

PRESCHOOL TEACHERS' LEVEL OF IMPLEMENTATION OF DEVELOPMENTALLY APPROPRIATE PRACTICES AND THE DEVELOPMENTAL PROGRESS OF PRESCHOOL PUPILS

Jonah Mavel M. Velez, Carmelito D. Sojor, IV, Libertine C. de Guzman, Roullette P. Cordevilla, Craig N. Refugio
College of Teacher Education, Negros Oriental State University, Kagawasan Avenue, Dumaguete City, Negros Oriental, Philippines
Email: mavelvelez84@gmail.com

ABSTRACT: *This study aims to look into the preschool teachers' developmentally appropriate practices (DAP) in relation to the developmental progress of preschool pupils. The quantitative approach was used to identify the preschool teachers' profile, and their developmentally appropriate practices in terms of these areas; (1.) creating a caring, equitable community of learners; (2.) engaging in reciprocal partnerships with families and fostering community connections; (3.) observing, documenting, and assessing children's development and learning; (4.) teaching to enhance each child's development and learning; (5.) planning and implementing an engaging curriculum to achieve meaningful goals; and (6.) demonstrating professionalism as an early childhood educator. The study's findings show that a majority of preschool teachers had obtained baccalaureate degrees in other fields and consistently applied developmentally appropriate practices. The developmental progress of the preschool pupils was categorized as average. Results show a neutral perspective regarding the difficulties encountered by preschool teachers in implementing the DAP. In addition, their level of utilization of DAP and the preschool pupils' level of development were positively correlated, as well as their profile and level of utilization of DAP and the level of challenges met in implementing these practices. In light of the findings and conclusions drawn, initiatives were proposed to enhance the implementation of developmentally appropriate practices and improve the developmental progress of preschool pupils.*

Keywords: Developmentally Appropriate Practices, Developmental Progress, Early Childhood Education, Preschool Teachers, Preschool Pupils

1. INTRODUCTION

Over the past two decades, there has been a significant 28% rise in the enrollment rate for pre-primary education. Access to pre-primary education has increased but many children still have not been reached [1]. Unfortunately, the COVID-19 pandemic has resulted in a global disruption to education, which has been acknowledged as the worst education crisis on record [2]. In light of this crisis, it is essential for teachers to be adequately equipped and trained to effectively support the holistic needs of children. To achieve this, educators should consider establishing an optimal learning environment, developing an engaging curriculum, and adapting appropriate strategies to suit the needs and goals of children [3].

Providing pre-primary education is crucial as early experiences during the critical period of rapid brain development are vital for future undertakings. During this significant period of rapid brain development, receiving nurturing care is of utmost importance [1]. To ensure optimal care for children, it is crucial to provide early childhood educators with the necessary knowledge, skills, and material resources for appropriate child care. This includes implementing developmentally appropriate practices (DAP), a framework, and a philosophical approach for teaching young children which is rooted in extensive research on child development and learning [4] ; [5] . It emphasizes the importance of teachers meeting children at their individual developmental levels and supporting them in reaching challenging and achievable learning goals. By understanding the unique needs of young children and implementing effective practices, DAP fosters their overall development.

In line with the mandate and legal bases, the Department of Social Welfare and Development acknowledges the role of the Day Care Service in honing the physical, intellectual, social, and emotional needs of children aged 0-5.11 years old [6]. One of its main goals is the

advancement of children's growth and development by applying developmentally appropriate curriculum for young children including content, methods, activities, materials, appropriate guidance techniques, and interactions. Early Childhood Care and Development (ECCD) service providers, specifically the child development workers, as pronounced in the Early Years Act of 2013 or Republic Act No. 10410 are the principal characters in handling the needs of Filipino children. In Early Childhood Care and Development, children are assessed based on their performance in gross motor, fine motor, self-help, receptive language, expressive language, cognitive and socio-emotional domain which are indicated in the Early Childhood Care and Development checklist. In accordance with the Standards for Day Care, other ECCD Centers and Service Providers, child development teachers and workers are expected to apply developmentally appropriate practices to develop the pre-kindergarteners.

The use of developmentally appropriate practices requires teachers to create interactive experiences for young children to develop holistically. Several studies specified the positive impacts of DAP in a classroom setting [7].

Nonetheless, a limited number of studies assessed the significance of developmentally appropriate practices of preschool teachers on preschool pupils' gross motor, fine-motor, self-help, receptive language, expressive language, cognitive and social-emotional development [8]. This study filled a gap in the early childhood education literature since it assessed the developmentally appropriate practices implemented by the DSWD preschool teachers in promoting the development of preschool pupils.

Specifically, it sought to answer the following specific problems:

1. What is the profile of the preschool teachers in terms of:
 - 1.1 highest educational attainment;
 - 1.2 number of years in teaching preschool;

- 1.3 number of seminars/trainings on early childhood education attended?
2. What is the level of implementation of the preschool teachers in terms of:
 - 2.1 creating a caring, equitable community of learners;
 - 2.2 engaging in reciprocal partnerships with families and fostering community connections;
 - 2.3 observing, documenting, and assessing children's development and learning;
 - 2.4 teaching to enhance each child's development and learning;
 - 2.5 planning and implementing an engaging curriculum to achieve meaningful goals; and
 - 2.6 demonstrating professionalism as an early childhood educator?
3. What is the developmental progress of preschool pupils in the following domains:
 - 3.1 gross motor;
 - 3.2 fine motor;
 - 3.3 self-help;
 - 3.4 receptive language;
 - 3.5 expressive language;
 - 3.6 cognitive; and
 - 3.7 social-emotional?
4. What is the level of challenges met by the preschool teachers in implementing the developmentally appropriate practices?
5. Is there a relationship between the:
 - 5.1 preschool teachers' level of utilization of developmentally appropriate practices and the preschool pupils' level of development?
 - 5.2 profile of the preschool teachers and level of utilization of developmentally appropriate practices?
 - 5.3 profile of the preschool teachers and level of challenges met in implementing the developmentally appropriate practices?

2. REVIEW OF RELATED LITERATURE

Developmentally Appropriate Practices

Developmentally Appropriate Practice (DAP) is a teaching approach informed by child development research that aims to support every child's holistic growth [4]. It emphasizes individualized and culturally relevant education to enhance social, emotional, cognitive, and physical development [5]. DAP is grounded in creating inclusive, hands-on, and play-based learning environments and fostering healthy relationships among educators, children, and families. Regular assessment is integral to DAP, allowing educators to individualize instruction, track progress, and set meaningful goals aligned with children's needs [9].

The NAEYC introduced DAP in 1986 as a response to increasing formal academic trends in early childhood programs. Its principles guide educators in crafting child-centered curricula and environments that encourage problem-solving, critical thinking, and lifelong learning. The approach emphasizes respecting children's unique abilities, passions, and cultural backgrounds, thereby ensuring that teaching strategies meet the individual and age-appropriate needs of young learners [10] ; [11] .

Teachers play a pivotal role in creating optimal learning opportunities that promote children's overall well-being [12]. Pendergast et al. [13] emphasize that DAP is rooted in a thorough understanding of child development and developmental theories, guiding educators to make informed teaching decisions. This framework underscores the importance of age, individual, and socio-cultural appropriateness.

DAP also involves culturally responsive teaching, acknowledging diverse values and beliefs. Educators must align their teaching strategies with children's developmental needs, family backgrounds, and societal contexts [14]. Successful implementation of DAP requires teachers to possess a comprehensive understanding of age-related developmental milestones and the ability to make predictions about children's learning trajectories [15]. Additionally, DAP necessitates structured yet flexible teaching frameworks that transcend the misconception that early childhood education is merely play [16].

Impact and Implementation of Developmentally Appropriate Practices in Developmental Domains

DAP significantly enhances children's literacy and developmental outcomes. Tariman [7] found that kindergarten teachers who prioritize age, individual, and socio-cultural appropriateness achieve improved literacy levels among students. Best practices in DAP include creating print-rich environments, fostering oral language development, and incorporating phonemic awareness activities through songs, stories, and play [13].

Studies also reveal correlations between DAP and literacy development across cognitive, expressive, and receptive domains [4]. Early exposure to culturally relevant materials and engaging learning experiences expands children's vocabulary and cognitive skills [17]. The use of tools like the ECCD checklist aids teachers in identifying developmental needs and ensuring tailored interventions [18]. Despite these advancements, challenges persist, particularly in the systematic monitoring of DAP implementation in the Philippines [19].

Developmental Domains

Children's development is interconnected, with progress in one domain influencing others, emphasizing the need for holistic growth. The adaptive domain involves self-care skills like eating, dressing, and toileting, as well as personal responsibility, such as organizing belongings and recognizing risks, fostering independence in early learning environments [20]. The personal-social domain develops emotional awareness, self-concept, and social interactions through play, enabling children to form relationships, empathize, and regulate emotions for successful socialization [21]. The communication domain focuses on understanding and using language to express needs and interact, with receptive skills (responding to words) and expressive skills (gestures and sentences) forming the foundation for literacy [22]. The motor domain includes gross motor skills like walking and jumping and fine motor skills like writing, enhancing coordination and precision through activities like crafts and sports [20]. Finally, the cognitive domain supports memory, problem-solving, and critical thinking, enabling children to understand cause-effect relationships and develop academic

readiness [21]. These domains collectively ensure children grow into capable, well-rounded individuals.

Early Childhood Care and Education

Relevant environmental stimulations, especially form primary caregivers were recognized as important determinants of a child's development. Development proceeds at varying rates for each child and reflects children's experiences and their environment [23]. The benefits of preschool attendance persist through the duration of primary school. Access to preschool, frequency, and length of attendance made a positive difference. Students' attendance in a day care or preschool enabled effective teaching [2]. One of the tools in assessing children's development is the use of ECCD checklist. This helps teachers in identifying the development status of children and those who may have developmental needs or challenges [18]. School, social interaction and family are identified that affect the performance of preschoolers. Majority of the preschool children were competent in most of the cognitive competencies [24]. In addition, a study of Casipe [17] shows that the pupil respondents are categorized to be in an average overall development based on the Level of Development for the Seven Domains using the Philippine Early Childhood Development Checklist. The kindergarten pupils always demonstrate the expected competence, always participate in the different activities, work independently, and always perform tasks to nurture their socio-emotional development and language, literacy, and communication development particularly on listening and viewing macro-skills.

Challenges in Implementing Developmentally Appropriate Practices

Several barriers hinder the effective execution of DAP. A significant issue is the lack of resources and time to create age-appropriate materials [25]. Teachers face challenges in addressing individual appropriateness due to large class sizes, classroom interruptions, and varying developmental rates among students [3]; [26]. Moreover, socio-cultural appropriateness is often compromised by insufficient parental and stakeholder support. Poverty, absenteeism, and medical issues further exacerbate these challenges [27]; [28].

The professional development of preschool teachers is constrained by financial limitations at the local government level, resulting in inadequate training and capacity-building opportunities [29]. Enhanced training programs and systematic monitoring are critical for addressing these gaps and ensuring the consistent application of DAP.

3. SIGNIFICANCE OF THE STUDY

The following sectors and individuals will benefit from this study:

Preschool Teachers

This will serve as a basis for enhancing the developmentally appropriate practices as well as to give necessary activities for the development of young children.

Preschool Pupils

The results will be beneficial in strengthening their developmental progress.

Parents

This study will serve as a guide to parents to perform home learning practices to track the development of their children.

Early Childhood Program Administrators

This study will serve as a guide for the administrators to provide trainings, workshops and seminars on developmentally appropriate practices for the preschool teachers in order to provide the basic holistic needs of young children.

Future Researchers

This will serve as a guide to further develop researches in developmentally appropriate practices and development status of young children.

4. METHODOLOGY

Research Design

This study employs a descriptive-correlational research design to explore the preschool teachers' level of implementation of developmentally appropriate practices and the developmental progress of preschool pupils. The descriptive aspect examines the preschool teachers' level of implementation of developmentally appropriate practices, developmental progress of preschool pupils and level of challenges met in implementing developmentally appropriate practices, while the correlational aspect investigates the relationship between preschool teachers' level of utilization of developmentally appropriate practices and the preschool pupils' developmental progress, their profile and level of utilization of developmentally appropriate practices and level of challenges met in implementing the developmentally appropriate practices.

Research Respondents

The study is conducted at Dumaguete City, Sibulan, Bacong and Valencia Child Development Centers, where preschool teachers are catering the preschool pupils enrolled in these centers.

Population and Sampling

The target population consists preschool teachers teaching in a child development center. A purposive sampling technique is

used, selecting preschool pupils who are enrolled in a child development center for the academic year 2021-2022.

Research Instrument

The study utilized a survey questionnaire to gather data pertinent to the developmentally appropriate practices of preschool teachers. The instrument is divided into three parts:

Demographic Profile – Includes information on highest educational attainment, number of years in teaching preschool and number of seminars or trainings attended on early childhood education

Adapted from the guidelines on developmentally appropriate practices developed by the National Association for the Education of Young Children – Assesses the level of implementation in (1.) a caring, equitable community of learners; (2.) engaging in reciprocal partnerships with families and fostering community connections; (3.) observing, documenting, and assessing children's development and learning; (4.) teaching to enhance each child's development and learning; (5.) planning and implementing an engaging curriculum to achieve meaningful goals; and (6.) demonstrating professionalism as an early childhood educator, rated on a five-point Likert scale (1 = Never Practiced, 5 = Always Practiced).

Level of challenges – Measures the challenges encountered by the preschool teachers in implementing the developmentally appropriate practices

Likewise, secondary data such as the results of the preschool pupils' Early Childhood Care and Development Checklist was secured from the preschool teachers' respective centers to determine the learners' development on the seven domains. The instrument underwent validation by a panel of experts. A pilot test was conducted to the preschool teachers of Dauin who are non-participants of the study to establish reliability, yielding a Cronbach's alpha coefficient of 0.85, indicating high reliability, hence all items are reliable.

Data Collection Procedure

Preparation – The survey questionnaire was developed, validated, and approved by the ethics committee.

Distribution – The questionnaire was distributed in-person to preschool teachers, ensuring voluntary participation and anonymity.

Collection – Responses were collected over a month and compiled for analysis.

Data Analysis

Descriptive Statistics – Frequencies, percentages, means, and standard deviations were used to describe the demographic profile, development status of preschool pupils, level of implementation of DAP, and challenges met in implementing DAP

Inferential Statistics – Spearman rho is used to determine the relationship between the preschool teachers' level of utilization of developmentally appropriate practices and the preschool pupils' development status, profile of the preschool teachers and level of utilization of developmentally appropriate practices and profile of the preschool teachers and challenges met in implementing the developmentally appropriate practices.

All statistical analyses were conducted using SPSS software, with a significance level set at 0.05.

Ethical Considerations

Informed consent was obtained from all participants, ensuring their right to privacy, confidentiality, and voluntary participation. Ethical clearance was secured from the university's research ethics board to ensure compliance with ethical standards throughout the study.

RESULTS AND DISCUSSION

Table 1.1: Respondents' Profile in terms of Educational Attainment

Educational Attainment Categories	Frequency (f)	Percentage (%)	Rank
Elementary graduate	1	0.90	5
High school level	1	0.90	6
High school graduate	9	8.10	3
College level	25	22.50	2
Baccalaureate degree in another field	65	58.60	1
Baccalaureate degree in ECE	1	0.90	7
MA units in another field	8	7.20	4
MA units in ECE	1	0.90	8
Total	111	100.00	

Table 1.1 showcases the profile of the preschool teachers in terms of educational attainment. Among the categories, the most prominent one is "Baccalaureate degree in another field" with a frequency of 65, constituting 58.60% of the total population. This category holds the highest rank, indicating that it is the most prevalent educational attainment among the preschool teachers surveyed. The remaining categories, including "High school level," "Elementary graduate," "Baccalaureate degree in ECE," "MA units in another field," and "MA units in ECE," each have a frequency of 1, constituting less than 1%. Overall, the table highlights the distribution of educational attainment levels within the population of 111 individuals, emphasizing the prevalence of baccalaureate degrees in fields other than ECE.

This indicates that most of the preschool teachers conform to the educational qualifications for child development workers as specified in Administrative Order No. 29, s. 2004 issued by the Department of Social Welfare and Development. However, this denotes variation in perspectives, practical knowledge and application of developmentally appropriate practices in early childhood education considering that only 2 (1.80%) of the respondents are specialized in early childhood education and majority are not specializing in the field of early childhood. This supports the study of Hogan [30] that teachers with Bachelor's degree in Early Childhood Education are successfully advancing in content knowledge and pedagogy in early childhood setting compared to those who are specializing in fields other than early childhood education. In contrast, Manning et al. [31] stated that by comparing early childhood teachers with a high school diploma to those teachers who possess a college education of two years or more, it was found that teachers with Bachelor's degree regardless of the specific major, were more responsive, encouraging and inspiring when communicating with young children.

Table 1.2: Respondents' Profile in terms of Number of Years in Teaching Preschool

Number of Years in Teaching Preschool	Frequency (f)	Percentage (%)	Rank
5 years and below	22	19.8	2
5.1- 10 years	24	21.6	1
10.1- 15 years	14	12.6	4
15.1- 20 years	12	10.8	5
20.1- 25 years	11	9.9	6
25.1- 30 years	17	15.3	3
30.1- 35 years	9	8.1	7
35.1- 40 years	2	1.8	8
Total	111	100.00	

Table 1.2 illustrates the profile of the preschool teachers in terms of number of years in teaching preschool. The most common range of teaching experience is "5.1-10 years," which comprises 24 instances, accounting for 21.6% of the total population. This range secures the highest rank, indicating it as the predominant category in terms of the number of years in teaching. In contrast, the ranges of "10.1-15 years," "15.1-20 years," "20.1-25 years," and "30.1-35 years" demonstrate lower frequencies, comprising 14, 12, 11,

and 9 instances, respectively. The range with the fewest instances is "35.1-40 years," with only 2 occurrences, representing 1.8% of the population. Overall, the table provides insights into the distribution of teaching experience in the preschool domain among the surveyed population of 111 individuals, highlighting the prominence of the 5.1-10 years range as the most prevalent category.

This denotes that most of the respondents (41.40%) have less number of years in teaching preschool and minority (1.80%) have the highest number of years in teaching preschool level. The study of Ratliff [32] suggests that Kindergarten teachers with more than 6 years of teaching experience reported significantly higher levels of ability to implement the informational text standards than teachers with less than five years of kindergarten teaching experience. Conversely, a study of Pranoto et al. [33] disclosed that there is no significant difference between the teachers' teaching experiences and age groups to the quality of their teaching performance. Regardless of how long a teacher has been teaching or what age group they are instructing, they are not decisive factors in determining the quality of a teacher's performance. Although the preschool teachers have varied teaching experiences, they still consistently implement developmentally appropriate practices to hone the developmental domains of the preschool pupils as reflected in the findings of this study in spite of their teaching experience in preschool pupils.

Table 1.3 Respondent's Profile in terms of Number of Seminars/Trainings Attended on Early Childhood Education

Number of Seminars/Trainings Attended	Frequency (f)	Percentage (%)	Rank
5 and below	13	11.7	4
6 - 10	13	11.7	5
11 - 15	15	13.5	2
16 - 20	38	34.2	1
21 - 25	11	9.9	6
26 - 30	15	13.5	3
31 - 35	3	2.7	7
36 - 40	3	2.7	8
Total	111	100.00	

Table 1.3 illustrates the number of seminars/trainings attended by preschool teachers in Early Childhood Education (ECE). The most common range, "16-20," was reported by 38 individuals (34.2%), while less frequent ranges, such as "21-25," "31-35," and "36-40," represent 2.7% to 9.9% of the total. This highlights the "16-20" range as the most prevalent category.

The data aligns with Table 1.2, which shows only 39 preschool teachers have over 20 years of experience. This suggests that longer tenure allowed more opportunities to attend seminars, many of which were exclusive to specific roles or coordinators. Insights gained from these seminars were often shared with colleagues during monthly meetings. Attending seminars and trainings plays a crucial role in enhancing teachers' understanding of developmentally appropriate practices and staying updated with trends and research, ultimately improving preschool education. This supports Fitzpatrick's [34] findings that evidence-based professional development fosters stronger connections

between research and practice, resulting in higher-quality education for preschool children.

Table 2. Preschool Teachers' Developmentally Appropriate Practices (N = 111)

Developmentally Appropriate Practices	Mean	SD	Verbal Rating
1. Creating a caring, equitable community of learners	4.66	0.60	Always Practiced
2. Engaging in reciprocal partnerships with families and fostering community connections	4.50	0.72	Always Practiced
3. Observing, documenting, and assessing children's development and learning	4.51	0.74	Always Practiced
4. Teaching to enhance each child's development and learning	4.50	0.70	Always Practiced
5. Planning and implementing an engaging curriculum, to achieve meaningful goals	4.33	0.71	Always Practiced
6. Demonstrating professionalism as an early childhood educator	4.31	0.72	Always Practiced
Average	4.47	0.70	Always Practiced

Legends:

Scale	Verbal Description
1.0-1.80	Never Practiced
1.81-2.60	Seldom Practiced
2.61-3.40	Occasionally Practiced
3.40-4.20	Frequently Practiced
4.21-5.0	Always Practiced

Legends:

Standard Score	Interpretation
69 and below	Suggests significant delay in overall development
70-79	Suggests slight delay in overall development
80-119	Suggests average overall development
120-129	Suggests slightly advanced development
130 and above	Suggests highly advanced development

Table 2 reflects the preschool teachers' developmentally appropriate practices based on the Developmentally Appropriate Practice by the National Association for the Education of Young Children. It shows that the preschool teachers always practice the said DAPs in all areas. Overall, the average mean rating for all the practices combined is 4.47, indicating a consistent implementation of developmentally appropriate practices and suggesting that the preschool teachers are implementing developmentally appropriate practices 96%-100% of the time. It can be denoted that they have implemented a developmentally appropriate curriculum, content, methods, activities, materials and authentic assessment suggested in the Competency Standards for Child Development Teachers and Child Development Workers [35]. The results run parallel to the study conducted by Tariman [7] that the utilization of the teachers' developmentally appropriate practices and age, individual, and socio-cultural appropriateness of the learners are deemed extremely important. High-quality teaching in the early grades requires deep understanding of developmentally appropriate expectations, meaningful back and forth engagement with teachers, and engagement of families and other stakeholders in the learning process [36].

As noted by the NAEYC [4], the creation of a nurturing environment relies on culturally and linguistically appropriate activities that encourage interaction, play, and problem-solving among children. The emphasis on partnerships is critical, as engaging families and communities strengthens

children’s learning experiences and enhances resource alignment, as supported by studies like those of Gilgoff et al. [37] and the American Institutes for Research [38].

Table 3 Development Status of Preschool Pupils based on the Early Childhood Care and Development Checklist (N= 1110)

Domain	Suggest Slight Delay in Overall Development 4-6		Average Development 7-13		Suggest Slightly Advanced in Overall Development 14-16	
	f	%	f	%	f	%
	1. Gross Motor	0	0.00	97	8.74	1013
2. Fine Motor	0	0.00	179	16.13	931	83.87
3. Self-Help	29	2.61	613	55.23	468	42.16
4. Receptive Language	17	1.53	1093	98.47	0	0.00
5. Expressive Language	11	0.99	1099	99.01	0	0.00
6. Cognitive	0	0.00	795	71.62	315	28.38
7. Social Emotional	0	0.00	100	9.01	1010	90.99

Table 3 represents the summary of development status of preschool pupils based on the 2021-2022 Early Childhood Care and Development checklist. The results reflect that majority of the preschool pupils’ development status fall into the average development. As shown on the table above, 97 of them have an average development in gross motor domain while 1013 were slightly advance in overall development in the said domain. In fine motor domain, 179 pupils were categorized under average development while 931 suggest slightly advanced in overall development. On the other hand, 29 pupils have slight delay in self-help domain while 613 of them were average and 468 were labeled as slightly advanced in overall development. It is also shown that 11 preschool pupils were categorized as having a slight delay in overall development in terms of receptive language domain and the rest of them belong to the average development category. In the cognitive domain aspect, majority belong to the average category with a frequency of 795 and while 315 individuals belong to the slightly advanced category. Lastly, 100 pupils were classified as average in terms of their social emotional component while 1010 of them fall into the category of slightly advanced in overall development.

Overall, the summary of data implies that the development status of preschool pupils falls under the average development category based on the ECCD checklist. This implies that the preschool pupils were able to perform the competencies or skills that are aligned with the general expectations for their age group.

It is interpreted that the average progress of the development status of the preschool pupils is identified based on the categories reflected in each of the seven (7) domains. Majority of the developmental domains namely gross motor, fine motor, and social-emotional domain have obtained a

slightly advanced development while receptive language, expressive language, self-help and cognitive domains were categorized into regular development of the preschool pupils. This can be viewed that there is interrelatedness among the different domains and overall, to the implementation of developmentally appropriate practices of preschool teachers. This runs parallel to the premise that consistent application of pedagogical practices on gross motor, fine motor, receptive, expressive, and cognitive skills influence significantly the pupils’ performance along the domains of development [39]. Moreover, this is in relation to the theory of Urie Bronfenbrenner that the microsystem which refers to the immediate environment, in which the child has a direct interaction, greatly influences the child’s overall development. In this study, the preschool teaches were part of the microsystem of the preschool pupils, hence, four (4) out of seven (7) developmental domains fall under the slightly advanced development. This can be interpreted that the consistent implementation of developmentally appropriate practices of the preschool teachers greatly contributed to the favorable outcomes for the development of the pupils. In contrast, three (3) out of the seven (7) developmental domains =\were categorized as average development. It is of note that if the mesosystem, the connections and interactions between two microsytms, is negative, it can still have a detrimental impact on child’s development (Ettedal& Mahoney, 2017). If preschool pupils experience positive and nurturing interactions with their teachers but encounter conflict or lack of communication between their family and school, it can lead to adverse effects on the child's overall well-being and growth. The negative aspects of the mesosystem can undermine the positive influences of the microsystem, affecting the child's emotional, social, and cognitive development [40]. Moreover, the macrosystem, which encompasses factors that a child does not directly interact with, plays a significant role in their development. Within this macrosystem, the ECCD council governs the structure, content, and delivery of education. As part of their assessment process, they require the use of ECCD checklist, a standardized tool for assessing the development of preschool pupils. The checklist organizes competencies into different domains and assigns a standard score along with an interpretation. However, it has been observed that even when children demonstrate all the required competencies, their maximum score remains only average. This limitation of the ECCD tool can have an impact on the overall development of the child.

Furthermore, in relation to Arnold Gesell's Maturation theory, it emphasizes that a child's development is primarily shaped by internal factors [41]. According to this theory, children must reach a certain level of biological readiness to acquire new skills and behaviors. The developmental stages are biologically determined rather than being influenced by their experiences or learning opportunities and as a result, children cannot be hurried or forced to progress through these stages at a predetermined pace

Table 4. Challenges Met by the Preschool Teachers in Implementing the Developmentally Appropriate Practices (N = III)

Challenges	Mean	SD	Verbal Rating
1. There is limited training and workshops on developmentally appropriate practices.	2.77	1.17	Neutral
2. I do not have enough field experience to implement developmentally appropriate practices.	2.32	0.99	Disagree
3. I do not have enough knowledge and understanding how to implement developmentally appropriate practices.	2.26	0.90	Disagree
4. There is lack of resources and instructional materials that provide pupils with the opportunity to participate in the developmentally appropriate curriculum.	3.91	1.14	Agree
5. I do not understand the benefits of implementing developmentally appropriate practices to the pupils.	2.19	0.89	Disagree
6. I feel pressured from school staff and policy makers to perform well on state-mandated assessment and accreditation.	2.25	0.97	Disagree
Challenges	Mean	SD	Verbal Rating
7. I feel that there is lack of autonomy in use of the curriculum.	2.38	0.92	Disagree
8. I felt hindered by the required academic standards.	2.41	1.01	Disagree
9. Large-class size affects the implementation of developmentally appropriate practices	3.90	0.77	Agree
10. There is a resistance from parents who disagree with	3.06	0.92	Neutral

play-based learning.

Average	2.75	0.97	Neutrall
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Table 4 presents challenges met by the preschool teachers in implementing developmentally appropriate practices. The challenges identified in the table include limited training and workshops on developmentally appropriate practices, insufficient field experience, lack of knowledge and understanding, scarcity of resources and instructional materials, limited understanding of benefits, perceived pressure from school staff and policymakers, limited autonomy in using the curriculum, feeling hindered by required academic standards, large class sizes, and resistance from parents who disagree with play-based learning.

The average mean rating for all the challenges combined is 2.75, indicating a neutral stance on the challenges faced in implementing developmentally appropriate practices. This indicates that the preschool teacher sees the statements as neither positive nor negative and therefore cannot decide whether they are challenges or not. The standard deviation of 0.97 suggests a moderate degree of variability in the ratings across the challenges. Some challenges were disagreed with by the respondents, including insufficient field experience, lack of knowledge and understanding, feeling pressured by school staff and policy makers, limited autonomy in using the curriculum, and feeling hindered by required academic standards. These disagreements indicate that the respondents feel they have adequate experience, knowledge, autonomy, and do not perceive significant hindrance from external pressures or academic standards.

Challenges such as insufficient field experience, lack of knowledge, external pressures, and limited autonomy were generally disagreed upon, suggesting that preschool teachers feel adequately prepared in these areas. However, lack of resources and large class sizes were agreed upon as significant barriers, as they hinder effective classroom management and implementation of DAP, echoing findings by Gollopeni et al. [42]. Limited time and materials preparation also impact the execution of culturally and age-appropriate activities, as noted by Raguindin [25] and Saracho [43].

Table 5.1 Relationship between the Preschool Teachers' Level of Utilization of Developmentally Appropriate Practices and the Preschool Pupils' Development Status

A. Preschool Teachers' Level of Utilization of DAP and the Preschool Pupils' Development Status	Degree of Relationship (Spearman Rho)	Interpretation
1. Creating a caring, equitable community of learners and gross motor domain	0.73	Strong Correlation
2. Creating a caring, equitable community of learners and fine motor domain	0.72	Strong Correlation
3. Creating a caring, equitable community of learners and Self-help Domain	0.71	Strong Correlation
4. Creating a caring, equitable community of learners and Receptive Language domain	0.71	Strong Correlation

5. Creating a caring, equitable community of learners and Expressive Language Domain	0.72	Strong Correlation	development and learning and Receptive language domain		Correlation
6. Creating a caring, equitable community of learners and Cognitive Domain	0.71	Strong Correlation	26. Teaching to enhance each child's development and learning and Cognitive domain	0.73	Strong Correlation
7. Creating a caring, equitable community of learners and Social-Emotional Domain	0.74	Strong Correlation	27. Teaching to enhance each child's development and learning and Expressive language domain	0.77	Strong Correlation
8. Engaging in reciprocal partnerships with families and fostering community connections and Gross motor domain	0.69	Strong Correlation	28. Teaching to enhance each child's development and learning and Social-emotional domain	0.68	Strong Correlation
9. Engaging in reciprocal partnerships with families and fostering community connections and Fine motor domain	0.72	Strong Correlation	29. Planning and implementing an engaging curriculum to achieve meaningful goals and Gross motor domain	0.74	Strong +Correlation
10. Engaging in reciprocal partnerships with families and fostering community connections and Self-help domain	0.76	Strong Correlation	30. Planning and implementing an engaging curriculum to achieve meaningful goals and Fine motor domain	0.69	Strong Correlation
11. Engaging in reciprocal partnerships with families and fostering community connections and Receptive language domain	0.67	Strong Correlation	31. Planning and implementing an engaging curriculum to achieve meaningful goals and Self-help domain	0.68	Strong Correlation
12. Engaging in reciprocal partnerships with families and fostering community connections and Expressive language domain	0.78	Strong Correlation	32. Planning and implementing an engaging curriculum to achieve meaningful goals and Receptive language domain	0.78	Strong Correlation
13. Engaging in reciprocal partnerships with families and fostering community connections and Cognitive domain	0.69	Strong Correlation			
14. Engaging in reciprocal partnerships with families and fostering community connections and Social-emotional domain	0.73	Strong Correlation			

Strength of Association	Coefficient, ρ
Very Weak	± 0.00 to ± 0.19
Weak	± 0.20 to ± 0.39
Moderate	± 0.40 to ± 0.59
Strong	± 0.60 to ± 0.79
Very Strong	± 0.80 to ± 1.00

Strength of Association	Coefficient, ρ
Very Weak	± 0.00 to ± 0.19
Weak	± 0.20 to ± 0.39
Moderate	± 0.40 to ± 0.59
Strong	± 0.60 to ± 0.79
Very Strong	± 0.80 to ± 1.00

A. Preschool Teachers' Level of Utilization of DAP and the Preschool Pupils' Development Status	Degree of Relationship (Spearman Rho)	Interpretation
15. Observing, documenting, and assessing children's development and learning and Gross motor domain	0.72	Strong Correlation
16. Observing, documenting, and assessing children's development and learning and Fine motor domain	0.68	Strong Correlation
17. Observing, documenting, and assessing children's development and learning and the Self-help domain	0.73	Strong Correlation
18. Observing, documenting, and assessing children's development and learning and Receptive language domain	0.78	Strong Correlation
19. Observing, documenting, and assessing children's development and learning and Expressive language domain	0.71	Strong Correlation
20. Observing, documenting, and assessing children's development and learning and Cognitive domain	0.75	Strong Correlation
21. Observing, documenting, and assessing children's development and learning and Social-emotional domain	0.77	Strong Correlation
22. Teaching to enhance each child's development and learning and Gross motor domain	0.73	Strong Correlation
23. Teaching to enhance each child's development and learning and Fine motor domain	0.74	Strong Correlation
24. Teaching to enhance each child's development and learning and Self-help domain	0.73	Strong Correlation
25. Teaching to enhance each child's	0.75	Strong

A. Preschool Teachers' Level of Utilization of DAP and the Preschool Pupils' Development Status	Degree of Relationship (Spearman Rho)	Interpretation
33. Planning and implementing an engaging curriculum to achieve meaningful goals and Expressive language domain	0.75	Strong Correlation
34. Planning and implementing an engaging curriculum to achieve meaningful goals and Cognitive domain	0.70	Strong Correlation
35. Planning and implementing an engaging curriculum to achieve meaningful goals and Social-emotional domain	0.72	Strong Correlation
36. Demonstrating professionalism as an early childhood educator and Gross motor domain	0.73	Strong Correlation
37. Demonstrating professionalism as an early childhood educator and Fine motor domain	0.73	Strong Correlation
38. Demonstrating professionalism as an early childhood educator and Self-help domain	0.71	Strong Correlation
39. Demonstrating professionalism as an early childhood educator and Receptive language domain	0.74	Strong Correlation
40. Demonstrating professionalism as an early childhood educator and Expressive language domain	0.71	Strong Correlation
41. Demonstrating professionalism as an early childhood educator and Cognitive domain	0.73	Strong Correlation
42. Demonstrating professionalism as an early childhood educator and Social-emotional domain	0.77	Strong Correlation
OVERALL	0.73	Strong Correlation

Table 5.1 shows the relationship between the preschool teachers' level of utilization of developmentally appropriate practices and the preschool pupils' development status. As

shown in the table, the correlations were all strong. Developmentally appropriate practices in creating a caring, equitable community of learners shows a significant strong correlation with the seven domains that entail the development status of preschool pupils namely gross motor, fine motor, self-help, receptive language, expressive language, cognitive and social emotional domain. Since these correlations were significant, it can be generalized from the sample to the population. The second component of developmentally appropriate practices that states “engaging in reciprocal partnerships with families and fostering community connections” shows a strong correlation to some developmental domains such as gross motor, fine motor, self-help, expressive language, cognitive and social emotional domain. On the other hand, engaging in reciprocal partnerships with families and fostering community connections shows a strong correlation. This is in contrast with the study of Hansen and Broekhuizen [44] that quality of staff interactions and conversation support had a significant influence on young children’s language skills.

Observing, documenting, and assessing children’s development and learning which is the third component of developmentally appropriate practices displays a strong correlation to all the domains which are gross motor, fine motor, self-help, receptive language, expressive language, cognitive and social emotional domain. The fourth component of developmentally appropriate practices is teaching to enhance each child’s development and learning. This component shows a strong correlation to some developmental domains such as gross motor, fine motor, self-help, expressive language, cognitive and social emotional domain. Similar with the second component of developmentally appropriate practices, teaching to enhance each child’s development and learning shows a strong correlation with the receptive language domain. In addition, high quality of teacher-child interaction has been documented as a positive factor that impacts children’s receptive vocabulary acquisition [45]. Close teacher-child relationships and frequent peer interactions were essential for children to develop receptive language skills in their early years [46]. The fifth component of developmentally appropriate practices is planning and implementing an engaging curriculum to achieve meaningful goals. Sticker et al., [47] state that early childhood curriculum interventions directing self-help skills resulted in sustained improvements in these skills throughout the elementary school years. Lastly, demonstrating professionalism as an early childhood educator is the sixth component. This component exhibits a strong correlation to all the developmental domains specifically gross motor, fine motor, self-help, receptive language, expressive language, cognitive and social emotional domain.

In general, the result is sufficient to reject the null hypothesis which states that there is no relationship between the preschool teachers’ level of utilization of developmentally appropriate practices and the preschool pupils’ development status. Hence, the hypothesis is rejected. These two variables are dependent on each other.

The above results can be correlated to the assertions made by Lettington [8] that developmentally appropriate practices do have a positive impact on a young child’s

development, as well as self-competence. Children in developmentally appropriate classrooms show improvements in motivation and emotional development. In addition, developmentally appropriate practices have a positive effect on children’s ability to initiate and maintain interpersonal relations [48]. Teachers who successfully use DAP have an understanding of age-related development, which makes it easier to make general predictions about children's learning and development [15].

Table 5.2 Relationship between the Profile of the Preschool Teachers and Level of Utilization of Developmentally Appropriate Practices

B. Profile of the Preschool Teachers and Level of Utilization of DAP	Degree of Relationship (Spearman Rho)	Interpretation
1. Highest Educational Attainment and Creating a caring, equitable community of learners	0.74	Strong Correlation
Strength of Association		
Very Weak	Coefficient ± 0.00 to ± 0.20	
Weak	± 0.20 to ± 0.40	
Moderate	± 0.40 to ± 0.60	
Strong	± 0.60 to ± 0.80	
Very Strong	± 0.80 to ± 1.00	
B. Profile of the Preschool Teachers and Level of Utilization of DAP	Degree of Relationship (Spearman Rho)	Interpretation
16. Number of seminar and training attended on Early Childhood Education and Teaching to enhance each child’s development and learning	0.73	Strong Correlation
17. Number of seminar and training attended on Early Childhood Education and Planning and implementing an engaging curriculum to achieve meaningful goals	0.60	Strong Correlation
18. Number of seminar and training attended on Early Childhood Education and Demonstrating professionalism as an early childhood educator	0.71	Strong Correlation
OVERALL		
	0.75	Strong Correlation
Strength of Association		
Very Weak	Coefficient, $p \pm 0.00$ to ± 0.19	
Weak	± 0.20 to ± 0.39	
Moderate	± 0.40 to ± 0.59	
Strong	± 0.60 to ± 0.79	
Very Strong	± 0.80 to ± 1.00	
B. Profile of the Preschool Teachers and Level of Utilization of DAP	Degree of Relationship (Spearman Rho)	Interpretation
2. Highest Educational Attainment and Engaging in reciprocal partnerships with families and fostering community connections	0.66	Strong Correlation
3. Highest Educational Attainment and Observing, documenting, and assessing children’s development and learning	0.70	Strong Correlation
4. Highest Educational Attainment and Teaching to enhance each child’s development and learning	0.71	Strong Correlation
5. Highest Educational Attainment and Planning and implementing an engaging curriculum to achieve meaningful goals	0.68	Strong Correlation

6. Highest Educational Attainment and Demonstrating professionalism as an early childhood educator	0.71	Strong Correlation
OVERALL	0.72	Strong Correlation
7. Number of years in teaching preschool and Creating a caring, equitable community of learners	0.70	Strong Correlation
8. Number of years in teaching preschool and engaging in reciprocal partnerships with families and fostering community connections	0.70	Strong Correlation
9. Number of years in teaching preschool and Observing, documenting, and assessing children's development and learning	0.72	Strong Correlation
10. Number of years in teaching preschool and Teaching to enhance each child's development and learning	0.76	Strong Correlation
11. Number of years in teaching preschool and Planning and implementing an engaging curriculum to achieve meaningful goals	0.78	Strong Correlation
12. Number of years in teaching preschool and Demonstrating professionalism as an early childhood educator	0.77	Strong Correlation
OVERALL	0.73	Strong Correlation
13. Number of seminar and training attended on Early Childhood Education and Creating a caring, equitable community of learners	0.78	Strong Correlation
14. Number of seminar and training attended on Early Childhood Education and Engaging in reciprocal partnerships with families and fostering community connections	0.72	Strong Correlation
15. Number of seminar and training attended on Early Childhood Education and Observing, documenting, and assessing children's development and learning	0.73	Strong Correlation

Table 5.2 shows the relationship between the profile of the preschool teachers and level of utilization of developmentally appropriate practices. In terms of the highest educational attainment, it shows a strong correlation with $\rho = 0.72$ with creating a caring, equitable community of learners, engaging in reciprocal partnerships with families and fostering community connections, assessing children's development and learning, teaching to enhance each child's development and learning, planning and implementing an engaging curriculum to achieve meaningful goals and demonstrating professionalism as an early childhood educator. In addition, their number of years in teaching preschool also shows a strong correlation with a $\rho = 0.73$ with their level of utilization of developmentally appropriate practices. The preschool teachers' attendance to seminars and trainings on early childhood education illustrate a strong correlation with a value of $\rho = 0.75$ with the developmentally appropriate practices in creating a caring, equitable community of learners, engaging in reciprocal partnerships with families and fostering community connections, assessing children's development and learning, teaching to enhance each child's development and learning, planning and implementing an engaging curriculum to achieve meaningful goals and demonstrating professionalism as an early childhood educator.

Overall, it shows a strong correlation between the variables correlated. The evidence is sufficient to reject the null hypothesis stating that there is no relationship between the profile of the preschool teachers and level of utilization of developmentally appropriate practices. Hence, the stated null hypothesis is rejected with the above test result regarding the relationship of the variables mentioned.

The result of this study is also made true in the research conducted by Manning et al. [31] wherein it was revealed that higher teacher qualifications are related to improvements in supporting children's development, including supporting language-reasoning experience supervision and the scheduling of activities, organization and arrangement of the room, providing varied social experiences for children and creating a warm and friendly environment for interactions. Diverse experiences in different settings and length of teacher's education and experience have a positive effect on beliefs about developmentally appropriate practices. One of the most significant aspects of being a professional educator is a teacher's education. This has a significant impact on teachers' views and teaching methods. It is important that pre-primary school teachers' education be anchored in early childhood expertise because this promotes a better understanding of developmentally appropriate activities, which facilitates children's development [49].

Table 5.3 Profile of the Preschool Teachers and Challenges Met in Implementing the Developmentally Appropriate Practices

C. Profile of the Preschool Teachers and Challenges Met in Implementing the Developmentally Appropriate Practices	Degree of Relationship (Spearman Rho)	Interpretation
1. Highest Educational Attainment and Challenges Met in Implementing the Developmentally Appropriate Practices	0.67	Strong Correlation
2. Number of years in teaching preschool and Challenges Met in Implementing the Developmentally Appropriate Practices	0.62	Strong Correlation
3. Number of seminars and trainings attended on Early Childhood Education and Challenges Met in Implementing the Developmentally Appropriate Practices	0.71	Strong Correlation
OVERALL	0.67	Strong Correlation
Strength of Association	Coefficient, ρ	
Very Weak	± 0.00 to ± 0.19	
Weak	± 0.20 to ± 0.39	
Moderate	± 0.40 to ± 0.59	
Strong	± 0.60 to ± 0.79	
Very Strong	± 0.80 to ± 1.00	

Table 5.3 shows the relationship between the profile of the preschool teachers and challenges met in implementing the developmentally appropriate practices. The data above shows that there is a strong correlation with a value of $\rho = 0.67$ between the profile of the preschool teachers in terms of highest educational attainment, number of years in teaching preschool and number of seminars and trainings attended on early childhood education and the challenges they encountered in implementing the developmentally appropriate practices. It is sufficient enough to reject the null hypothesis stating that there is no relationship between the profile of the preschool teachers and challenges met in implementing the developmentally appropriate practices.

According to the study conducted by Ntumi [50] in-service trainings that school administrators organized are not enough to keep pre-school teachers abreast with the current trend of the early childhood curriculum. The in-service training that teachers participated might not be supportive for them in finding answers for their questions on curriculum implementation. Teaching experience of preschool teachers can also be problematic in implementing the early childhood education practically [50]. Research findings show that teachers with higher levels of education are more likely to implement appropriate practices in the delivery of Early Childhood and Care Education services than teachers with lower levels of education [51]. Since Early Childhood Care and Development Education in the Philippines lack systematic monitoring and supervision, teachers are not regularly subjected to performance evaluation, monitoring and mentoring, and professional development interventions [19].

CONCLUSIONS

The findings indicate that a significant number of preschool teachers possess baccalaureate degrees in fields unrelated to Early Childhood Education (ECE), while some have only completed secondary or elementary education. Additionally, while many have extensive teaching experience ranging from 5 to over 30 years, only a few have attended professional development seminars specific to ECE. Research underscores the importance of training educators in developmentally appropriate practices (DAP), as it leads to higher-quality teaching and better developmental outcomes for children [52].

Preschool teachers consistently implement DAP, which emphasizes practices that promote holistic child development by building on individual strengths and countering biases. According to the National Association for the Education of Young Children (NAEYC), DAP fosters cognitive, social, and emotional growth when applied effectively [4]. Despite these efforts, most preschool pupils exhibit "Average Development," demonstrating competencies appropriate to their level. However, some children show "Slight delay in overall development," particularly in self-help, receptive language, and expressive language domains. These findings align with evidence that high-quality ECE programs significantly benefit children's cognitive and social-emotional development, especially during critical early years [53].

Challenges in implementing DAP include limited resources, insufficient instructional materials, and large class sizes, which hinder effective teaching. Although preschool teachers remain neutral about whether these challenges are major obstacles, they acknowledge their impact on classroom practices. Research highlights the importance of well-resourced early childhood programs in enhancing children's physical, cognitive, and emotional well-being. There is a strong positive correlation between the extent to which DAP is implemented and improvements in preschool pupils' developmental domains. Studies have found that educators trained in DAP consistently achieve better developmental

outcomes in their classrooms [52]. Moreover, the educational attainment, years of teaching experience, and professional development engagement of preschool teachers significantly influence their ability to implement DAP effectively. As workers pursue advanced studies, gain more experience, and participate in seminars, they are better equipped to meet developmental goals but may also encounter more complex challenges [4].

While preschool teachers exhibit adequate competencies in implementing DAP, other factors—such as environmental influences or individual child circumstances—may contribute to the slight developmental delays observed in some pupils. Addressing these factors, along with improving the availability of resources and reducing class sizes, will enhance the effectiveness of DAP implementation and overall child development outcomes.

RECOMMENDATIONS

Based on the findings, the following recommendations are proposed to enhance the level of implementation of developmentally appropriate practices by the preschool teachers leading to the improvement of the preschool pupils' developmental progress:

Conduct hands-on workshops and skill-enhancing seminars focused on Developmentally Appropriate Practices (DAP):

City and Municipal Social Welfare and Development Officers should organize workshops that provide practical strategies for enhancing self-help, receptive language, and expressive language domains in young learners. Studies suggest that targeted professional development improves educators' abilities to implement evidence-based practices effectively [54]. Interactive and experiential learning approaches, such as coaching and feedback sessions, have been proven effective in enhancing the skills of early childhood educators

Review and update the ECCD checklist to align with current developmental research:

The ECCD Council should evaluate the checklist components, particularly those related to receptive and expressive language domains, to ensure they reflect updated interpretations of developmental benchmarks. Studies have identified the need for culturally and contextually relevant tools to assess young children's development accurately [55]. Collaborative consultations with experts in child development and early childhood education are essential to enhance the tool's reliability and validity.

Conduct in-depth qualitative research on Developmentally Appropriate Practices (DAP):

Future studies should explore the experiences and perspectives of preschool teachers regarding DAP implementation. Qualitative methods, such as interviews and focus groups, can provide a deeper understanding of the challenges they face and the strategies they employ. According to Basit and Santoro [56], qualitative research captures nuanced insights that quantitative approaches may overlook, offering valuable recommendations for policy and practice improvements.

Support preschool teachers in completing their baccalaureate degrees:

In collaboration with Negros Oriental State University (NOrSU) College of Teacher Education, Graduate School, and DepEd, an extension program should be developed to assist preschool teachers without degrees in completing their education. Advancing the educational qualifications of early childhood educators improves teaching quality and supports professional growth [2]. LGUs in Dumaguete, Valencia, Sibulan, and Bacong are encouraged to fund this initiative to promote equity and excellence in ECE services.

REFERENCES

- [1] UNICEF Annual Report 2020. (2021, June 1). UNICEF. https://www.unicef.org/reports/unicef-annual-report-2020?gad=1&gclid=CjwKCAjwyqWkBhBMEiwAp2yUFIT9VXzsFxaDTfhx3geAlQD90Y9VfE0yQmquCDVUD-irbkz1_vxhMRoCjWgQAvD_BwE
- [2] UNICEF Philippines. (2021). Philippines Early Childhood Education Kindergarten to Grade 4 Longitudinal Research. Summary Report.
- [3] Ahonen, L. (2019). Challenges to the Implementation of Developmentally Appropriate Practices in Early Childhood Education. Digital Commons. https://digitalcommons.csp.edu/teacher-education_masters/17/.
- [4] NAEYC (National Association for the Education of Young Children). (2020). Professional Standards and Competencies for Early Childhood Educators. Washington, DC: NAEYC. <https://naeyc.org/resources/positionstatements/professional-standards-competencies>.
- [5] Sanders, K., & Farago, F. (2018). Developmentally appropriate practice in the twenty-first century. In *International handbook of early childhood education* (pp. 1379-1400). Springer, Dordrecht.
- [6] Department of Social Welfare and Development. (2004). STANDARDS FOR DAY CARE, OTHER ECCD CENTERS AND SERVICE PROVIDERS (FOR CHILDREN AGED 0-5.11 YEARS). A D M I N I S T R A T I V E O R D E R NO. 29. SERIES 2004.
- [7] Tariman, J. D. (2022). Developmentally appropriate practices for learners' literacy in Public Elementary Schools. *South Florida Journal of Development*, 3(2), 2611-2626.
- [8] Lettington, M. (2018). Developmentally appropriate practice in early childhood education (Master's thesis, Northwestern College). Northwestern College Institutional Repository.
- [9] Betawi, A., & Jabbar, S. (2019). Developmentally appropriate or developmentally inappropriate, that's the question: Perception of early childhood pre-service teachers at The University of Jordan. *International Journal of Adolescence and Youth*, 24(1), 40-50.
- [10] Allen, L. & Kelly, B. (2015). *Transforming the Workforce for Children Birth through Age 8: A Unifying Foundation*. The National Academies Press.
- [11] Goelman, H. (2020). Janusz Korczak and Developmentally Appropriate Practice. *Nurture, Care, Respect, and Trust: Transformative Pedagogy Inspired by Janusz Korczak*.
- [12] Hur, E., Jeon, L., & Buettner, C. K. (2016, June). Preschool teachers' child-centered beliefs: Direct and indirect associations with work climate and job-related wellbeing. In *Child & Youth Care Forum* (Vol. 45, No. 3, pp. 451-465). Springer US.
- [13] Pendergast, E., Lieberman-Betz, R. G., & Vail, C. O. (2017). Attitudes and beliefs of prekindergarten teachers toward teaching science to young children. *Early Childhood Education Journal*, 45(1), 43-52.
- [14] Demircan, Ö., & Erden, F. T. (2015). Parental involvement and developmentally appropriate practices: A comparison of parent and teacher beliefs. *Early Child Development and Care*, 185(2), 209-225.
- [15] Burchinal, M. (2018). Measuring early care and education quality. *Child Development Perspectives*, 12(1), 3-9.
- [16] Alghamdi, A. A., & Ernest, J. M. (2019). Teachers' beliefs about developmentally appropriate practices in Saudi Arabia. *International Journal of Child Care and Education Policy*, 13(1), 1-16.
- [17] Casipe, D. (2019). Kindergartners' Domain Development and Competency in Omod Elementary School, Bayawan City.
- [18] Umali, A. E., Velasco, P.T. (2015). Assessment on the Utilization of the ECCD Checklist by Day Care Workers and Status of Implementation among Day Care Children in the 11 Municipalities of Eastern Samar. A Plan International and UNICEF-Funded Project.
- [19] Biana H, & Javier R. (2021, January). Assessing Cultural, Linguistic, and Indigenous Competencies: The Case of Early Childhood Care and Development Teachers in the Philippines. ResearchGate | Find and share research. https://www.researchgate.net/publication/348247011_Assessing_Cultural_Linguistic_and_Indigenous_Competerencies_The_Case_of_Early_Childhood_Care_and_Development_Teachers_in_the_Philippines
- [20] Slentz, K. L., & Krogh, S. L. (2017). *Early childhood development and its variations*. Routledge.
- [21] McCoy, D. C., Waldman, M., Team, C. F., & Fink, G. (2018). Measuring early childhood development at a global scale: evidence from the Caregiver-Reported early development instruments. *Early childhood research quarterly*, 45, 58-68.
- [22] Aiger, A. (2017). Five Domains for Early Childhood

- Development. Hello Motherhood.
<https://www.hellomotherhood.com/article/156820-five-domains-for-early-childhood-development/>.
- [23] Arbiol, J. M., Cabajes, A. V., Chaonui, M. L., & Mancao, P. A. (2020). The psychomotor and cognitive competencies of Filipino children ages 1-4: A multiple case study. *International Journal of Humanities and Social Sciences*, 12(4), 10-26. <https://doi.org/10.26803/ijhss.12.4.2>
- [24] Gervacio, Mydee (2015). Factors affecting the cognitive competency of the pre-school children in selected day care centers in Diffun, Quirino, Philippines. *Journal of Agricultural Technology*. Vol. 11(2): 423-434
- [25] Raguindin, P. Z. J. (2020). Integrating Concepts and Expressions of Inclusion in the K-Curriculum: The Case of the Philippines. *European Journal of Educational Research*, 9(1), 305-317.
- [26] Bubikova-Moan, J., Næss Hjetland, H., & Wollscheid, S. (2019). ECE Teachers' views on play-based learning: a systematic review. *European Early Childhood Education Research Journal*, 27(6), 776-800.
- [27] Mizutani, M., Moriyama, M., Sugiarto, H., & Bando, H. (2019). Challenges and Assets for Promoting Early Childhood Development in Indonesia: A Health Statistics Review from a Community Health Perspective. *Asian Community Health Nursing Research*, 20-20.
- [28] Cobanoglu, R., Capa-Ayudin, Y., & Yildirim, A. (2019). Sources of teacher beliefs about developmentally appropriate practice: a structural equation model of the role of teacher efficacy beliefs. *European Early Childhood Education Research Journal*, 27(2), 195-207.
- [29] Floresca, M., Nuñez, A.L., & C. Cristobal (2017, December). Implementation of ECCD and Professionalizing Child Development Workers: What Works? *Fundacion Education y Cooperacion (EDUCO)*.
- [30] Hogan, D., Kraft, M.A., Blazar, D., (2018). The effect of teaching coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, 88(4), 547-588.
- [31] Manning, M. et al., (2017). The Relationship between Teacher Qualification and the Quality of the Early Childhood Education and Care Environment. *Campbell Collaboration*, 1-85.
- [32] Ratliff, Shelly Ann, "A Study of Kindergarten Teachers' Ability to Teach the Kindergarten Informational Text Common Core Standards in Fifteen West Virginia School Districts" (2014). Theses, Dissertations and Capstones. Paper 887
- [33] Pranoto, Y. K. S., Utami, D. R. F., & Latiana, L. (2021). Do Teachers' Experiences and Ages Contribute to Their Teaching Performance? *IEOM Society International*.
- [34] Fitzpatrick, Deborah, "Perceptions of Kindergarten Teachers regarding Professional Development in New Jersey's Public Schools" (2014). *Seton Hall University Dissertations and Theses (ETDs)*. 1936. <https://scholarship.shu.edu/dissertations/1936>
- [35] ECCD Council. (2017). "Competency Standards for Child Development Teachers (CDTs) and Child Development Workers (CDWs): A Manual". Pasig: ECCD.
- [36] Dahlin, Melissa. (May 2017). All in the Family: Supporting Students through Family Engagement in ESSA. *New America*. Retrieved from <https://www.newamerica.org/education-policy/edcentral/all-family-supporting-students-through-family-engagement-essa/>.
- [37] Gilgoff, J. N., Park, E., Price, J., Scott, T., Moyd, T., Rouse, K., Knighton, G., Frey, J., Mattocks, N., Shook, E., Tuten, M., Unick, J., & Wagner, F. A. (2022). Building Equitable Community-Academic Partnerships for Opioid Recovery Research: Lessons Learned from Stakeholder Engagement With Peer and Provider Organizations. *Journal of community engagement and scholarship*, 15(1), 479. <https://doi.org/10.54656/jces.v15i1.479>
- [38] American Institutes for Research. (2018). Family-school-community partnerships. *Family-School-Community Partnerships | National Center on Safe Supportive Learning Environments (NCSSLE)*. <https://safesupportivelearning.ed.gov/training-technical-assistance/education-level/early-learning/family-school-community-partnerships>
- [39] Mina, C. D., & Agbon, A. (2016). School participation of children with disability: The case of San Remigio and Mandaue City, Cebu, Philippines. *Discussion papers DP 2017-59, Philippine Institute for Development Studies*.
- [40] Bronfenbrenner, U., & Morris, P. (2006). The Bioecological Model of Human Development. In R. Lerner (Ed.), *Handbook of child psychology. Theoretical Models of Human Development* (6 ed., pp. 793-828). Canada: John Wiley & Sons, Inc.
- [41] Gesell, A. (1928). *Infancy and human growth*. Macmillan.
- [42] Gollopeni, B., Bekteshi, E., & Avdiu, E. (2022). Challenges Facing Early Childhood Education in Developing Countries. *Journal of Educational and Social Research*,

- 12(6), 184.
- [43] Saracho, O. N. (2015). Developmentally-appropriate technology and interactive media in early childhood education. In *Young children and families in the information age* (pp. 183-205). Springer, Dordrecht.
- [44] Hansen, J. E., and Broekhuizen, M. L. (2020). Quality of the Language-Learning Environment and Vocabulary Development in Early Childhood. *Scand. J. Educ. Res.* 2020:1705894. doi: 10.1080/00313831.2019.1705894
- [45] Gonzalez, J. E., Pollard-Durodola, S., Simmons, D. C., Taylor, A. B., Davis, M. J., Fogarty, M., et al. (2014). Enhancing preschool children's vocabulary: Effects of teacher talk before, during and after shared reading. *Early Childhood Res. Q.* 29, 214–226. doi: 10.1016/j.ecresq.2013.11.001
- [46] Spilt, J. L., Koomen, H. M. Y., and Harrison, L. J. (2015). Language Development in the Early School Years: The Importance of Close Relationships With Teachers. *Dev. Psychol.* 51, 185–196. doi: 10.1037/a0038540
- [47] Sticker, R., & Christner, N. (2023, May). Longitudinal stability and cross-relations of prosocial behavior and the moral self-concept in early childhood.
- [48] Wall, S., Litjens, I., & Taguma, M. (2015). Early childhood education and care pedagogy review: England. Organisation for Economic Co-operation and Development. <http://www.oecd.org/edu/school/early-childhood-education-and-care-pedagogy-review-england.pdf>
- [49] Cade, J., Wardle, F., & Otter, J. (2022). Toddler and preschool teachers' beliefs and perceptions about the use of developmentally appropriate practice. *Cogent Education*, 9(1), 2018908.
- [50] Ntumi, S. (2016). Challenges Pre-School Teachers Face in the Implementation of the Early Childhood Curriculum in the Cape Coast Metropolis. *Journal of Education and Practice*, 7(1).
- [51] Mwaipopo, C., Maundeni, T., Seetso, G., and Jacques, G. (2021). Challenges in the provision of early childhood care and education services in rural areas of Botswana. *African Educational Research Journal*, 9(3): 753-561EJ1324076.pdf (ed.gov)
- [52] Child Trends. (2021). Research shows how developmentally appropriate practice helps early childhood educators support all children. Retrieved from <https://www.childtrends.org>
- [53] Office of Planning, Research, and Evaluation (OPRE). (2019). Children's learning and development: Benefits of high-quality early care and education. Retrieved from <https://www.acf.hhs.gov>
- [54] Dennis, S. E., & O'Connor, E. E. (2020). The impact of professional development on early childhood educators' practices. *Early Childhood Research Quarterly*, 53, 30-40.
- [55] Fleer, M., & Quiñones, G. (2020). Cultural-historical approaches to assessing children's development. *Early Years*, 40(3), 333-345.
- [56] Basit, T. N., & Santoro, N. (2022). Exploring qualitative approaches in education research. Taylor & Francis.