyam (2024) note that games involving recall and sequencing raise memory, whereas Shroff (2024) presents that sorting and pattern recognition activities develop reasoning. Besides, puzzle play enhances problem solving skills. Therefore, these findings served as a basis for the theoretical argument of this paper by which play activities may have direct effects on the three cognitive domains.

According to the FGD, kindergarten teachers concurred that children, on a regular basis, forget instructions (memory), have difficulties in connecting ideas logically (reasoning), and experience problems with puzzles or other types of challenges inside the classroom (problem solving). Their perceptions pointed out the areas where learners commonly need help and they also assisted the researchers in coming up with the strategies that would effectively meet these needs as evidenced by the classroom observations.

Looking at the MATATAG Curriculum, the Kindergarten Competencies, in the Alpbasa program, are the ones that highlight phonemic awareness and recall (memory), sequencing and logical connections (reasoning), as well as decoding unfamiliar words or using strategies to comprehend text (problem solving) (DepEd, 2024). Hence, these curriculum criteria acted as a guarantee that the play strategies were not only in line with the national priorities but also suitable in accordance with the developmental aspects of preschool learners.

Relying on literature, teacher insights, and curriculum standards, the researchers designed explicit play strategies specifically targeting the enhancement of preschoolers' memory, reasoning, and problem solving skills. They ensured the strategies are academically based, resilient to different contexts, and well aligned with the curriculum, hence making them more relevant and really useful in kindergarten teaching.

Part III. Development and Evaluation of a Bilingual (English–Filipino) Explicit Play Strategies Manual for Kindergarten

Factor 1: Content

The bilingual (English and Filipino) Explicit Play Strategies Manual was created by combining three primary sources: the focused group discussion (FGD) of kindergarten teachers, competencies from the MATATAG Curriculum particularly the Alpbasa program, and lessons learned from the teachers about kids who often forgot instructions, kids who had a hard time logical connections, and kids who had a hard time figuring puzzles or tasks. Such teacher observations shed light on the learners' challenges and needs areas which were supported by curriculum standards to ensure the strategies are aligned with the national priorities focusing on phonemic awareness, sequencing, and decoding skills. By merging these three bases, the manual's content was framed in such a way that it was evidence-based, context-sensitive, and curriculum-aligned thereby guaranteeing its suitability and effectiveness for kindergarten teaching.

Latest research has furthermore helped to deepen the manual's content by supporting personally selected play activities with theories that back them up. Wang and Oyam (2024) pointed out that memory can be improved by playing recall and sequencing games, Shroff (2024) explained that sorting and patterning activities are good for reasoning, and puzzle play is an effective way to develop problem-solving skills. New studies even show that play, especially if it's structured, is a tool through which children get to develop, among other things, their creative side, their executive functions, and their emotional skills, thus becoming more well-rounded individuals. Following these citations, the manual is committed to guaranteeing that: each game or activity supports, learning objectives that are made for kindergarten learners are met, gives learners the chance to develop their cognitive skills (memory reasoning problem-solving), and only simple clear instructions are presented. The detailed methodologies followed are suitably arranged, which makes the manual well-founded academically, robust pedagogically, and very apt for use in the classroom.

Factor 2: Prints

The prints were assessed for their appeal to kindergarten learners keeping their age and psychological needs in mind. The characters of the letters in the font were adjusted to be simple and suitable for the age of the learners. Apart from that, the letter sizes were regulated according to the visual and cognitive capacities of the youngest children. Proper spacing between letters and words was observed to provide not only a good looking layout but also easy reading. A font was chosen on the grounds of its clarity and legibility thereby the fonts with very fancy and complicated designs were completely avoided which might cause a loss of understanding. Additionally, the quality of the printing was checked thoroughly: letters were smooth and continuous, density was uniformly spread, alignment was perfect, and screen registration was exactly in place. These factors made the printed text of the manual accessible, visually appealing and a good support for early literacy development. In addition, it has been noted that the manual's print quality needs to be ensured through proper checking of density (brightness), density distribution, screen registration and smooth continuity of letters (no open letters).

The findings of recent research have demonstrated the direct link between print quality and literacy achievement among kindergarten learners. Liwag and Marquez (2025) discovered that children exposed to clear, well spaced print materials in their early years show an improvement in their phonemic awareness and word recognition

which are the core literacy skills. Likewise, Marcelo (2024) pointed out that learning materials based on games and play are the most effective if supported by the print design that is not only readable but also culturally relevant because this leads to increase in motivation and engagement in literacy activities. Sta. Ana (2024) highlighted that, in addition to innovative play strategies, accessible print resources improve both comprehension and classroom participation. This research supports the manual's focus on using suitable fonts, space allocation, and excellent printing quality thereby the materials will not only have strong visual impact but also be a good teaching tool for supporting the literacy and cognitive development of kindergarten learners.

Factor 3. Illustrations

The main point was to ensure the illustrations are clear, recognizable in a flash, and able to directly support the words. They not only assist in the interpretation of the text but also serve as a guide, which makes the activities simple enough for kindergarten children to understand. To keep the visuals attractive and at the same time prevent any distractions, realistic and suitable colors were selected. Besides, these images are actually the pictures of the materials mentioned in the manual, so they not only give teachers and learners a visual connection to the real-life resources, but also maintain credibility. Thus, the rhythm and flow of the pictures are maintained in a way that they become more than just mere ornaments. These visuals have effectively been converted into real aids which can be depended upon for the successful execution of the play ideas.

Further, the result of these studies also highlight the role of illustrations in supporting early learning. According to Cruz and Villanueva (2024), clear and realistic images help preschool kids better understand and remember the lesson especially if the text is bilingual. Santos (2025), on the other hand, noticed that genuine photos of school equipment motivated learners and helped them in applying their skills learned through the play to their independent work. These observations support the decision of the manual to employ simple and familiar pictures with the right colors which not only make the visuals attractive but also help in achieving the academic objectives and meeting the developmental level of kindergarten children. The manual's pictures, through their clear presentation, truthful representation, and practical use, make the resource more powerful in the overall context.

Figure 2. Sample Illustration in the Manual

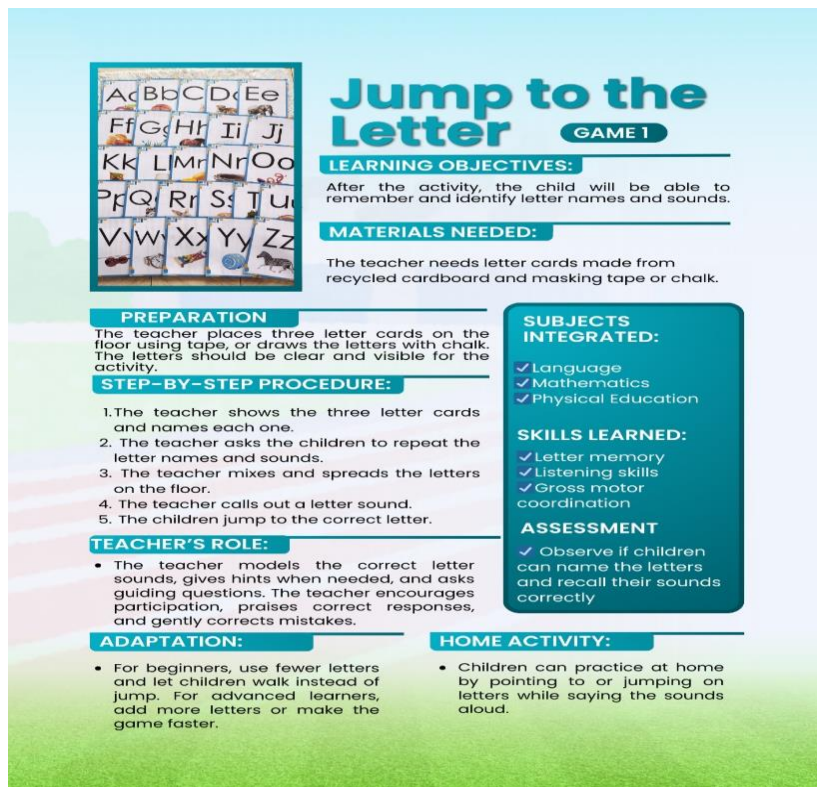


Factor 4: Design and Layout

The three main criteria: attractiveness, simplicity, and harmonious blending reflect a steady evaluative framework that emphasizes a good balance between subjective and functional aspects of design. Attractiveness is seen as a means to capture and hold attention, as well as arousing emotions, while simplicity is a reflection of a desire for transparency and minimization of mental effort, which is in line with cognitive load theory. Harmony, on the other hand, focuses on the combination of text and images and reveals a recent development in multimodal communication where the combination of elements is more effective than the quality of elements separately. Overall, these three factors are the elements that are used to evaluate designs. Thus, one model of design evaluation can be made by mapping the three key aspects of design: aesthetic appeal, cognitive efficiency, and structural coherence.

Drawing on these three elements, one can predict that a good design must satisfy several criteria: to look beautiful, to be clear, and to combine the separate elements. Beauty may be connected with the feelings one has, clarity is a way to make sure that no one is lost in the complexity of the design, and harmony makes sure that the elements are well combined, which often leads to a better recall of the information. Other publications in the field, for instance, Derek Lomas's *Harmony in Design: A Synthesis of Literature from Classical Philosophy, the Sciences, Economics, and Design* (2022), go further by highlighting the multidisciplinary nature of the concept of harmony, drawing from classical philosophy to modern neuroscience and computer science. This further buttresses the argument that design is not simply about pleasing the eyes but it is about the way information is transformed and communicated. Furthermore, it is intertwined with broader human experiences such as beauty, happiness, and sustainability. The authors would argue that a well-balanced combination of beauty, simplicity, and relational synergy is what makes a communication piece successful. Such a combination will appeal to diverse cognitive preferences and will also increase the effectiveness of the piece. By highlighting that different parties may have different perceptions, this integrated approach emphasizes the importance of comprehensively planning the design in both educational and business sectors.

Figure 3. Sample Design and Layout of the Manual



Factor 5. Overall Satisfaction & Dissemination

This section summarizes the evaluation of the Explicit Play Strategies Manual using the LRDMS tool, highlighting key findings from past data that identify its strengths and areas for improvement. These insights allow us to enhance the Manual refining its content, structure, and usability so that it is more effective and ready for the implementation phase.

Table 2.

Evaluation of Explicit Play Strategies Manual using LRMDS Tools			
Indicators	Mean	SD	Description
1. Content	3.50	0.43	Strongly Agree
2. Prints	3.00	0.00	Agree

3. Illustrations	3.00	0.00	Agree
4. Design & Layout	3.00	0.00	Agree
5. Overall Satisfaction & Dissemination	3.00	0.00	Agree
OVERALL	3.03	0.10	Agree

Table 2 displays the Evaluation of Explicit Play Strategies Manual by LRMDs Tools, which indicates five criteria: Content Prints, Illustrations, Design & Layout, and Overall Satisfaction & Dissemination. Each of the criteria is assessed through mean scores, standard deviations, and qualitative interpretations of a Likert-type scale. Content is the highest rating (Mean = 3.50, SD = 0.43, "Strongly Agree"), whereas the lowest ratings are at Prints Illustrations Design & Layout, and Overall Satisfaction (Mean = 3.00, SD = 0.00, "Agree"). The overall mean is 3.03 with a low SD of 0.10, pointing to very high agreement among scorer responses. One cluster is obvious at 3.00, while Content stands apart as the only outlier above the cluster. The difference between the highest and lowest figures is small (0.50), which means indicators are more or less equally balanced with only slight changes. An omission is made in providing the sample size (N), thereby affecting the statistical generalization capability, although it doesn't invalidate these observed patterns.

The analysis highlights the content of the manual as its major strength, being rated the highest and representing evaluators' emphasis on the instructional material's depth and effectiveness. However, the continually lower points in prints, illustrations, design, and dissemination point to the areas that require improvement in terms of presentation and making the manual user-friendly, possibly these sections have been taken as good enough but still are not made outstanding ones. Support for this finding is present in recent literature. UNESCO's Languages Matter: Global Guidance on Multilingual Education (2025) warns that multimodal resources must have a perfect balance of language and design to create maximum impact on the learning process. Stoffelsma et al. (2024) argue that bilingual material should also reflect the culture of the users. On the other hand, Eden et al. (2024) assert that the kind of teaching framework used can change the way the program is understood and accepted by the learners. Altogether these results imply that the manual is a good guide. The problem is that the design and distribution of the manual are the two areas that need to be fixed immediately. One way to do this is to think about having really good-looking colors, pictures, and relevant in the culture others strategies for the distribution to make these more user-friendly and accessible.

Table 3.

Evaluation of Explicit Play Strategies Manual using LRMDs Tools in terms of Content			
Indicators	Mean	SD	Description
1. The game or activity is designed to support learning objectives appropriate for kindergarten learners.	3.67	0.43	Strongly Agree
2. The game or activity provides opportunities for the development of cognitive skills, including memory, reasoning, and problem-solving.	3.67	0.58	Strongly Agree
3. The manual's instructions are clear and easy to follow.	3.00	0.00	Agree
4. The step-by-step procedures are well organized.	3.67	0.58	Strongly Agree
OVERALL	3.03	0.10	Agree

Table 3 presents the assessment of the Explicit Play Strategies Manual conducted through LRMDs instruments, mainly in the area of content. Four separate indicators were measured: the extent to which the manual corresponds to the kindergarten curriculum, the manual's potential to nurture children's thinking skills, how easy it is to understand the manual's instructions, and how well the manual is structured in terms of step-by-step guidance. There were three aspects that recorded the highest marks: learning objectives, cognitive skills, and

organization with mean scores close to 3.67 and standard deviations between 0.43 and 0.58, all marked as "Strongly Agree". On the other hand, the clarity of instructions is the one aspect with the lowest mark (Mean = 3.00, SD = 0.00, "Agree"), meaning that the agreement, although moderate, was reached unanimously. The general average of 3.03 with a tremendously low standard deviation of 0.10 points to strong agreement among the evaluators however the total score is in the "Agree" range and not "Strongly Agree". The small gap of 0.67 between the highest and lowest values points to a relatively even but limited distinction among the indicators.

The evaluation shows that the manual's best features are those that link the pedagogy closely with the learning objectives for kindergarten, that support the development of cognitive skills, and that have very neatly structured procedures. These findings point to the manual's high level of instructional quality and its success in using play as a learning tool in a very planned manner. Yet, the less positive score on the clarity of the instructions brings out a major flaw: although the evaluators do think that the instructions are clear, they do not see them as being top-notch. Therefore, the instructions may need more detail, illustrations, and simpler language to make them more user-friendly. Recent studies indicate the same. UNESCO's Languages Matter: Global Guidance on Multilingual Education (2025) notes that educational materials must have solid content and also be attractively designed to produce the best learning results. Stoffelsma et al. (2024) point out that culturally responsive design of bilingual educational materials is not only important but also very effective in making them accessible and engaging to learners. Eden et al. (2024) on the other hand, stress that educational manuals need to be clear and well organized if they are to be effectively used by learners. Taken together, these studies show that the manual, even though pedagogically appropriate, really needs some work on the instruction part and presentation in order to reap its full benefits. It is suggested that the teaching parts be redone to make them more accessible and more effective for teachers who are using play in early childhood classrooms.

Table 4.

Evaluation of Explicit Play Strategies Manual using LRMDS Tools in terms of Prints			
Indicators	Mean	SD	Description
1. Size of letters is appropriate to the intended user.	3.00	0.00	Agree
2. Spaces between letters and words facilitate reading.	3.00	0.00	Agree
3. The font is easy to read.	3.00	0.00	Agree
4. Printing is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).	3.00	0.00	Agree
OVERALL	3.00	0.00	Agree

Table 4 shows four (4) print quality features were evaluated on the Explicit Play Strategies Manual using the LRMDS tools. The features were letter size, letter and word spacing, font readability, and printing quality. Each feature was graded with a score of 3.00, a standard deviation of 0.00, and was described as "Agree". The total mean is also 3.00 with an SD of 0.00, which shows that the panelists all agreed. While other assessments showed some differences, this set of data shows complete uniformity, so the assessors must have had the same idea about the print. The group of 3.00 indicates that the features were rated the same and no outliers or differences were found.

The results indicate that the print quality of the manual is sufficient, but the evaluators didn't consider it to be outstanding. They all thought that the letters spacing font, and printing quality were at an acceptable level, although none of them rated these aspects as extremely good ones. It is to be inferred that the manual is pretty much a tool to be used, it is readable, but it does not feature such a standout quality in the way it is presented visually. The average rating could speak to the fact that there are few creative aspects or technical solutions in the design, e.g. it lacks the presence of vibrant typography or other components of higher readability. Effective instructional materials, according to Mayer's Multimedia Learning Theory (2021), should not only be clear but

also attractive visually to support learning effectively. In the same vein, Kimmons and Veletsianos's recent work (2024) underscores that access to well-designed print materials is one way to foster learner engagement and lower cognitive load. All in all, the results imply that the manual's print quality is sufficiently good. However, better typography, spacing, and designing can produce the desired user experience and make the manual more accessible to both educators and learners.

Table 5.

Evaluation of Explicit Play Strategies Manual using LRMS Tools in terms of Illustrations			
Indicators	Mean	SD	Description
1. Simple and easily recognizable.	3.00	0.00	Agree
2. Clarify and supplement the text.	3.00	0.00	Agree
3. Realistic / appropriate colors.	3.00	0.00	Agree
OVERALL	3.00	0.00	Agree

Table 5 shows how the Explicit Play Strategies Manual was evaluated in terms of its illustrations, based on three criteria: simplicity and recognizability, ability to clarify and supplement text, and use of realistic or appropriate colors. Each criterion got a mean score of 3.00 and the standard deviation was 0.00 in all cases, meaning that the respondents' answers perfectly coincided with "Agree". This complete agreement is shown by the fact that there was no variation in their responses. The total score is also 3.00, with an SD of 0.00, signifying a unanimous agreement across all matters of the illustration assessment. The absence of variation implies that while the evaluators find the illustrations to be satisfactory, they are not of excellent quality, thus meeting the standard requirements only without going beyond them.

These findings suggest that the manual's pictures serve their purpose but are not very visually attractive or innovative. Although the evaluators agreed that the illustrations are simple, easily recognizable, text-supportive, and properly colored, none of them considered these aspects as being highly commendable. So, it seems the illustrations are just enough to explain things to the teachers who will be using the manual, but they don't give the teachers much incentive to get involved. Recently, many studies have changed quite a lot. Clark and Mayer (2023) point out that educational illustrations should, at the same time, be visually attractive and instructional in order to be of the most use to teachers seeking to adopt them. Kimmons and Veletsianos (2024) believe that accessible and well-designed visuals increase professional engagement and retention, while Lin and Chen (2022) maintain that culturally relevant and visually appealing illustrations can be instrumental in fostering a closer relationship between instructional materials and their users. Taken together, these results point out that though the manual's drawings are okay, they need to be more creative, culturally appropriate and of higher design quality to really have a strong educational impact. One of the ways is by coming up with totally new and fresh concepts for the play strategies that not only align with the culture but also visually educate the teachers as to how to implement these in their classrooms. It might be worthwhile to make these new and improved materials so that they are not only useful but effective as well because the teacher would be the one having the final say in whether or not the play strategies work in the early childhood classrooms.

Table 6. Evaluation of Explicit Play Strategies Manual using LRMS Tools in terms of Design & Layout

Indicators	Mean	SD	Description
1. Attractive and pleasing to look at.	3.00	0.00	Agree
2. Simple (i.e., does not distract the attention of the reader).	3.33	0.58	Agree

3. Harmonious blending of elements (e.g., illustrations and text).	2.67	0.58	Agree
OVERALL	3.00	0.00	Agree

Table 6 gives us a look at how the Explicit Play Strategies Manual scored on design and layout using the LRMDS tool. The analysis by the panel resulted in favorable feedback with almost all criteria being rated as 'Agree'. The top scoring attribute was 'Simple (i.e. does not distract the attention of the reader)' with a mean of 3.33 and SD of 0.58. that is, respondents felt that the layout was clear and user-friendly. The point 'Attractive and pleasing to look at' was endorsed by each evaluator and received a mean of 3.00 with SD of 0.00. The point, 'Harmonious blending of elements (e.g. illustrations and text)', garnered the lowest mean score (M = 2.67, SD = 0.58) but it is actually still 'Agree', which means that respondents were somewhat satisfied with the integration of visual and textual elements. The overall mean of 3.00 with a standard deviation of 0.00 shows that design and layout of the manual are quite acceptable and consistent with the standards of LRMDS.

The results indicate that manual's design and layout are fundamentally well-crafted and serve their functional purpose effectively, especially in terms of simplicity and distraction-free reading. A slightly less favorable score for the seamless incorporation of pictures and text might be a sign of potential work visually, like adjusting the location or spacing of graphics, or ensuring alignment, to make the manual more readable and aesthetically balanced. However, the predominantly favorable assessment confirms that the manual complies with basic design requirements for instructional materials in early childhood education. There is a growing body of research that stresses the significance of clear and well-structured instructional design in educational resources. For example, Moreno and Mayer (2023) point out that strong multimedia and layout design not only help to reduce the cognitive load but also direct the learner's attention to the important information, thereby enhancing the overall comprehension and learning. In a similar vein, Clark and Mayer (2024) argue that properly set up visual and textual elements increase the usability and teaching effectiveness of educational materials. Such views mean that keeping a simple, visually balanced and reader-friendly layout plays a major role in the ease of use and teaching capability of manuals such as the Explicit Play Strategies Manual.

Table 7. Evaluation of Explicit Play Strategies Manual using LRMDS Tools in terms of Overall Satisfaction & Dissemination

Indicators	Mean	SD	Description
1. I am satisfied with the manual as a teaching resource.	3.00	0.00	Agree
2. I would recommend this manual to other preschool teachers.	3.00	0.00	Agree
3. The manual is ready to be shared with other schools without major changes.	3.00	0.00	Agree
OVERALL	3.00	0.00	Agree

Table 7 shows the assessment results of the Explicit Play Strategies Manual through the LRMDS tools in the aspects of general satisfaction and dissemination. The findings indicate that each of the three measures scored a mean of 3.00 with no variation in standard deviation (SD = 0.00), which is equivalent to the descriptive rating "Agree." More precisely, the expressions "I am satisfied with the manual as a teaching resource," "I would recommend this manual to other preschool teachers," and "The manual is ready to be shared with other schools without major changes" manifested the same average value. The zero dispersion of the answers (SD = 0.00) reveals that all the respondents gave the same rating for every measure. Such a trend reflects that the respondents showed an identical and total agreement concerning the manual's potential, their willingness to endorse it, and whether it is prepared to be spread. Besides, the collective average value of 3.00 with an SD of 0.00, termed as "Agree," further symbolizes the consistent impression of the respondents about the manual's capability and relevance.

The results indicate that the Explicit Play Strategies Manual with LRMDS tools is extremely well liked by the respondents and that it also serves as a great resource for teaching preschool. The complete agreement on all points suggests that the manual is a strong support for teachers' work and that it is suitably packaged for use by others in the education field and in schools. The fact that some respondents said they would propose the manual to their colleagues and that they thought it could be used for a broader distribution shows the high level of trust they have in the material's quality, usefulness and relevance. Possibly the main reason is the significance of play-based approaches in early childhood education and the user-friendliness of LRMDS tools for accessing learning resources. Recent research also reveals that carefully planned teaching materials bring about better teaching methods and student involvement. For example, Linda Darling-Hammond et al. (2022) point out that well-made teaching aids facilitate teachers to carry out their instructions effectively and thus improve the overall learning environment in the early childhood education setting. Besides that, UNESCO (2023) notes that the production and distribution of recognized educational materials help raise the standard of teaching and make it easier for educators to share resources collaboratively. Hence, all things considered, the findings strongly suggest that the manual is indeed capable of being widely used and distributed in the preschool sector.

Part IV. Implementation of the Manual by Kindergarten Teachers through Classroom Orientation and Play-Based Activities

The implementation steps illustrated describe a sequential orientation model: teachers are first given the manual, then students are exposed to the framework, and finally, play activities are conducted. Such a systematic manner guarantees educational consistency and also students' readiness. The chosen activities are memory, reasoning, and problem-solving games, which show an intentional focal point on cognitive skill development. The statistics exhibit a tendency towards combining play with programmed learning outcomes, which is in line with current educational practices highly focusing on experiential and inquiry-based learning.

The data imply that regular training coupled with play-based learning activities boosts both teacher role and student learning results. Preparing first teachers guarantees adherence to the manual, at the same time, student orientation allows their involvement and setting of expectations. Concentration on cognitive-centered play activities uncovers the manual's willingness to provide a good time and skills development at the same time. Recent related studies endorse this result: Wang and Oyam (2024) demonstrated that play-based learning develops higher-order functions such as planning and self-control whereas Dean and Wenner's (2025) meta-synthesis pinpointed "choice, wonder, and delight" as major features of effective play-based learning across various environments. Also, Timtim and Ducot (2025) proved that play-based activities, when integrated with the curriculum and facilitated by teachers, act as strategies for meaningful learning in kindergarten.

Figure 4. Classroom Orientation about different play activities



Figure 5 Implementation of selected play activities



Part V. Level of Acceptability of the Explicit Play Strategies Manual

Responses across all question categories: content relevance, clarity enhancement of cognition, practicality, and overall acceptability point out that the manual aligns very well with early childhood education goals. The manual is, in fact, repeatedly said to be developmentally appropriate, very comprehensible, and logically laid out. The bilingual version of the manual increases accessibility, and suggested play activities aim at enhancing memory, reasoning, and problem-solving. The stress on practicality is through easy incorporation in daily life and still being doable even with scarce resources. In general, responses reflect great satisfaction and very strong endorsements for widespread dissemination, thus showing a trend of positive evaluations on multiple aspects.

Not only does the manual incorporate all five traits, content relevance clarity cognitive enhancement, practicality, and overall acceptability into one, it is also a thorough and efficient tool for early childhood education. On the one hand, among other features, its bilingual format and logical organization make the implementation no harder, on the other hand, their focus on activities based on play directly helps memory, reasoning, and problem-solving. The manual may be used even in limited resource classrooms thus it has very big usability, which ensures applicability of the manual across different contexts. Recent studies closely related to this one back up these statements: Casapao and Matira (2025) found that play-based activities have a major effect on the length of attention and engagement in the classroom, whereas Urado and Marquez (2025) have pointed out that play-based learning promotes the whole child: cognitive, social and emotional, but there are still issues with finding the right amount of resources and training teachers. Altogether, these data indicate that the manual is consistent with research trends and can be considered as a trustworthy and scalable instrument to help both cognitive and holistic development of preschool children.

Table 8. Manual’s Level of Acceptance regarding the application of Explicit Play Strategies

Indicators	Mean	SD	Description	Interpretation
1. Content & Relevance	4.00	0.00	Strongly Agree	Highly Acceptable
2. Clarity & Organization	3.97	0.09	Strongly Agree	Highly Acceptable
3. Cognitive Enhancement Through Play	3.92	0.28	Strongly Agree	Highly Acceptable
4. Practicality & Usability	3.95	0.13	Strongly Agree	Highly Acceptable

5. Overall Acceptability	4.00	0.00	Strongly Agree	Highly Acceptable
OVERALL	3.97	0.06	Strongly Agree	Highly Acceptable

Table 8 indicated Manual's level of acceptance for applying Explicit Play Strategies through five main indicators. The data show that the mean scores have always been high from 3.92 to 4.00, which means that the acceptance level among the evaluators was very strong. Both indicators Content & Relevance and Overall Acceptability scored the highest mean of 4.00 with no variation (SD=0), implying that all respondents agreed on these two aspects completely. At the same time, Clarity & Organization had a result of 3.97 on average (SD = 0.09), very close to a perfect agreement, and there was only a slight difference of variation in the answers. Practicality & Usability was not far behind with an average of 3.95 (SD=0.13), indicating the faculty members agree that the manual is quite usable in teaching situations. Signing in the lowest "Strongly Agree" range is Cognitive Enhancement Through Play with 3.92 (SD=0.28) which, on the other hand, has the largest SD, thus showing a little greater diversity of evaluators' opinions. Overall, the summary exhibits a grand mean of 3.97 with an SD of 0.06, as Strongly Agree and Highly Acceptable being the descriptors, importantly indicating an overall highly favorable opinion of the manual.

These results imply that the manual developed by fusing Explicit Play Strategies is extremely acceptable to potential users and the biggest standout according to the evaluators was the manual's relevance, organization, and use practically aspect. The perfect agreement in Content & Relevance means that the members of the survey were expecting that the unit is well thought out in terms of the learning objectives and instructional needs. Similarly, the high grades given for the explanations and usability mean that the manual has been designed in such a way that teachers will find it easy to comprehend and use it for their instructional purposes. Though the area of Cognitive Enhancement Through Play had the lowest average, it is still considered as among the highest levels of agreement which means that the reviewers generally recognize that play-based strategies have cognitive benefits but there may be differences between them in Respect to the degree or method of adoption of the strategies. These results give support to the literature that highlights the role of structured play in educating and engaging the mind. For instance, the works of Zosh et al. (2022) and Parker and Thomsen (2023) show that the use of guided play and play-based instruction explicitly results in major improvements in learners' critical thinking, creativity, and retention of knowledge. Besides that, UNESCO (2023) points out that play-based pedagogies provide motivation and lead to meaningful learning when the instructional materials used are well-structured and considered to be relevant. Hence, the top views in terms of acceptability exhibit that the manual is built on evidence-based play strategies and therefore it is very likely to be successfully used in the classroom.

Table 9. Manual’s Level of Acceptance regarding the application of Explicit Play Strategies in terms of Content & Relevance

Indicators	Mean	SD	Description	Interpretation
1. The manual’s content aligns with early childhood learning goals focused on cognitive development.	4.00	0.00	Strongly Agree	Highly Acceptable
2. The topics and examples clearly show how play can be used to support children’s thinking and learning.	4.00	0.00	Strongly Agree	Highly Acceptable
3. The information presented is developmentally appropriate and applicable to preschool learners.	4.00	0.00	Strongly Agree	Highly Acceptable
OVERALL	4.00	0.00	Strongly Agree	Highly Acceptable

Table 9 reports the level of acceptance by the manual for the use of Explicit Play Strategies based on Content and Relevance. The three indicators scored 4.00 as an average with a standard deviation of zero, which means that all the judges had the same opinion. This finding reflects the total consensus that the manual's content is

consistent with the learning goals of early childhood focusing on cognitive development, that it clearly shows the role of play in children's thinking and learning, and that it contains appropriate developmental information for preschool children. The aggregate average of 4.00 (SD = 0.00), which translates to Strongly Agree and is rated as Highly Acceptable, emphasizes the consistently very high level of approval of the manual's content and its relevance to early childhood education.

These results indicate that the manual successfully combines appropriate and relevant content that facilitates cognitive development by means of play-based strategies. The fact that all the evaluators agreed suggests that the material is very well-tuned to early childhood learning objectives and effectively illustrates how play helps to enhance children's learning. This finding substantiates the most recent studies that have shown that play which is both structured and guided contributes to children's cognitive engagement, critical thinking, and meaningful learning experiences in early childhood environments. Research by Parker, Thomsen, and Berry (2022) revealed that instructional materials based on play enhance the congruence between pedagogy and developmental requirements, whereas Zosh et al. (2022) pointed out that guided play facilitates a more profound understanding and active involvement of young learners. Therefore, the excellent approval scores imply that the manual can be considered a relevant and valuable tool in helping preschool children develop cognitively through explicit play strategies.

Table 10. Manual's Level of Acceptance regarding the application of Explicit Play Strategies in terms of Clarity & Organization

Indicators	Mean	SD	Description	Interpretation
1. The explanations and instructions are easy to understand and follow.	4.00	0.00	Strongly Agree	Highly Acceptable
2. The bilingual format (English–Filipino) enhances comprehension and accessibility for teachers.	4.00	0.00	Strongly Agree	Highly Acceptable
3. The topics are logically arranged, making it easy to connect concepts to play-based teaching.	3.92	0.28	Strongly Agree	Highly Acceptable
OVERALL	3.97	0.09	Strongly Agree	Highly Acceptable

Table 10 shows the extent to which the manual is accepted in terms of explicit play strategies being clearly stated and organized. The results indicate that very high ratings were given to all manifestations of the indicators. The clarity of instructions as well as the bilingual format were judged as perfect with mean scores of 4.00 and a standard deviation of 0.00, which means that all respondents agreed with these features. This implies that these features were considered highly acceptable by everyone. On the other hand, logical arrangement of topics had a mean of 3.92 and a standard deviation of 0.28 points, which only reflects some small differences in responses but still is in the "Strongly Agree" category. In fact, the overall mean score of 3.97 and a very low SD of 0.09 indicate that the manual is generally recognized as being clear, accessible, and well-structured, with just a few differences in perceptions regarding the ordering of topics.

Firstly, the results point out that clarity of instructions and bilingual accessibility are the manual's main strengths that, in a direct way, help teachers understand and use the material. Secondly, the small differences in the organization of topics demonstrate that while the majority of the respondents found the structure logical, only a few ones might have seen the potential for the improvement of the sequencing or the flow of the concepts. Thirdly, the bilingual format getting a perfect score illustrates that linguistic inclusivity in educational materials is really crucial which is in line with the new research that shows that bilingual education improves comprehension, accessibility, and teacher confidence in diverse classrooms (Creed, 2024; Shil, 2024). Overall, the data indicates that direct play methods combined with comprehensive directions and bilingual assistance may work quite well in getting teachers on board and then keeping the quality of teaching high. If the researchers were to give their verdict, it would probably be along the lines that the handbook represents the finest standards

in clearness and structuring, but only small changes in the ordering of the topics would be required for complete harmony in approval.

Table 11. Manual’s Level of Acceptance regarding the application of Explicit Play Strategies in terms of Cognitive Enhancement Through Play

Indicators	Mean	SD	Description	Interpretation
1. The suggested play activities help improve children’s memory.	3.92	0.28	Strongly Agree	Highly Acceptable
2. The suggested play activities help improve children’s reasoning.	3.92	0.28	Strongly Agree	Highly Acceptable
3. The suggested play activities help improve children’s problem-solving.	3.92	0.28	Strongly Agree	Highly Acceptable
OVERALL	3.92	0.28	Strongly Agree	Highly Acceptable

Table 11 displays a consistent pattern for all three indicators: memory, reasoning, and problem-solving. Each indicator recorded a mean score of 3.92 with a standard deviation of 0.28, indicating that the respondents largely agreed that play activities are effective in developing these cognitive skills although they differed slightly on their individual responses. The similar scores across the indicators point to a well-rounded positive perception of play's influence on different cognitive areas. The overall mean of 3.92 and SD of 0.28 confirm further that strategies presented in the manual are mostly accepted as very acceptable with no cognitive skill rated single-handedly higher or lower than others. This magnificent statistical uniformity depicts that the manual is considered as equally effective in promoting memory, reasoning, and problem-solving through play.

These results tell us that play strategies are explicit and recognized as the primary means of cognitive skill improvement, especially for fundamental skills like memory, reasoning, and problem-solving. The teachers believe that play is an all-round approach to cognitive development and do not separate one domain from the others which is confirmed by the uniformity of their scores. This finding together with several others point to the role play-based learning has in developing critical thinking, creativity, and executive functions of children (for example, Wang and Oyam, 2024). Looking at it from a wider lens, these findings highlight the manual's success in blending play with education, endorsing the idea that well-planned play can be great instruments for brain development in young children especially in the setting of early childhood education. Experts may find that the manual offers a well-rounded and thorough approach to developing children's cognitive skills through play, a fact that is backed up by the large majority of respondents supporting it.

Table 12. Manual’s Level of Acceptance regarding the application of Explicit Play Strategies in terms of Practicality & Usability

Indicators	Mean	SD	Description	Interpretation
1. The manual is easy to use and integrates into daily classroom routines.	3.85	0.38	Strongly Agree	Highly Acceptable
2. The materials and activities are feasible even with limited classroom resources.	4.00	0.00	Strongly Agree	Highly Acceptable
3. The manual supports effective classroom management during play activities.	4.00	0.00	Strongly Agree	Highly Acceptable
OVERALL	3.95	0.13	Strongly Agree	Highly Acceptable

Table 12 reveal that the level of acceptance of the manual is extremely high in terms of practicality and usability. The first point, which asks if a manual is easy to operate and if it fits into the daily routine of the classroom, was awarded a mean of 3.85 with a standard deviation of 0.38. This points to a high level of agreement between the evaluators with only a small amount of difference in the responses. The second point, which looks at if the materials and activities can be done even in the case of very few classroom resources, got a mean of 4.00 with a standard deviation of 0.00. This shows that the evaluators were in complete agreement. In the same way, the last point, which checks if the manual can be used as a tool for managing the classroom effectively during play activities, was granted a mean score 4.00 and a standard deviation of 0.00, which is a unanimous agreement. Those very same figures led to an overall mean score 3.95 and standard deviation 0.13 that go with the descriptive rating "Strongly Agree" and interpretation "Highly Acceptable".

The results suggest that the book is very useful and usable for teachers to implement the lessons in their classrooms, especially in early childhood education. The evaluators' high level of agreement means that the manual offers teachers clear and simple strategies that they can easily integrate into their daily teaching activities. Besides, the top scores in feasibility and classroom management indicate that the materials and activities provided in the manual are both realistic and adaptable, even in resource-limited classrooms. This shows that playing the manual is not only encouraging play-based learning but also equipping teachers with the necessary skills to manage and facilitate learning activities effectively. In summary, the excellent reading supports that the manual is a trustworthy and teacher-friendly instructional tool that can assist in the successful use of explicit play strategies in preschool classrooms.

Table 13. Manual’s Level of Acceptance regarding the application of Explicit Play Strategies in terms of Overall Acceptability

Indicators	Mean	SD	Description	Interpretation
1. The manual is a valuable and reliable resource for promoting cognitive development through play.	3.85	0.38	Strongly Agree	Highly Acceptable
2. I am satisfied with the manual’s overall quality and usability.	4.00	0.00	Strongly Agree	Highly Acceptable
3. I would recommend the manual for wider use among preschool teachers.	4.00	0.00	Strongly Agree	Highly Acceptable
OVERALL	3.95	0.13	Strongly Agree	Highly Acceptable

Table 13 shows that the manual received extremely good acceptance from the users throughout the whole study. The whole set of indicators achieved very good to excellent results with respective mean values between 3.85 and 4.00. This clearly proves the highest level of the descriptive category "Strongly Agree" with the corresponding interpretation "High Acceptable". The respondents gave the most positive feedback for the indicators concerning satisfaction with the quality and usability of the manual and recommending it for a wider audience (M = 4.00, SD = 0.00), meaning that they were all in consensus. Conversely, the indicator claiming that the manual can be used as a great and trusty resource to encourage cognitive development through play got a slightly lesser mean (M = 3.85, SD = 0.38) but still within the highest descriptive level. The general mean of 3.95 and an SD of 0.13 reflect an extremely high tolerance level with negligible fluctuation in the answers.

Results reveal that the manual is very much welcomed and seen as a potent teaching tool for delivering explicit play methods in preschool education. The unanimity amongst the respondents implies that the manual is not only feasible and up to date for the actual student's needs but also has the possibility to be used on a larger scale among academics and teachers. These points present the latest research, which shows that children's cognitive development and their interest in the learning process are greatly enhanced when they are supported by the correct instructional resources and are engaged in structured play-based learning strategies. For example, relevant publications provide evidence on the efficacy of guided play and teacher-led play interventions in

promoting the educational success of young children and their active participation in the classroom environment (Zosh et al. 2022; Weisberg et al. 2023). Therefore, based on the excellent acceptance of the manual, it is concluded that it could be a good tool for educators in integrating purposeful play into early childhood instruction.

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a comprehensive synthesis of the quantitative and qualitative data collected during the study. It focuses on the key findings from kindergarten teachers' experiences with play-based learning resources, the creation and evaluation of the Bilingual Explicit Play Strategies Manual, and the teachers' level of acceptance of the developed material. The findings serve as the foundation for the conclusions reached and recommendations made.

Summary of Findings

The study's findings enabled the researchers to design and validate a structured instructional material aimed at increasing the intentional use of play in kindergarten classrooms. The Bilingual Explicit Play Strategies Manual was created to address the challenges that teachers face when implementing guided play. The manual focuses on improving preschoolers' cognitive abilities, specifically memory, reasoning, and problem solving. The study's findings indicate that the material is appropriate and useful as a resource for teachers in facilitating purposeful play-based learning.

Kindergarten teachers' experiences with play-based learning resources in terms of adequacy, affordability, and accessibility.

The study reveals that although kindergarten classrooms are equipped with play materials, these materials are often not enough to keep the structured play activities going. In many cases, due to lack of resources, teachers make or adapt their own materials. The issue of regularly buying and replacing play materials that are appropriate for the different stages of children's development is also hindered by financial constraints. Furthermore, the problem of classroom space and storage can occasionally make it difficult for children to access the materials during guided play times.

Explicit play strategies designed to enhance children's cognitive competency.

The study created a set of explicit play strategies designed to help children improve their memory, reasoning, and problem-solving abilities. These activities were based on the preschool teachers' experiences and suggestions shared during the interview. The strategies included using classroom materials such as flashcards, matching games, picture activities, and letter recognition tasks to supplement early literacy activities like Alfabasa. These activities turned play into guided learning experiences that encourage active participation and cognitive engagement.

Evaluation of the Bilingual Explicit Play Strategies Manual.

The created manual was assessed regarding its content, printing, illustrations, design, layout, and overall satisfaction. The results show that most teachers agreed that the manual has clear instructions, useful activities, and well-organized topics. The prints and layout were thought to be easy to read and good for use in the classroom, and the illustrations were said to be simple and helpful for the lessons. The results show that the manual meets the expected standards for teaching materials for young children.

Implementation of the manual through orientation and classroom application.

The manual was implemented by having a briefing with the participating kindergarten teachers. At that time, the teachers were briefed on the manual's goal, format, and usage guidelines. Having been oriented, the teachers went on to use the manual by including a few play activities in their teaching. Through the implementation it

was found that the manual can be a very useful guide for a teacher in conducting both guided and unstructured play in the kindergarten classroom.

5. Teachers' level of acceptance of the developed manual.

All of the teachers who answered gave the manual a score of 4 (Strongly Agree) on all of the indicators. This led to a weighted mean of 4.00, which was seen as Highly Acceptable. The fact that the answers were all the same shows that teachers strongly agree about the manual's quality, relevance, and usefulness for teaching. The results show that the material that was made is good for use in the classroom and is ready to be used more widely.

Conclusions

The study revealed that kindergarten teachers encounter difficulties in executing play-based learning, especially regarding the sufficiency, cost-effectiveness, and availability of instructional resources. Even with these problems, teachers still find ways to give their students fun and meaningful play experiences. The Bilingual Explicit Play Strategies Manual gives teachers a structured guide to help them plan purposeful play activities in the classroom. The high scores for evaluation and acceptance show that the manual is good and useful for use in the classroom.

The findings support the study's hypothesis that the creation of a Bilingual Teacher's Manual on Explicit Play Strategies would provide teachers with a structured and practical tool for implementing purposeful play-based learning. The manual includes clear instructions, step-by-step activities, and materials that teachers can easily incorporate into their regular lessons. Through these activities, teachers can help children develop important cognitive skills like memory, reasoning, and problem-solving. Positive evaluation results indicate that the study's assumption was met.

The study's findings underline the significance of equipping teachers with instructional materials that are not only accessible but also well-organized. If teachers receive clear directions and properly planned activities, their confidence in employing play as an effective learning method is likely to increase. The high appreciation of the manual indicates that teachers recognize its potential to aid classroom teaching. Essentially, the manual, to a great extent, can be a reliable guide to enhance and maximize the effects of play-based learning for preschool children.

Recommendations

In light of the conclusions drawn from the study, the following recommendations are proposed:

1. Kindergarten teachers are advised to include direct instruction and teacher-led play activities in their daily teaching routines. These approaches will help them create meaningful and intellectually challenging learning opportunities for their young learners. School leaders can also help by making and sharing the Bilingual Explicit Play Strategies Manual so that even more teachers will have access to the resource and will be able to use the material developed in their teaching.
2. Educational leaders and curriculum planners could think about enhancing the blend of well-organized play-based techniques in early childhood education settings. Workshops and seminars for professional growth may be based on guided play facilitation, and the appropriate use of play-based educational resources in kindergarten classrooms may be among topics covered.
3. Schools may consider ways to make play materials more adequate, affordable, and accessible, for instance, by mutual sharing of resources and better structuring of teaching materials.
4. Future researchers may replicate these studies with a bigger number of teachers or in different educational setups to get a deeper understanding of the potential and effectiveness of explicit play strategies in early childhood education.
5. While the study confirmed the manual's widespread acceptance among teachers, future research could

investigate the long-term effects of explicit play strategies on children's cognitive development and academic readiness. Another area to investigate is how home and school collaboration can promote the use of structured play activities in early learning.

