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PLAY-BASED MULTI-SENSORY INSTRUCTIONAL MATERIALS FOR COGNITIVE & LANGUAGE DEVELOPMENT OF PRESCHOOL LEARNERS

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Acceptance Page

This special/capstone project prepared by **SHAINA MARIE P. SIA** with the title: **"PLAY-BASED MULTI-SENSORY INSTRUCTIONAL MATERIALS FOR COGNITIVE & LANGUAGE DEVELOPMENT OF PRESCHOOL LEARNERS"** is hereby accepted by the Faculty of Education, U.P. Open University, in partial fulfillment of the requirements for the degree of Bachelor of Education Studies.

03/18/2025

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Biographical Sketch

Shaina Marie P. Sia is a fourth-year Bachelor of Education Studies (BES) student from the University of the Philippines Open University residing in Parañaque City. She completed elementary and secondary education at Saint Mary's Academy of Capiz. Prior to enrolling in UPOU, she earned an Associate in Arts in Pre-Dentistry degree from Centro Escolar University Makati. She also took up Doctor of Dental Medicine at the same institution prior to shifting to Bachelor of Science in Psychology at College of St. John-Roxas De La Salle Supervised. She then transferred to UPOU in the 3rd Trimester of A.Y. 2020-2021.

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"I can do all things through Christ who gives me strength." – Philippians 4:13

With a grateful heart,
Shaina

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Abstract

Move.Org Foundation Inc. (MovEd) is a non-stock, non-profit organization that provides early childhood care and development programs to children and their families in underserved communities in the Philippines. It has nineteen (19) learning labs in total and one of which is located in La Huerta, Parañaque City, which is the chosen project locale of the researcher. The purpose of the study is to identify the instructional gap that exists in MovEd La Huerta learning lab and address this gap through an instructional solution.

Results of the needs, context, and learner analysis reveal that the participants, MovEd preschool learners, have deficiency in their cognitive domain and language skills, and there is a lack of variety in the instructional materials available that will help develop these deficiencies. As such, the goal of the study is for the participants to improve on their cognitive and language skills as compared to their pre-assessment results through play-based multi-sensory instructional materials.

The researcher is an eight-week instructional plan consisting of eight (8) modules that contain mainly play-based learning activities and multi-sensory instructional materials. The Module 5 Day 2 lesson was pilot-tested by the preschool teachers (implementers) for the researcher and her external adviser (project gatekeeper) to evaluate the effectiveness of the instructional design. Evaluation results reveal that the participants showed improvements in the post-assessment as compared to their pre-assessment results. It is recommended that the other MovEd learning labs adopt the instructional design.

Keywords: play-based learning; multi-sensory learning; instructional materials; cognitive development; language development; preschool learners; early childhood education; pre-primary education

I. INTRODUCTION

Rationale

Daycare centers have inarguable benefits in the development of young learners. According to Olayvar (as cited in Ramirez, 2024), pre-primary education is the foundation of a child's development wherein every educational stage that follows relies on its success, in which every child has the right thereto. As such, it is important that daycare centers and teachers are capable of providing quality pre-primary education. One way of enhancing the capacity of daycare teachers to teach effectively is by providing them the necessary materials for teaching and guiding them on how to use these to optimize learning of preschool learners. By providing instructional materials that promote play-based and multisensory learning through hands-on activities, it will help in the cognitive and language development of the participants.

Executive Summary

The Special Project's target participants are the preschool learners enrolled in MovEd La Huerta learning lab which is the project's locale. MovEd La Huerta is located inside Ancop Rotary Homes 1, C5 Extension, Brgy. La Huerta, Parañaque City. For S.Y. 2024-2025, they have thirty-one (31) enrollees in total: fourteen (14) for PS1, or those that are 3.0 to 3.11 years old upon enrollment, and seventeen (17) for PS2 who are 4.0 to 4.11 years old upon enrollment. The project focuses on the design and development of learning activities and instructional materials based on play-based and multi-sensory learning approaches which will help enhance the participants' cognitive and language skills. The project likewise supports United Nations' Sustainable Development Goal 4 of

Quality Education, specifically Target 4.2 that “by 2030, all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education” (*Quality Education,* 2024).

A needs, context, and learner analysis was conducted to Identify the instructional gap that exists and needs to be addressed in the project locale. Data collection methods include semi-structured interview with the teachers, survey with the parents, and on-site classroom observation to come up with a thorough needs assessment. The identified instructional problem is the lack of variation in the instructional materials available in the learning lab that will help develop the participants’ cognitive and language skills. The analysis likewise reveals that there is a deficiency in the participants’ cognitive domain and a need to improve on their reading and writing or language skills. The study aims to bridge the gap between the desired status of enhanced cognitive and language skills of the participants and the current status wherein their cognitive and language skills are subpar, making them unprepared for primary education.

The researcher designed an eight-week instructional plan consisting of eight (8) modules with learning activities that promote play-based and multi-sensory learning. The topics are based from Early Childhood Care and Development (ECCD) Council’s required list of lessons particularly for Quarter 2 with the theme of My Family. The Module 5 Day 2 lesson was pilot-tested and evaluated, and the post-assessment results show that the participants improved as compared with their pre-assessment results.

It is recommended that the other MovEd learning labs adopt the instructional plan designed for MovEd La Huerta so the other preschool learners also enhance their

cognitive and language skills and have quality pre-primary education to make them prepared for primary education.

Statement of the Problem

Findings of the thorough needs, context, and learner analysis (see Appendix C) conducted reveal that there is a deficiency in the participants' cognitive domain and lack of instructional materials that will help address this. The analysis also shows that there is a need for them to improve on their reading and writing or language skills.

Thus, the identified instructional problem is a lack of variation in the instructional materials available in the learning lab that will help develop the participants' cognitive and language skills.

Objectives

Goal: The participants will be able to improve on their cognitive and language skills as compared to their pre-assessment results through play-based multisensory instructional materials.

Cognitive sub-goals:

1. Enhance memory retention through sensory-rich activities
    a. Introduce new words using sensory materials such as flashcards with textures or objects to associate words with concrete experiences
    b. Administer games that promote visual memory such as memory match using flashcards with textures

    c. Use tactile materials to draw letters and shapes such as powder and kinetic sand

2. Develop problem-solving skills through interactive play-based tasks
    a. Use alphabet puzzles for sorting and placing the pieces correctly

Language sub-goals:

1. Increase vocabulary through multisensory storytelling and play-based tasks
    a. Play audiovisual storybooks with moral lessons
    b. Make use of manipulatives such as modelling clay to form letters and shapes
2. Enhance listening comprehension through auditory-based games
    a. Implement games such as I Spy and Bring Me
    b. Use nursery rhymes to sing and dance

Significance of the Study

The United Nations' fourth sustainable development goal of Quality Education aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (*Quality Education*, 2024). The same posits that education liberates the mind, unlocks the imagination, and is necessary for self-respect. A specific target of the SDG 4 under Target 4.2 is *equal access to quality pre-primary education* which aims to ensure that by 2030, all children have access to quality early childhood development, care, and pre-primary education that will make them prepared for primary education (*Quality Education,* 2024). As such, this project seeks to contribute toward achieving said target of the SDG 4 of Quality Education, especially in the Philippines wherein the reality

is that education has become more of a privilege than a right. In partnership with Move.Org Foundation Inc. which provides free early childhood care and development programs in the Philippines and whose vision is for every Filipino child to have quality early childhood education, this project will be beneficial for pre-primary learners of today and the future that will make them prepared for primary education and will help make education sustainable for future generations.

Scope and Limitations of the Study

The study's participants are the learners of MovEd's La Huerta learning lab. The study also includes the analysis of MovEd La Huerta learning lab itself, its teachers, and the community where the learning lab is located. Other MovEd learning labs are excluded from the study.

II. REVIEW OF RELATED LITERATURE

Theoretical Framework

Rationale of Play-Based Learning and Multi-Sensory Learning Approaches

The instructional plan shall adhere to the principles of play-based and multisensory learning approaches for preschool learners. Play-based learning maintains a child's enjoyment of guided play, i.e., play with teacher involvement, while engaging with the learning content (Sprig Learning, 2022). It promotes holistic development of learners by engaging all of the learners' senses, thereby also promoting multisensory learning (Sprig

Learning, 2022). In the same vein, multisensory learning supports cognitive development, promotes language development, strengthens motor skills, and encourages socio-emotional growth, thereby making the approach holistic as well (Brightwheel, 2024b). Play-based learning and multisensory learning are learner-centered approaches in early childhood education because the active participation of learners is encouraged. Moreover, because multisensory learning makes use of all the senses, it promotes learners' multiple intelligences since the activities and materials are relevant to each of the learners according to their strengths, thereby allowing them to express their learning in many different ways (Brightwheel, 2024b).

Experiential Learning Theory and Theory of Multiple Intelligences in Pre-Primary Education

Kolb's experiential learning considers a more holistic approach, combining the role of mental processes and the possible role of subjective experience in the learning process, thereby emphasizing how experiences, including cognition, environmental factors, and emotions influence the learning process (Cherry, 2022). A study by Enache (2022) reveals that the experiential approach to learning allows preschool learners to take responsibility for their learning through direct discoveries and experiments, given that their main activity is play. As such, their interest is piqued through experimentation, exploration, creation, and representation of what they learn through play and the role of the teachers is to ensure that these learners gain positive experiences.

Experiential learning helps learners explore their strengths and weaknesses when learning new things and improve. As such, learners are able to express their learning and intelligence in multiple ways based on their capabilities and strengths since each learner

has their own learning style (Brightwheel, 2024b). Delgoshaei and Delavari (2012) have found that applying a multiple intelligence approach in classrooms significantly improves all the domains of cognitive development of preschoolers by viewing and introducing concepts from different perspectives and intelligences, thereby allowing them multiple means of expressing their learning. MI-based curricula attempt to produce deeper understanding and memory development to increase preschool learners' ability to apply concepts, explore, discover learning, and be creative (Delgoshaei & Delavari, 2012).

Sociocultural Theory of Cognitive Development in Pre-Primary Education

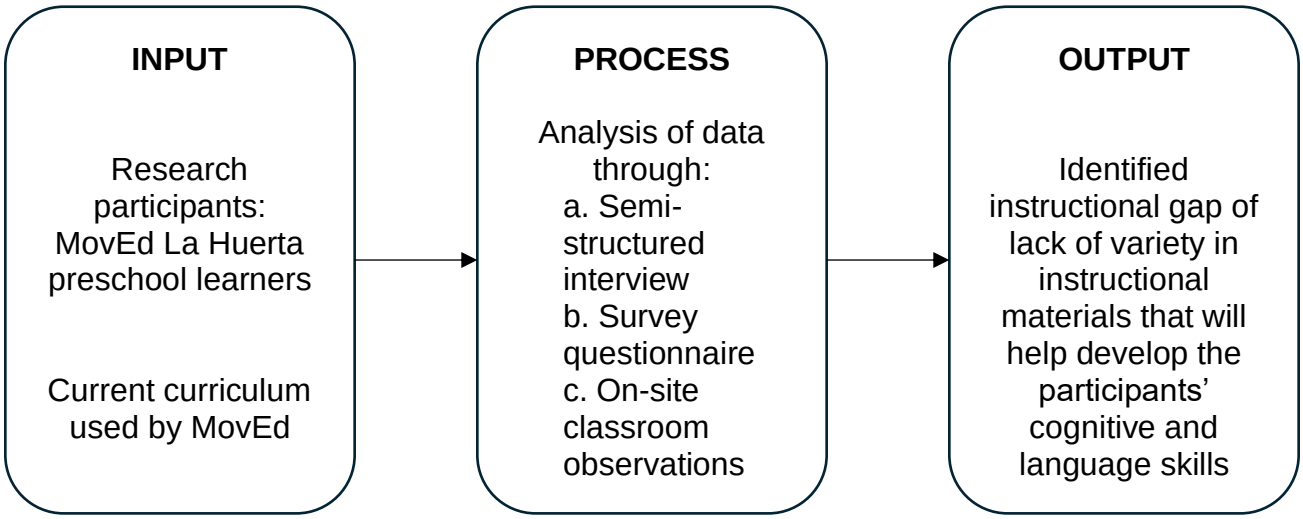
Combining these with Vygotsky's sociocultural theory which emphasizes the role of social interaction with more knowledgeable others (MKOs) in the development of mental abilities such as language and cognitive skills, the learners can increase not only the quantity of information and the skills they can develop, but also help in the development of their higher-order thinking skills (McLeod, 2024). Teachers as MKOs play a significant role in facilitating the learning of preschool learners because their zone of proximal development (ZPD) needs the most sensitive guidance and scaffolding to help them close the gap between what they can do independently and with guidance. The sociocultural theory likewise emphasizes the role of language in cognitive development especially in young learners (Zhou, 2024), which is what this project proposal aims to improve on. Zhou (2024) highlights the importance of sociocultural variables, such as teachers and family members, in the formative period of preschool learners since MKOs provide foundation for lifelong learning and holistic development. The same study finds that integrating sociocultural theory into early childhood education can foster a more inclusive, dynamic, and effective learning environment. Applying sociocultural theory in

early childhood education presents immense potential for promoting inclusive practices, personalized learning, and meaningful relationships among preschool learners as it considers the significance of social interactions and cultural contexts in their cognitive development (Zhou, 2024).

Social Learning Theory in Pre-Primary Education

In relation to teachers as MKOs, social learning theory's observational learning through modeling can be helpful in the cognitive development of preschool learners as they observe their teachers and eventually do things on their own. A recent study by Ismail (2023) shows that social cognitive abilities can be significantly improved by art learning through modeling and imitation to acquire knowledge. Thus, it is important for teachers to establish the necessary conditions for effective modeling which are attention, retention, reproduction, and motivation (David, 2020).

Conceptual Framework



Operational Definition of Terms

1. **Play-Based Learning** – is an educational approach that incorporates play as a central component of the learning process (Brightwheel, 2024a). It encourages children to use their imagination and learn problem-solving as it recognizes that young learners learn best through active engagement and exploration in a fun, meaningful, and enjoyable context (Brightwheel, 2024a).

2. **Multi-Sensory Learning** – is a learning approach that encourages learners to make use of more than one of their senses while learning and appeals to their visual, auditory, kinesthetic, and tactile senses (Brightwheel, 2024b).

3. **Cognitive Development** – is the process through which an individual develops the ability to think and reason (Nees, 2023).

4. **Language Development** – is the process through which an individual acquires the ability to communicate and process speech which includes understanding basic linguistic patterns, expanding vocabulary, and achieving fluency (Indeed Editorial Team, 2024).

5. **Pre-Primary Education** – is the first stage of organized education and considered as the more formal component of early childhood care and development (Otto, 2024). It is designed to introduce very young learners, usually between ages three (3) and six (6), to a school environment (Otto, 2024).

III. METHODOLOGY

Research Design

The project shall adhere to the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model of instructional design which follows an iterative process that allows feedback and changes at every stage to ensure alignment with the goals and objectives (ELM Learning, 2024).

E) ANALYSIS

The instructional design's main rationale shall be based on the urgent instructional gap or problem identified in the conducted needs, context, and learner analysis (see Appendix C). This phase commences the instructional design process, making it a very crucial phase in the success of the entire design. In this phase, the researcher shall identify the instructional gap in the target locale that will be addressed through an instructional design. In this specific scenario, bridging the gap between the desired status of enhanced cognitive and language skills of the participants and the current status wherein their cognitive and language skills are subpar making them unprepared for primary education is at the heart of the whole design process.

B) DESIGN

A design blueprint showing the detailed instructional plan based on the project goals and subgoals shall be created. The researcher (instructional designer) will draft the learning objectives, learning activities, instructional strategies, instructional materials needed, duration, and assessments through a constructive table of alignment. The design

blueprint shall likewise reflect the goals and subgoals and how they will be met through the lessons and instructional materials to be developed.

The design shall be good for eight (8) weeks and shall be based on the curriculum that MovEd is following, which is in accordance with the required list of lessons by the ECCD Council, to ensure alignment with the themes set forth by the latter for pre-primary education nationwide.

C) DEVELOPMENT

Based on the approval and feedback of both the project gatekeeper and the content expert, the researcher shall begin the development of the instructional materials including various multimedia materials, teachers' manual, and learning activities. In this phase, the designer shall tailor the content to meet the participants' preferences and the learning objectives established in the design phase.

In terms of developing the instructional materials, particularly non-projected visual aids and print materials, the researcher shall adhere to the visual principles by Smaldino et al. (2005) to ensure legibility, reduce effort and extraneous noise, increase active engagement, and focus attention.

D) IMPLEMENTATION

In this phase, the implementers, i.e., daycare teachers, shall pilot-test one of the modules designed and developed by the researcher in accordance with the teachers' manual provided. Its purpose is to revise or refine the entire instructional design based on the effectiveness (or not) of the actual implementation of the design.

The researcher's target pilot-testing is on or before the second week of December 2024. Prior to this date, she must have already turned over the entire instructional design

package including the modules, teachers' manuals, and instructional materials to prepare them for the pilot implementation. A timeline of the special project tasks is planned using a Gantt chart (see Appendix H).

E) EVALUATION

The researcher shall observe the pilot implementation and evaluate the effectiveness thereof based on the participants' summative assessment results, their behaviors and reactions, and the fulfillment (or non-fulfillment) of the learning objectives. Thereafter, based on these evaluations, the researcher shall revise the entire design as needed.

Kirkpatrick's model of evaluation shall be used as framework in the assessment of the effectiveness of the instructional design, which has four levels of evaluation: reaction, learning, behavior, and results (Calhoun et al., 2021).

Level	Evaluation Questions	Yes / No
Reaction	Are the learners actively engaging with the learning activities and materials?	
Learning	Are the learners able to correctly answer the formative and summative assessments conducted?	
	Did the learners improve their pre-assessment results on their post-assessment results?	
Behavior	Do the learners display attitudes and performances expected of them based on the learning outcomes?	
Results	Are all the learning goals, subgoals, and outcomes achieved?	

The researcher shall develop a pre-assessment worksheet or booklet which shall be administered by the teachers orally and individually to each of the participants to determine their starting point prior to the pilot-testing. The results of which shall be recorded accordingly and the same material shall be used as one of the post-assessment tools to determine any improvement in their cognitive and language skills. In addition to this, the summative assessment worksheets or outputs expected from the participants at the end of the modules shall also be used as a post-assessment tool along with the evaluation questions above patterned from Kirkpatrick's model of evaluation.

Locale of the Study

The target locale, MovEd La Huerta learning lab, is one of MovEd's nineteen (19) learning labs. It is located inside the Parañaque Ancop Rotary Homes 1, C5 Extension, Brgy. La Huerta, Parañaque City which is a relocation site of informal settlers coming from different places. The primary source of livelihood of the community is fishery.

MovEd La Huerta is a free, donor-driven daycare center run by Move.Org Foundation Inc., a non-stock, non-profit organization that aims to bring early childhood care and development programs to children and their families in underserved communities in the Philippines.

Respondents of the Study

The respondents of the study are the preschool learners enrolled in MovEd La Huerta for S.Y. 2024-2025. They are thirty-one (31) in total: fourteen (14) from PS1, or those who are 3.0 to 3.11 years old upon enrollment, and seventeen (17) from PS2, those

who are 4.0 to 4.11 years old upon enrollment. PS1 has six (6) girls and eight (8) boys, while PS2 has seven (7) girls and ten (10) boys. The PS1 learners are divided into two (2) sessions: 8:00am to 9:30am and 10:00am to 11:30am; while the PS2 class is from 1:00pm to 3:00pm. All of the learners are residing within or nearby the community where the project locale is located.

Sampling Procedure

Purposive sampling method was used by the researcher to gather data for the analysis. This type of sampling uses the researcher's expertise in selecting a sample that is most useful to the project's purpose (McCombes, 2023). For this project, the researcher included all the parents of the participants in the survey. Moreover, both of the daycare teachers were interviewed.

Data Gathering Procedure

The data gathering procedures used in this study consist of a semi-structured interview with the teachers, which is a more flexible approach than other interview methods since it combines elements from both structured and unstructured interviews (George, 2022), survey questionnaire for the parents for easier sorting of results, and direct classroom observations. These data gathering procedures were conducted simultaneously in order for the researcher to come up with a more accurate and detailed data analysis.

Data Analysis

Descriptive analysis was used by the researcher to interpret the data gathered from the survey questionnaires which describes and summarizes a set of data (Neo, 2024). After which, the researcher used inductive thematic analysis based on the results of the survey, interview, and observation to determine emerging common themes and patterns and therefore identify the primary instructional gaps that exist. Inductive approach involves deriving themes from data without preconceptions (Crosley, 2021), which makes it suitable for this research because the researcher did not have an expected and pre-identified instructional gap prior to conducting a needs, context, and learner analysis.

IV. RESULTS AND DISCUSSION

Socio-demographic Profile of Respondents

The respondents are the 31 learners enrolled in MovEd La Huerta: 14 from PS1 and 17 from PS2. PS1 is comprised of six girls and eight boys, while PS2 has seven girls and 10 boys. 17 out of the 31 learners, or 54.8%, have parents who are either housewives or are unemployed. Hence, not all learners can afford to bring school supplies that would be beneficial to optimize their learning. Most of them rely on the free learning kit given by MovEd which only contains writing pads, pencils, erasers, sharpeners, and crayons. 15 of the learners are aged 3 to 3.11 years old and the same are aged 4 to 4.11 years old, while the other one has just turned 5 years old.

All the respondents are residents of Ancop Rotary Homes 1, Brgy. La Huerta, Parañaque City wherein the primary source of livelihood is fishery. All the respondents

come from low-income households, given that the community is a relocation site of informal settlers from different places and their houses are very close to each other, making it impassable for vehicles. The respondents benefit from the free pre-primary education being provided by MovEd.

Results

Results of the survey reveal that the developmental area that the respondents need to improve on the most is their cognitive skills (61.3%) followed by language skills (51.6%) and emotional regulation (48.4%). MovEd has four subjects for both PS1 and PS2: Storytime, Reading, Writing, and Math. Parents believe that their children need to improve on both reading and writing the most (67.7%).

The ECCD has identified seven developmental domains, namely, gross motor, fine motor, self-help, receptive language, expressive language, cognitive, and social-emotional (UNICEF, 2015). Among these, the domain that the respondents need further development is their cognitive skills as verified by the survey results. Since most of them communicate their needs and feelings verbally (77.4%), they have substantial receptive and expressive language.

In terms of the activities that the respondents like doing the most in school, free play topped the survey results (67.7%), equally followed by arts and crafts, games, and sing & dance (58.1%). Most of the respondents' preferred learning style is physical learning through hands-on activities.

87.1% of the parents expect that their children will become active participants of learning through the help of MovEd and its teachers. From the interview with the teachers,

it was determined that the instructional gap that exists is mainly the **lack of instructional materials** that will help address the deficiency of the respondents' cognitive domain. The teachers mainly use print materials in the form of storybooks and worksheets and the non-projected visual aid chalkboard. According to the teachers, this sometimes triggers the respondents' short attention span because of the limited availability of instructional material choices. The teachers believe that combining different media, i.e., multimedia materials, in teaching will help optimize the learning of their learners.

Discussion

Kolb's Experiential Learning Theory (ELT) posits that knowledge is created through transformation of experience (Cherry, 2022). Because most of the respondents prefer hands-on experience, engaging in activities involving active experimentation will improve their learning. Furthermore, Vygotsky's Sociocultural Theory emphasizes the importance of social interaction in the cognitive development of learners (McLeod, 2024), i.e., the respondents. Thus, in the process of their experiential learning, the guidance of More Knowledgeable Others (MKOs), i.e., the teachers, plays a very significant role as this would help develop their skills including higher-order thinking skills (McLeod, 2024).

Guidance of the teachers through scaffolding is of utmost importance at this stage because the respondents are very young, and they still have so much to learn within their zone of proximal development. Social interaction with the teachers and other learners is necessary for them to develop higher mental functions such as language, reasoning, and self-regulation (McLeod, 2024). Respondents' active participation in meaning-making is

important for them to internalize knowledge, i.e., bridging the gap between social interaction and individual cognitive development (McLeod, 2024).

Conclusively, results of the analysis show that there is a need for instructional materials that will help develop the respondents' cognitive skills through play-based learning involving hands-on activities. Given the important role of teachers in the learning process and the interest of learners in free play, the middle ground would be to implement guided play. Having the need to improve on the respondents' early literacy of reading and writing as well as their cognitive skills, an instructional design utilizing play-based learning is the best path forward since it engages in multisensory learning, i.e., making use of all the senses of young learners (Sprig Learning, 2022). Multisensory learning supports cognitive development, promotes language development, strengthens motor skills, and encourages socio-emotional growth (Brightwheel, 2024b), making it a holistic approach in early childhood education which is in accordance with the ECCD checklist. In addition, multisensory learning promotes the multiple intelligences identified by Gardner which encourage each learner to relate the material according to his/her own strengths, thereby allowing each of them to express their learning in many different ways (Brightwheel, 2024b).

As a solution, the researcher designed an instructional plan that addresses the instructional problem of lack of variety in instructional materials that will help develop the respondents' cognitive and language skills good for eight weeks or one quarter of a school year. The eight-week design, comprising eight modules in total, includes play-based and multi-sensory activities and assessments suitable for preschool learners. This comes with

an easy-to-follow teachers' manual which contains a step-by-step guide on how to implement the lessons.

The researcher's instructional design is aligned with the ECCD Council's suggested lessons for Quarter 2 with the theme "My Family" while incorporating activities that can improve the respondents' cognitive and language skills. The activities are based on the goals and subgoals of the project, wherein the researcher ensured that each activity addresses at least one sub-goal and that all goals and subgoals are covered in the modules. These activities include but are not limited to various games, arts & crafts, sing & dance, storytelling, etc. The researcher also chose instructional materials that were feasible, sustainable, and can be easily sourced for the learning activities. In the development phase, the researcher adhered to the visual principles by Smaldino et al. (2005) for the print materials (worksheets) and non-projected visual aids to ensure legibility, reduce effort and extraneous noise, increase active engagement, and focus attention.

To determine the effectiveness of the instructional design, the researcher, through the help of the teachers as implementers, pilot-tested one of the lessons which was Module 5 Day 2 entitled *Prutas Pampalusog at Pampalakas (GLOW Food).* The learning activities in this specific lesson are a game and a worksheet activity that involves using tactile materials. The researcher believes that the said lesson is the most ideal to be pilot-tested because both of the learning activities cover the project's main themes of play-based learning and multi-sensory learning.

While the teachers were conducting the pilot implementation, the researcher and her external adviser/gatekeeper observed at the back of the classroom and evaluated the

lesson. For this phase, the researcher adhered to Kirkpatrick's model of evaluation as framework in the assessment of the effectiveness of the instructional design because of its clear and easy-to-follow process that divides evaluation into manageable levels. The four levels of evaluation under said model, i.e., reaction, learning, behavior, and results (Calhoun et al., 2021), were used as basis for the questions in the evaluation instrument she developed.

The researcher and her gatekeeper used the same evaluation instrument to evaluate the pilot implementation, but the gatekeeper's instrument included another page for the evaluation of the project plan, instructional design blueprint & materials, and areas for improvement. Aside from this, the researcher developed a pre- and post-assessment material specifically for the pilot implementation lesson to gauge the respondents' improvements, if any. Five out of seven learners were able to distinguish healthy food from unhealthy food based on their post-assessment result.

V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary and Conclusions

Because the designer, i.e., the researcher, is technically not the implementer, there have been challenges and deviations from the researcher's expected implementation versus the actual implementation. To sum it up, most of the difficulties the researcher encountered were already during the implementation phase which were somehow beyond her control. Although it can be frustrating, what she did during those moments was just keep going and not interrupt. Unforeseen circumstances that are beyond her

control may be inevitable but that does not mean that everything she worked hard for will go to waste and will not make sense. She looked at it from a different perspective; that albeit the instructions were not totally followed by the implementers, by assessing the respondents' performance according to her evaluation, the researcher can still confidently say that the design was effective.

With all the experiences she gained from this special project, her main takeaway is that *things will not always completely go as how one sees or plans it, but it does not mean that one's plan is a failure or that it's a reason for him/her to stop*. Like in life, people always encounter this situation wherein what they envision or expect is not how it's always like in reality; but they don't stop living. As for this project, when the researcher encountered this situation, she just looked at the brighter side of it and tried not to think too much about what went wrong and instead focused on what went right.

As an educator and instructional designer, being open-minded especially to constructive criticisms is an important trait that one must have for the success of the design because it's one way for you to improve your craft. Listening to feedback from experts and more knowledgeable others is important for growth and improvement as an educator. In addition, one should not be too fixated on perfection to the point that whenever little things do not go as planned, he/she would get too clouded or overwhelmed by it to the point that it would disturb his/her focus.

Further, the researcher realized that there are a lot of alternative learning systems that exist in the community that need equal importance, help, and attention as the basic education system. Education experts have vast options to render their services towards the realization of the UN's sustainable development goal of quality education. The

Philippine Education System in general can still be greatly improved to ensure that learners become not just individuals who are ready for the workforce, but more importantly learners who are critical thinkers; and the researcher believes this begins with the way they are educated at the onset, i.e., in pre-primary education.

The shortage of budget allocation by the government for education is primarily the biggest factor as to why alternative education and/or instructional technology development and integration in the country is insufficient. Budget cuts in education lead to fewer scholarship beneficiaries and probably an even lower wage for teachers who deserve so much more than what they are currently getting. These issues all affect the quality of education that Filipino learners are getting up to the youngest ones; and it requires a solution from a national level. As an individual nonetheless, whatever skills the researcher can render to the improvement of education in the Philippines is what she can offer as a solution, especially being a beneficiary of the Free Tuition Law herself and as an Iskolar ng Bayan.

Personally, the researcher can say that she has achieved her personal objectives and of the course because she was able to apply her knowledge of instructional design in developing and testing an instructional program to her project locale. Specifically, the knowledge she has gained from EDS 103 Theories of Learning, EDS 112 Principles of Instructional Design, EDS 113 Principles and Methods of Assessment, EDS 151 Instructional Media Resources, EDS 153 Design of Educational Multimedia Materials, and EDS 134 Community Education have been the most useful for this special project.

Moreover, her gatekeeper always acknowledges ger efforts for their institution and expresses her gratitude for her special project that has helped in improving their La Huerta

learning lab, which they also plan to incorporate into their other learning labs. For the researcher, this is the most fulfilling part -- knowing that she is able to leave a lasting impact and a difference to her project locale; that she will leave her partner institution at a better position than from when she entered it. Of course, she will bring the attitudes, traits, and skills that she has honed from doing this special project in her future endeavors as an educator. The researcher will continue to learn and improve on her craft because as cliché as it sounds, practice makes perfect progress; she will continue to strive for progress in everything she does.

Recommendations

The teachers' manual can be further developed to include a Filipino translation/ version for the instructions. It might have been easier for the teachers to implement the lessons had the instructions been given both in English and Filipino because it would have been easier for them to understand and interpret what is expected of them to do from the instructional plan.

Modify the actual implementation of ECCD Required List of Lessons based on learners' current competencies. As observed from the pilot-testing, it was difficult for the teachers to insert the lesson on Glow Food because the respondents have not yet developed and established enough prior knowledge on healthy vs. unhealthy food in general. The teachers should gradually introduce these lessons to them such that they will not feel overwhelmed by it, but at the same time still grasp the lessons on different food groups which they need to learn according to ECCD Council's recommendation. This is why including games and play-based activities can be very helpful for the respondents'

cognitive development and memory enhancement because they learn while having fun at the same time.

Adopt the instructional design to other learning labs. The instructional design developed can be used not only by the MovEd La Huerta learning lab but also by other MovEd learning labs since they all follow the same curriculum.

Continuous teacher training on pre-primary education particularly on implementing play-based and multi-sensory learning approaches. It is important for the teachers to develop new strategies and teaching styles for effective preschool teaching, especially since preschool learners have a very short attention span. Teachers must be knowledgeable on play-based learning and multi-sensory learning approaches for them to appropriately implement these teaching strategies.

Continuous support from donors and partnerships with LGUs. In order to sustain the program, MovEd must continuously secure partnerships with the LGUs that also provide educational support for the learners, such as by giving out free books, feeding programs, school supplies, and the like. Likewise, donor support is crucial because MovEd is a non-profit organization. Donors' financial support is vital in the actualization of the design because of the expenses in developing the materials, especially if the design will also be adopted by other learning labs.

Based on the pilot testing that the researcher conducted, if she were to develop an improved version of the design, she would *include a sample expected output* for each of the worksheet activities so that the learners and teachers could easily and readily visualize what they are supposed to do with the learning materials. For the sing and dance activities, she would also *replace the songs with music videos* because of the added

visual aspect to encourage active participation of learners, given that young learners rely more on visuals for learning. As for the teachers/implementers, she would *develop worksheet answer keys* to make it easier for them to accurately implement the instructional plan. This way, it would be easier to gauge and evaluate the effectiveness of the design.

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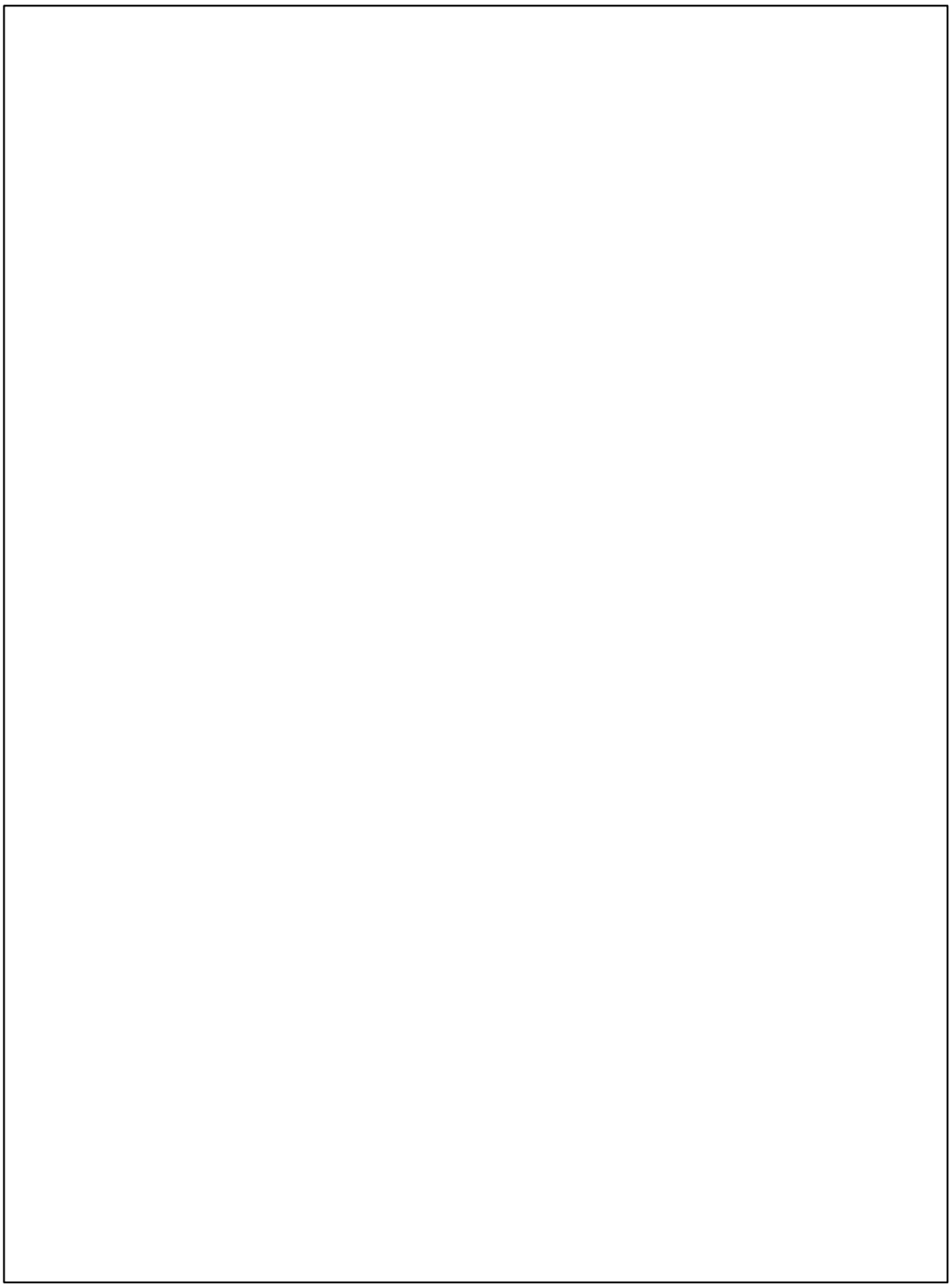
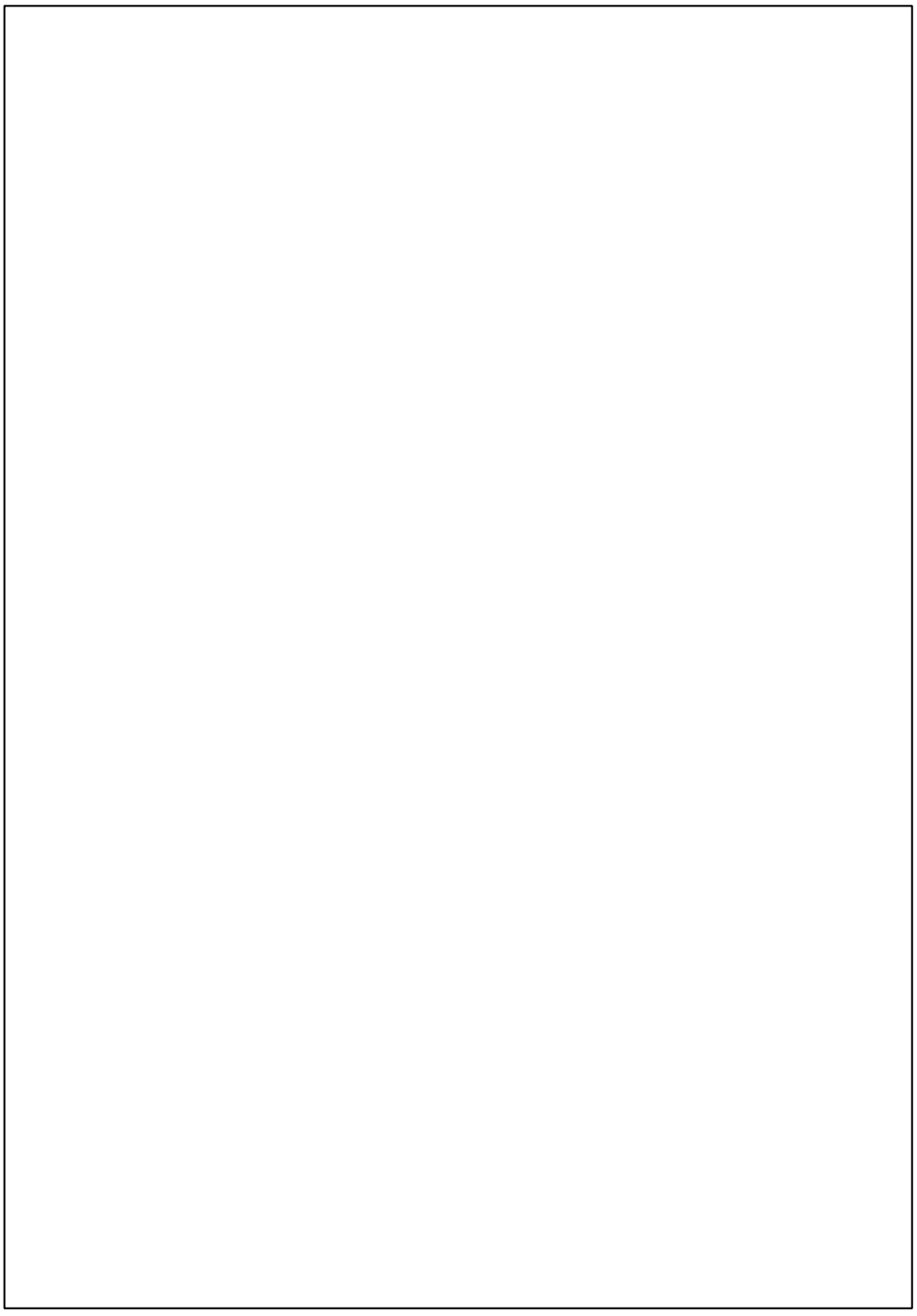
APPENDICES

APPENDIX A

Signed Special Project Consent Form





APPENDIX B

Parents' Signed Consent and Assent Forms

https://drive.google.com/file/d/1_M49Q2cBEvHLThPtv5S6dteP_F3PGqLT/view

APPENDIX C

Needs, Context, and Learner Analysis

https://drive.google.com/file/d/1IjUqz96MT9lLbyqHxSowkNQF03Rqf4f1/view

APPENDIX D

Project Logs

https://drive.google.com/file/d/1abOvx8OCHMwNBXk4zb1RsP7azU0LIc5C/view

APPENDIX E

Filled-Out Evaluation Instrument and Post-Assessment Data

https://drive.google.com/file/d/1fa1CVKz8IcbIrnl28fpap1vw-1iv6Gse/view

APPENDIX F

Parents' Survey Questionnaire Responses

https://drive.google.com/file/d/1RRScfDpZFcNN8pYbJeXtR4zT2xqeTB2t/view

APPENDIX G

Teachers' Interview Guide Questions and Notes

https://drive.google.com/file/d/1B6JvpBpEH9O7mP4iTg7V593cBrbJlGYd/view

APPENDIX H

Gantt Chart

https://drive.google.com/file/d/1WlvDbosJONpvDe5FZncmAXN-geAxVdbc/view