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Level of Innovative Practices of Early Childhood Education (ECE) Teachers

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Abstract — This research, titled "Level of Innovative Practices of Early Childhood Education (ECE) Teachers," explores the innovative pedagogical approaches employed by ECE teachers in Rosales, Pangasinan, Division of Pangasinan II, during the second semester of School Year 2024-2025. The study, submitted as a Master of Arts in Early Childhood Education thesis by Michael Dan Azul Caranza to Urdaneta City University in May 2025, investigates diverse teaching strategies, including project-based learning, play-based learning, and technology integration. It analyzes their impact on children's holistic development (cognitive, social-emotional, and physical growth) and examines teacher perspectives on the benefits and challenges of implementing these practices, considering factors such as resources, professional development, and institutional support.

The findings indicate that ECE teachers "Very Highly Practice" innovative methods across learning delivery, assessment of learning, learning materials, and learning environment, with average weighted means ranging from 4.53 to 4.61. Despite these high levels of innovative practice, the study found no significant relationship between the level of innovative practices and teacher demographic profiles. Furthermore, teachers reported "Serious" challenges in all four domains, with average weighted means from 2.61 to 2.66, primarily due to limited financial resources, time constraints, inadequate technology access, and physical space limitations.

The research concludes that while the school demonstrates a strong foundation in core educational areas and a commitment to student-centered practices, addressing resource, time, and space-related challenges is crucial for enhancing the learning experience. Recommendations include prioritizing budget allocation for diverse learning materials, investing in ongoing professional development focusing on technology integration and flexible grouping, implementing a phased approach to redesigning learning spaces, and fostering stronger partnerships with parents and the community. This study contributes to understanding effective strategies for enhancing early childhood education and aims to inform supportive policies and professional development programs.

Keywords — Innovative practices, ECE Teachers, Learning Materials, Learning Delivery, Assessment of Learning, Learning Environment

I. Introduction

Early Childhood Education (ECE) is extremely important in determining a child's educational trajectory. Application of the new technologies in the ECE context is crucial. In order to do so, these approaches are supposed to offer compelling, dynamic and effective learning experiences, which meet different requirements and stages of the developmental process. This is

how far out of the gate a child's education begins. It affects their cognitive, social, and emotional growth. In recent times, the landscape of education has undergone rapid transformation due to innovative pedagogical practices, technological advancements, and a growing emphasis on personalized learning.

In other words, a person with developed creativity has a high probability of having a healthy body and mind, great experiences, and a fulfilling existence worthy of a human being.

According to Kylliäinen (2023) there is a need for innovation, and by definition is the introduction of something new. Without innovation, there is nothing new, and without anything new, there will be no progress. Schools must be vibrant and competitive to move forward. Transformation and creativity are needed to be worldly savvy and flexible in a fast-moving world.

Innovation in education is not limited to big projects; it can be as simple as using new techniques, procedures, products, or tactics. Educational leaders are always trying to rethink what education means to meet the diverse needs of learners. They support innovation that is relevant, personalized, and responsive.

The researcher believed that innovative classrooms lead to better results. Kids develop stronger communication skills and show more engagement. Personalized learning, along with new teaching methods, is essential for preparing students for a global and competitive workforce. In the digital age, children in creative classrooms can retain more information and develop a deeper level of knowledge. Innovation in early childhood education (ECE) isn't just about high-end gadgets. It's also about cool new ways to teach, fun places to learn, and flexible strategies that fit what learners need as they grow. What's really important to remember is that the creative methods ECE teachers use directly impact how children learn right now.

In light of the foregoing statements, this study aimed to find out how much innovation ECE teachers use in their classrooms. It recognized the specific challenges and opportunities that come with teaching young children. The study is extremely important because it addresses crucial areas of education and child development and has far-reaching implications for the future of education and society.

Literature Review

Early childhood education efforts in the Philippines strive to meet the SDG 4 Education goals of providing inclusive and quality education to all children. The target goes well beyond simply enrolling children in school; it aims to deliver an education that is meaningful, top-notch, and open to every child, no matter where they come from. Early Childhood Education (ECE) is firmly seen as a crucial building block for reaching SDG 4. The significance of ECE is explicitly highlighted in Target 4.2, which states, "By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education (Li, Z., & Rao, N.,2023). Despite political and social restraints and a growing

population, the government remains committed to delivering learning programs and services to its youth. The government has robust legislative frameworks in place for providing early learning programs, specifically the "Early Years Act of 2013" and the "Kindergarten Act." Early childhood care and education are mandated for all children ages 0-8 years old, with mandatory early childhood education beginning in kindergarten for all 5-year-olds. The Philippines' early childhood education is overseen by two key agencies: the Early Childhood Care and Development Council, which supervises Pre-Kindergarten programs serving children aged 0 to 4, and the Department of Education, which supervises Kindergarten programs (Bustos-Orosa, 2021).

According to Almasa (2020), thirteen distinct competencies should be included in the teacher quality framework for Early Childhood Education teachers as follows: a) demonstrate learnedness the content of ECE specifically the holistic development and learning of the children, b) apply teaching strategies that are developmental and play-based in all learning areas to include ICT and mother tongue to facilitate the teaching-learning of the children, c) develop skills in networking and collaboration with relevant stakeholders to improve learning programs practices, d)inculcate the value of respect in diversity in school and whole community, e) display pride and commitment on professional ethics, f) display pride and commitment as early childhood educators, g) set-up a nurturing and inclusive learning environment for children, h) design conducive environment for learning and development, i) implement differentiated and developmentally appropriate practice for diverse children, j) prepare responsive ECE learning programs, k) address learning goals and outcomes by applying systematic use of appropriate assessment tools and methods, l) able to work collaboratively to improve teaching practice, and m) demonstrate understanding on systematic use of appropriate assessment tools and methods.

The world of education is really changing in the 21st century. New ideas are shaking up old classrooms and how we teach. We need this change to keep up with our fast-paced, global world. As education evolves, new tech, teaching styles, and learning spaces are key to making education better, easier to access, and more impactful. Teachers, students, and new technologies are all working together to reshape schools. This is building a future that's more empowering and transformational. From learning tailored just for you to working with people across the globe, and even virtual reality classrooms and smart learning platforms, we're ready to explore how innovation is changing education and training for the leaders of tomorrow.

II. Methodology

This chapter outlined the methods used in this study, along with the tools and processes employed. It outlined the research design, population, and locale of the study, data gathering instrument, data gathering procedure, statistical treatment of data, and ethical considerations.

Research Design

This quantitative research employed a descriptive-correlational design. According to Hassan (2023), the descriptive research design is a type of research methodology that aims to describe or document the characteristics, behaviors, attitudes, opinions, or perceptions of a group or population being studied. The descriptive design was appropriate for the study, as it provided the demographic profile of the respondents, the innovative practices of teachers in four domains, and the problems they encountered in the identified domains.

Furthermore, the correlational research design looked at the relationships between variables, assuming that the researcher does not control or change any of them (Bhandari, 2021). This design was very suitable for the study. It showed a significant relationship between the innovative practices of early childhood education teachers and their profile variables.

Population and Locale of the Study

The targeted population of this study was fifty (50) Kindergarten and Grade 1 teachers in Rosales, Pangasinan.

Data Gathering Instrument

The researcher used a data collection tool made specifically for the study based on the problem presented. The questionnaire checklist consisted of three parts. Part I of the questionnaire elicited the background profile of the respondents, Part II measured the level of innovative practices of ECE teachers, and Part III asked about the extent of the problems encountered in the innovative practices of ECE teachers.

The questionnaire was then validated by the experts in the field particularly three (3) Master Teachers.

Data Gathering Procedure

Before collecting data, the researcher asked for approval from the Office of the Schools Division Superintendent. This request included the principal's approval. Following approval, the researcher wrote a letter to the teachers who would participate in the study. Subsequently, the researcher scheduled meetings with the teachers involved in the study to explain the purpose and goal of the study.

Statistical Treatment of Data

In order to obtain valid and reliable results from the gathered data, different and appropriate statistical tools were utilized. The profile of the teacher-respondents was analyzed using descriptive statistics (frequency counts and percentages). The level of innovative practices of the ECE teachers was analyzed using weighted mean. The significant relationship between the level

of innovative practices of early childhood education teachers and their profile variables, Point Biserial, Spearman rho, and Pearson r, was utilized. The extent of the problems encountered by the ECE teachers along the given domains was analyzed using weighted means.

III. Results and Discussion

This chapter presented, interpreted, and discussed the results of the data gathered by the researcher through a survey on the level of innovative practices among early childhood education teachers in Rosales. It was divided into four (4) sections: 1) profile of the respondents, 2) level of innovative practices of ECE teachers along the following domains: a) learning delivery, b) assessment of learning, c) learning materials, and d) learning environment, 3) significant relationship between the level of innovative practices of early childhood education teachers and their profile variables, and 4) extent of the problems encountered by Early Childhood Education teachers in the given domains.

Demographic Profile of the Respondents

Based on the data, the typical respondent in this group is likely to be a female (82%), married (66%) individual between 31 and 40 years old (44%), holding some master's level units (48%), and having 1-5 years of service (42%). A significant majority (80%) did not provide specific information about recent relevant training or seminars.

Division Training Workshop on Supplementary Learning Resource for Teachers and Administrators/ Three-Day Live-Out Training-Workshop on Basic Graphic Design and Illustration Cum Storybook Writing was mentioned by one respondent (implied 2% if only one response).

Table 1
Demographic Profile of the Teacher Respondents
n=50

Variable	Category	Frequency	Percent %)
Age	24-30	11	22
	31-40	22	44
	41-50	14	28
	above 50	3	6
	Mean	37.3	
Sex	Male	9	18
	Female	41	82
Marital Status	Single	16	32
	Married	33	66
	Widower	1	2
Highest Educational Attainment	With MA units	24	48
	MA graduate	8	16
	With Doctoral units	14	28

	EdD/PhD graduate	4	8
Years in Service	1-5	21	42
	6-10	10	20
	11-15	14	28
	16-20	3	6
	above 20	2	4
Relevant Trainings/seminars Recently Attended	School-Based Training Of Teachers On The Matatag Curriculum - Kindergarten	8	16
	Upskilling And Reskilling of Teachers On Inclusive Education	1	2
	Division Training Workshop on Supplementary Learning Resource For Teachers And Administrators/ Three-Day Live-Out Training-Workshop On Basic Graphic Design And Illustration Cum Storybook Writing	1	2
	No answer	40	80

Detailed Breakdown by Variable:

Age: The largest age group is 31-40 years old (44%), followed by 41-50 years old (28%). Younger individuals (24-30 years old) make up 22%, while those above 50 are the smallest group at 6%. The mean age is 37.3 years. This suggests a workforce with a good mix of experience, with a slight skew towards the younger middle-aged group.

Sex: There is a clear female dominance (82%) in this group, with males representing only 18%. This is a common demographic trend in many education sectors, particularly at the early childhood and elementary levels.

Marital Status: The majority of respondents are married (66%), followed by single individuals (32%). Widowed individuals make up a very small percentage (2%). This information can provide context about the personal lives of the respondents.

Highest Educational Attainment: The largest group holds units toward a master's degree (48%). This is followed by those with Doctoral units (28%). Individuals who are MA graduates make up 16%, and those who are EdD/PhD graduates represent 8%. This indicates a relatively well-educated group, with a significant portion engaged in or having completed postgraduate studies.

Years in Service: The largest segment comprises individuals with 1-5 years of service (42%), indicating a relatively new workforce or a group with recent entrants. Those with 6-10 years (20%) and 11-15 years (28%) form the following largest groups. Individuals with more extensive experience (16-20 years and above 20 years) are the smallest segments, comprising 6% and 4%, respectively. This could indicate a high turnover rate in the past or a recent expansion of the workforce.

Relevant Training/Seminars Recently Attended: A significant 80% of respondents provided no answer to this question. Among the small group who did respond:

School-Based Training of Teachers on the Matatag Curriculum - Kindergarten was attended by 16%. The Matatag Curriculum is the recently launched basic education curriculum in the Philippines, so this training aligns with current educational reforms. Upskilling and Reskilling of Teachers on Inclusive Education was attended by 2%. This highlights some focus on catering to diverse learners.

Level Of Innovative Practices of ECE Teachers

Tables 2 to 5 present the level of innovative practices of ECE teachers in four (4) different domains: learning delivery, assessment of learning, learning materials, and learning environment.

Table 2 shows the level of innovative practices of ECE teachers in learning delivery. The average weighted mean across all ten learning delivery aspects is 4.60, which falls under the descriptive equivalent of VHP (Very Highly Practiced). This suggests an overwhelmingly positive perception of the learning delivery methods being employed. Respondents generally agree that these practices are being implemented effectively.

"Incorporates activities that engage several senses, including touch, sight, and hearing, to enhance the learning process (multi-sensory learning)" got the highest at 4.74 WM. This practice was overused to support children's literacy development (Digital, 2024). Although item number 5, "Encourages curiosity and critical thinking by asking open-ended questions and allowing youngsters to investigate themes in depth (inquiry-based learning)," got the lowest among the 10 items with 4.50 WM, this still falls under "Very Highly Practiced."

Table 2
Level of Innovative Practices of ECE Teachers along Learning Delivery
n=50

LEARNING DELIVERY	WM	DE
1. Incorporates activities that engage several senses, including as touch, sight, and hearing, to enhance the learning process (multi-sensory learning).	4.74	VHP
2. Effectively supports and enhances learning activities with age-appropriate educational technology (technology integration).	4.66	VHP
3. Implements projects or activities that foster hands-on exploration and problem-solving among young learners (project-based learning).	4.58	VHP
4. Creates adaptive and interactive learning environments that are tailored to children's needs and interests. (flexible learning spaces).	4.66	VHP
5. Encourages curiosity and critical thinking by asking open-ended questions and allowing youngsters to investigate themes in depth (inquiry-based learning).	4.50	VHP
6. Utilizes outdoor settings to aid learning, allowing children to connect with nature and engage in physical activities (outdoor learning).	4.52	VHP
7. Encourages a cooperative learning atmosphere in which pupils collaborate on projects, share ideas, and learn from one another (collaborative learning).	4.54	VHP

8.	Instruction is tailored to individual requirements and learning styles, while also recognizing and accommodating various abilities and interests (personalized learning plans).	4.66	VHP
9.	Uses narrative and imaginative play to foster creativity, language development, and social skills (story-telling and imaginative play).	4.54	VHP
10.	Incorporates varied cultural viewpoints into learning experiences to foster understanding, tolerance, and appreciation for different backgrounds (cultural inclusivity).	4.60	VHP
Average Weighted Mean		**4.60**	**VHP**

Legend: 1.00-1.80-Not Practiced (NP); 1.81-2.60-Slightly Practiced (SP); 2.61-3.40-Moderately Practiced (MP); 3.41-4.20-Highly Practiced (HP); 4.21-5.00-Very Highly Practiced (VHP)

In general, the data in Table 2 shows a very positive view of the learning delivery practices. The high average weighted mean and consistently high ratings for individual items indicate a strong commitment to using effective and engaging teaching methods. The data supports the description of "Very Highly Practice." This information can help celebrate successes and point out potential areas for ongoing improvement and further exploration.

The "Assessment of Learning" practices, similar to "Learning Delivery," are perceived very positively, as indicated by the "Very Highly Practiced" descriptive equivalent and the average weighted mean of 4.58, as shown in Table 3.

Table 3
Level of Innovative Practices of ECE Teachers along Assessment of Learning
n=50

	ASSESSMENT OF LEARNING	**WM**	**DE**
1.	Real-life scenarios and assignments are used to assess children's understanding and skills, in addition to traditional testing methods (authentic assessment).	4.66	VHP
2.	Regularly observes and documents children's behavior, interactions, and growth in a variety of learning settings (observational assessments).	4.58	VHP
3.	Creates and maintains digital portfolios highlighting children's work, accomplishments, and developmental milestones across time (digital portfolios).	4.60	VHP
4.	Allows children to participate actively in their exams, promoting self-reflection and self-assessment (children-led assessment).	4.78	VHP
5.	Assesses children's participation and contributions to project-based learning activities and collaborative projects (project-based assessment).	4.52	VHP
6.	Encourages children to keep learning journals where they can reflect on their experiences, create objectives, and track their progress (learning journals).	4.56	VHP
7.	Allows students to examine and provide feedback to their peers, encouraging collaboration and social skills (peer assessments).	4.48	VHP
8.	Engages parents in the evaluation process by sharing insights and soliciting feedback on their children's development and learning at home (parent involvement in assessment).	4.60	VHP
9.	Uses adaptable assessment approaches to accommodate different learning styles and abilities (adaptive assessment).	4.50	VHP
10.	Incorporates play-based assessments that acknowledge the significance of play in children's growth and learning (play-based assessments).	4.52	VHP
Average Weighted Mean		**4.58**	**VHP**

Legend: 1.00-1.80-Not Practiced (NP); 1.81-2.60-Slightly Practiced (SP); 2.61-3.40-Moderately Practiced (MP); 3.41-4.20-Highly Practiced (HP); 4.21-5.00-Very Highly Practiced (VHP)

The "Assessment of Learning" practices, similar to "Learning Delivery," are perceived very positively, as indicated by the "Very Highly Practiced" descriptive equivalent and the average weighted mean of 4.58, as shown in Table 3.

Item number 4, "Allows children to participate actively in their exams, promoting self-reflection and self-assessment (children-led assessment)," received the highest score with a 4.7 weighted mean. This shows that most teachers used a student-centered approach to assessment. They incorporated various methods to gain a complete understanding of children's learning and development. This approach improves the relationship between teachers and students and boosts confidence and self-esteem (Hawthorne, 2025).

The data in Table 3 highlight the focus on real, observational, and participatory assessment strategies, along with parent involvement. This suggests a well-rounded and effective assessment system.

Table 4 shows the level of innovative practices of ECE teachers along learning materials, and it can be gleaned that the average weighted mean for Table 4 "Learning Materials" is 4.61, which firmly falls under the descriptive equivalent of VHP (Very Highly Practice). This indicates a very positive perception of the learning materials being provided.

Table 4
Level of Innovative Practices of ECE Teachers along Learning Materials
n=50

LEARNING MATERIALS	WM	DE
1. Offers a variety of learning resources that engage many senses to enhance the learning experience (multi-sensory materials).	4.78	VHP
2. Uses age-appropriate interactive technology and educational apps to enhance learning (interactive technology).	4.70	VHP
3. Provides resources that foster creativity and problem-solving, allowing youngsters to explore and create in open-ended ways (open-ended materials).	4.72	VHP
4. Introduces natural materials and recycled goods to increase sustainability and environmental awareness (natural and recycled materials).	4.58	VHP
5. Creates themed learning kits that include a variety of materials to help students explore various concepts or subjects (thematic learning kits).	4.52	VHP
6. Uses materials that are easily adaptable to various learning activities, encouraging classroom adaptability (flexible and adaptable resources).	4.58	VHP
7. Introduces play-based learning methods that promote skill development through innovative and hands-on activities (play-based learning tools).	4.62	VHP
8. Uses a mix of books, storytelling props, and literacy-based activities to promote language development and a love of reading (literacy rich materials).	4.52	VHP
9. Provides a variety of art tools, including paints, clay, and craft items, to stimulate creative expression (artistic expression tools).	4.58	VHP
10. Extends learning materials to the outdoors, incorporating nature-based resources to encourage outdoor exploration and discovery (outdoor learning materials).	4.50	VHP
Average Weighted Mean	**4.61**	**VHP**

Legend: 1.00-1.80-Not Practiced (NP); 1.81-2.60-Slightly Practiced (SP); 2.61-3.40-Moderately Practiced (MP); 3.41-4.20-Highly Practiced (HP); 4.21-5.00-Very Highly Practiced (VHP)

Data from Table 4 shows that respondents generally agree that the resources are high-quality and effectively support the learning process. "Offers a variety of learning resources that engage many senses to enhance the learning experience (multi-sensory materials), has the highest weighted mean of 4.78. According to Bearman (2023), The item with the lowest weighted mean of 4.50 is "Extends learning materials to the outdoors, incorporating nature-based resources to encourage outdoor exploration and discovery (outdoor learning materials) but still under "Very Highly Practiced".

Overall, the data from Table 4 suggests a commitment to providing a rich and diverse array of resources that cater to different learning styles, promote engagement, and support various pedagogical approaches. The emphasis on multi-sensory, interactive, open-ended, and play-based materials aligns well with contemporary educational best practices.

Table 5 presents the results for the "Learning Environment" section, and it shows that the highest weighted mean of 4.80 was for item 1 – "Arranges the classroom area to be flexible and adaptable to various learning activities and groupings (flexible classroom layouts)". This indicates that teachers want to make learners retain greater knowledge and want their learners to produce better results

The slightly lower weighted mean of 4.42 was "Creates separate learning zones within the classroom, each dedicated to a unique sort of activity, such as reading corners, creative arts, and exploring sections (inviting learning zones)" (item 2). Given the standard classroom size in the Philippines, and considering the number of learners, this item is quite hard to achieve.

Table 5
Level of Innovative Practices of ECE Teachers along Learning Environment
n=50

LEARNING ENVIRONMENT	DV	DE
1. Arranges the classroom area to be flexible and adaptable to various learning activities and groupings (flexible classroom layouts).	4.80	VHP
2. Creates separate learning zones within the classroom, each dedicated to a unique sort of activity, such as reading corners, creative arts, and exploring sections (inviting learning zones).	4.42	VHP
3. Uses natural elements such as plants, natural light, and nature-inspired design to create a peaceful and stimulating learning environment (natural elements integration).	4.56	VHP
4. Uses interactive displays and bulletin boards to highlight children's work, inspire discovery, and provide information on current topics of study (interactive displays).	4.52	VHP
5. Decorates the classroom with themed items that relate to current lectures or subjects, resulting in an immersive and engaging environment (interactive decors).	4.44	VHP
6. Design areas that encourage pupils to take ownership of their learning, including spaces for joint projects and independent studies (pupil-centered spaces).	4.50	VHP
7. Provides a variety of comfortable seating options, such as variable seating arrangements or snug corners, to satisfy varied preferences and needs (comfortable seating options).	4.44	VHP
8. Develops a sensory-friendly atmosphere that takes into account lighting, colors, and textures to accommodate children with various sensory requirements (sensory-friendly design).	4.44	VHP
9. Creates quiet and reflective places in which children can participate in mindfulness activities, self-reflection, or relaxation techniques (reflective spaces).	4.58	VHP

10. Ensures that the learning environment is inclusive and accessible to all children, considering various talents, backgrounds, and learning styles (inclusive design).	4.62	VHP
Average Weighted Mean	**4.53**	**VHP**

Legend: 1.00-1.80-Not Practiced (NP); 1.81-2.60-Slightly Practiced (SP); 2.61-3.40-Moderately Practiced (MP); 3.41-4.20-Highly Practiced (HP); 4.21-5.00-Very Highly Practiced (VHP)

It might be worth exploring the specific characteristics of the learning zones, the variety and comfort of seating, and the specific sensory considerations being addressed to see if any improvements could be made. It might be worth exploring the specific characteristics of the learning zones, the variety and comfort of seating, and the specific sensory considerations being addressed to see if any improvements could be made.

The "Learning Environment" stands out as a key strength, with an average score of 4.53, showing "Very High Practice." The data shows a careful effort to create learning spaces that are flexible, engaging, inclusive, and supportive of children's varied needs and learning styles. The emphasis on adaptability, natural elements, student ownership, and sensory considerations contributes to a positive and effective learning environment.

Relationship Between the Level of Innovative Practices of ECE Teachers to Profile Variables

Table 6, the relationship between the level of innovative practices of early childhood education teachers and their profile variables was determined using Spearman's rho correlation and the Chi-Square test of association.

Table 6
Relationship Between the Level of Innovative Practices and Profile Variables

Profile Variables		Innovative Practices			
		Learning Delivery	Assessment of Learning,	Learning Materials	Learning Environment
Age[a]	Correlation Coefficient	-.037ns	.106ns	-.196ns	.191ns
	Significance	.797	.465	.171	.186
Sex[b]	Correlation Coefficient	.255ns	.455ns	.986ns	.255ns
	Significance	.880	.800	.611	.880
Civil Status[b]	Correlation Coefficient	1.374ns	.994ns	5.624ns	1.374ns
	Significance	.849	.911	.229	.849
highest educational attainment[a]	Correlation Coefficient	.110ns	.140ns	-.053ns	.087ns
	Significance	.447	.332	.715	.547
years in the service[a]	Correlation Coefficient	-.063ns	-.004ns	-.190ns	.126ns
	Significance	.662	.977	.186	.383

ns-not significant
[a]Spearman rho coefficient; [b]Pearson Chi Square

Table 6 shows that the correlation coefficient values of all the profile variables and the innovative practices on learning delivery, assessment of learning, learning materials, and learning

environment have corresponding significance values that are all higher than the set .05 level of significance. This means that there is no significant relationship between the level of innovative practices of early childhood education teachers and their profile variables.

Extent of the Problems Encountered by ECE Teachers

A. Learning Delivery

Table 7 shows the extent of the problems encountered by ECE teachers. It can be seen that the average weighted mean (WM) for Learning Delivery is 2.66. Table 7, a score between 2.61 and 3.4 indicates a Moderate Extent of challenges encountered in this area.

Table 7
Extent of the Problems Encountered by ECE Teachers along Learning Delivery

LEARNING DELIVERY	WM	DE
1. Limited financial and time constraints make it difficult to conduct a wide range of sensory exercises.	2.94	S
2. Inadequate access to technology and educators' aversion to change limit effective integration.	2.52	SS
3. Limited resources or a tight curriculum make it difficult to integrate project-based learning methodologies.	2.66	S
4. Limited physical space or institutional constraints make it difficult to create flexible learning settings.	2.68	S
5. Balancing inquiry-based learning with standardized testing requirements is a problem.	2.67	S
6. Managing varied learning styles and personalities within collaborative environments is tough.	2.64	S
7. Managing varied learning styles and personalities in collaborative environments is difficult.	2.62	S
8. Limited resources and huge class numbers make personalized education difficult.	2.62	S
9. It is tough to balance play-based activities with curriculum expectations and evaluation needs.	2.58	SS
10. Limited resources or a lack of diversity awareness make it difficult to integrate different cultural ideas.	2.62	S
Average Weighted Mean	2.66	Serious

Legend: 1-1.5= Not Serious (NS); 1.51-2.6= Slightly Serious (SS); 2.61-3.4=Serious (S); 3.41-4.2= Very Serious (VS); 4.21-5= Critically Serious (CS)

This suggests that while there are not extremely high levels of difficulty, there are ongoing issues that require monitoring and improvement efforts.

The data in Table 7 suggests that the challenges related to Learning Delivery are generally of moderate extent, requiring ongoing attention and improvement efforts across various aspects. While some specific challenges are experienced to a low extent, the overall picture indicates areas where proactive measures and resourcefulness are needed.

A. Assessment of Learning

In Table 8, the average weighted mean (WM) for the Assessment of Learning is 2.64. This indicates a Moderate Extent (ME) of challenges encountered in this area. This suggests that educators face considerable difficulties in effectively and efficiently assessing student learning.

Table 8
Extent of the Problems Encountered by ECE Teachers along Assessment of Learning

ASSESSMENT OF LEARNING	WM	DE
Time constraints and standardized testing requirements restrict the use of authentic evaluations.	2.78	S
It is time-consuming to consistently observe and document children's behavior.	2.70	S
Limited access to technology, as well as privacy issues, have an impact on digital portfolio construction and management.	2.60	SS
Children require help to comprehend self-assessment, and their self-perception may not always match objective criteria.	2.64	S
It is difficult to ensure that individual contributions to a collaborative effort are evaluated fairly.	2.60	SS
Some children struggle with self-reflection, and maintaining a continuous journaling practice is difficult.	2.60	SS
It's difficult to provide helpful critique while also regulating potential social dynamics.	2.62	S
Communication challenges or a lack of parental involvement reduce the efficacy of the assessment method.	2.56	S
Creating flexible assessments that properly accommodate different learning styles necessitates more resources.	2.78	S
Balancing play-based assessments with traditional assessment criteria presents difficulties.	2.48	S
Average Weighted Mean	2.64	Serious

Legend: 1-1.5= Not Serious (NS); 1.51-2.6= Slightly Serious (SS); 2.61-3.4=Serious (S); 3.41-4.2= Very Serious (VS); 4.21-5= Critically Serious (CS)

The data in Table 8 indicates that the challenges in the "ASSESSMENT OF LEARNING" are generally of a moderate extent. Several factors contribute to this, with time constraints, the influence of standardized testing, the time required for observation and documentation, and the complexities of self and peer assessment being prominent. The need for resources to create flexible assessments that accommodate diverse learning styles also stands out.

Interestingly, communication and parental involvement issues, as well as the balance between play-based and traditional assessment, are perceived as challenges to a low extent. This suggests that while these areas are important, they are not currently the most significant obstacles in the assessment process.

Addressing the "moderate extent" challenges is crucial for improving the effectiveness and fairness of learning assessments. This could involve exploring more efficient assessment methods, providing professional development on alternative assessment strategies, addressing technology access and privacy concerns, and developing clear guidelines and support for self and peer

assessment. Finding ways to integrate authentic and flexible assessments within existing constraints also warrants attention.

B. Learning Materials

Table 9 shows the extent of the problems encountered by ECE teachers along learning materials, and the average weighted mean (WM) for Learning Materials is 2.62. A score between 2.61 and 3.4 signifies a Moderate Extent (ME) of challenges encountered in this domain. This implies that educators are facing notable difficulties in securing and utilizing appropriate learning materials, requiring consistent attention and strategies for improvement.

Table 9
Extent of the Problems Encountered by ECE Teachers along Learning Materials

LEARNING MATERIALS	WM	DE
1. Limited budgets or resources limit the availability of different multi-sensory materials.	2.84	S
2. Unequal access to technology, as well as educator reluctance to its usage, is a problem.	2.68	S
3. Budget limits prevent the availability of a wide range of open-ended materials.	2.64	S
4. Obtaining and maintaining a sufficient supply of natural and recycled resources is difficult.	2.52	SS
5. The development and upgrading of themed learning kits requires a great amount of time and work.	2.62	S
6. It is difficult to find resources that may be easily adapted to a variety of educational activities.	2.58	SS
7. Balancing play-based tools with organized learning objectives is difficult.	2.62	S
8. Limited access to a wide range of literacy resources impedes language development.	2.54	SS
9. Budget constraints limit access to a wide range of artistic tools.	2.58	SS
10. Limited supplies for outdoor materials, as well as restrictions on how outside spaces can be used, present obstacles.	2.59	SS
Average Weighted Mean	2.62	Serious

Legend: 1-1.5= Not Serious (NS); 1.51-2.6= Slightly Serious (SS); 2.61-3.4=Serious (S); 3.41-4.2= Very Serious (VS); 4.21-5= Critically Serious (CS)

The analysis reveals that while the overall challenge with learning materials is to a moderate extent, several specific issues contribute to this. Budget limitations consistently appear as a factor affecting the availability of various types of learning resources, including multi-sensory, open-ended, and artistic materials. Additionally, the integration of technology and the balance between play-based learning and structured objectives pose moderate challenges.

Interestingly, the difficulties in obtaining natural and recycled resources, finding adaptable materials, accessing literacy resources, and managing outdoor materials and spaces are perceived as challenges to a low extent. This suggests that while these areas require some attention, they are not as pressing as the budget-related constraints and pedagogical integration issues.

Addressing the "moderate extent" challenges, particularly those related to budget limitations, technology integration, and balancing play with learning objectives, should be a priority. Exploring cost-effective solutions, providing professional development for technology use, and developing effective strategies for integrating play-based learning could significantly improve the availability and utilization of learning materials.

D. Learning Environment

Table 10 presents the result of the extent of the problems encountered by ECE teachers along learning environment.

Table 10
Extent of the Problems Encountered by ECE Teachers along Learning Environment

LEARNING ENVIRONMENT	WM	DE
1. Flexible layouts are limited due to physical space constraints or traditional classroom setups.	2.80	S
2. Space limits or a lack of resources limit the ability to create discrete learning zones.	2.64	S
3. Maintaining living plants or assuring access to natural light is difficult.	2.66	S
4. Limited wall space and technological access make it difficult to create interactive displays.	2.60	SS
5. It takes time to keep themed decorations updated on a regular basis.	2.64	S
6. It is difficult to balance pupil-centered environments with a regulated curriculum.	2.58	SS
7. Budget or space constraints limit the availability of varied seating options.	2.44	SS
8. To meet all children's different sensory needs, additional resources are required.	2.60	SS
9. The availability of quiet areas is influenced by space limits and noise interruptions.	2.60	SS
10. Significant changes are required to transform the learning environment into one that is fully inclusive.	2.60	SS
Average Weighted Mean	2.61	Serious

Legend: 1-1.5= Not Serious (NS); 1.51-2.6= Slightly Serious (SS); 2.61-3.4=Serious (S); 3.41-4.2= Very Serious (VS); 4.21-5= Critically Serious (CS)

The average weighted mean (WM) for the Learning Environment is 2.61, and this indicates a Moderate Extent (ME) of challenges encountered in this area. This suggests that educators are facing notable difficulties in establishing and maintaining an optimal learning environment.

The analysis indicates that the challenges related to the "LEARNING ENVIRONMENT" are, on average, to a moderate extent. The most prominent challenges revolve around physical space constraints limiting flexible layouts and the creation of distinct learning zones. Maintaining natural elements like living plants and natural light, as well as the time involved in updating themed decorations, also pose moderate difficulties.

Perceived as challenges of a low extent are creating interactive displays, balancing pupil-centered approaches with the curriculum, providing varied seating options, meeting sensory needs, ensuring quiet areas, and making the environment fully inclusive. This suggests that while these aspects are important, they are not currently the most significant obstacles in shaping the learning environment.

IV. Conclusion and Recommendation

In the light of the findings in this research, the following conclusions were formulated:

The schools demonstrate a strong foundation in core educational areas, particularly in learning materials and delivery. The high ratings for flexible classroom layouts, multi-sensory materials, and child-led assessment indicate a commitment to student-centered and engaging pedagogical practices. Limited financial resources and time constraints are significant barriers to optimizing the learning environment and instructional practices. Overall, the findings indicate a positive perception of the school's educational practices. However, the challenges identified, particularly those related to resources, time, and space, represent areas where targeted interventions and improvements could further enhance the learning experience for students.

The researcher recommends the following based on the findings and conclusions of the study:

Prioritize allocation of budget in order to address the limitations of resources, specifically for acquiring different, diverse, and multi-sensory learning materials. Search for alternative funding sources, such as grants, community partnerships, and cost-sharing initiatives, to supplement and increase existing budgets.

Invest in teachers' professional development that focuses on effective strategies for integrating technology, implementing project-based learning, and utilizing flexible grouping. This will help teachers improve and optimize learning delivery. Execute a phased approach to redesigning learning spaces to enhance flexibility and adaptability. Begin with low-cost alterations, like rearranging furniture, assigning, and identifying designated learning zones, and incorporating mobile storage solutions. Encourage stronger partnerships with parents, community members, and external organizations to leverage and support additional resources, expertise, and support for enhancing the learning environment and student outcomes.

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