

MONITORING THE DEVELOPMENT OF KINDERGARTEN PUPILS WHO ARE EXPOSED AND UNEXPOSED TO DAYCARE EDUCATION

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Volume 8, Issue No.2

ABSTRACT

The study aimed to monitor the development of kindergarten pupils who were exposed and unexposed to daycare education. The researcher made use of the descriptive-comparative design of research and employed the stratified sampling technique. The subjects were the 300 randomly selected kindergarten pupils. A standardized assessment tool was used and percentage, mean, ECD development index, and z-test were employed. The study revealed that the majority of the pupils who were exposed to daycare education had acquired the basic skills in the seven domains necessary for the transition from daycare to kindergarten. Meanwhile, most of the pupils who were unexposed lacked the necessary skills. The data further revealed that after the second assessment, almost all pupils who were exposed to daycare education acquired the basic skills, although most of those who lacked daycare exposure still had acquired the essential skills. Nevertheless, a remarkable number of pupils were not able to acquire such skills in the self-help and expressive language domains. Generally, the performances during enrolment and after the second assessment of those pupils with daycare exposure were significantly higher than the performances of the pupils without daycare exposure.

Keywords: basicskills, daycareeducation, ECD, kindergarten, seven domains

1.0 Introduction

A critical stage in the lives of children is when they step into kindergarten (NAEYC, 2009; Lo-Casale-Crouch et al., 2012). Children usually feel that being in kindergarten is like entering into a new and totally unfamiliar world

(Pianta & Cox, 1999). Researchers found that the early learning experiences of children can affect not only their studies but also their undertakings later in life (Jenkins et al., 2016; Claessens et al., 2014). Thus, children need to obtain the necessary skills that would prepare them for acquiring formal educa-

tion. This is where pre-kindergarten or daycare education comes in.

Not all countries offer free daycare services. Others have low regard for daycare education. Jakarta, for instance, lacks a specific childcare policy compelling its local government to make childcare programs sustainable (Dewi, 2013). However, there are also countries, such as China and Singapore that provide full support for daycare education (Ochiai & Molony, 2008). Over the past three decades, China's Early Childhood Education and Care (ECEC) system has had significant changes in policy and practice. China has recently made substantial efforts to increase the enrollment of children aged 3 to 6 years old (Qi, & Melhuish, 2017). Likewise, the Early Childhood Care and Education (ECCE) program in Singapore is acknowledged by the government as vital in attaining national goals (Ang et al., 2021). Alongside the government's commitment to making ECCE a priority, there was a substantial increase in budget in the sector (Singapore Budget, 2012). Two of the numerous turning points in Singapore's early childhood education history include the setting up of the Early Childhood Development Agency (ECDA) in 2013 and the establishment of the National Institute of Early Childhood Development (NIEC) in 2018 (Karuppiah & Poon, 2021).

In the Philippines, Republic Act No. 6972 mandates every barangay of the country to promote the Total Development and Protection of Children Program and to establish a daycare center—a government initiative that aims to help children acquire life skills and social skills, develop confidence, and boost their self-esteem (Montejano, n.d). The policy was further enhanced through RA 8980 (The ECCD Act) to ensure that the country fully recognizes the nature of childhood and upholds the rights of children to development, survival, and special protection (Manuel, 2011). The most recent document that provides the general structure of ECCD administration in the Philippines is RA 10410, or the Early Years Act (EYA) of 2013. It says that the government's ECCD programs—which cover child safety, nutrition, health and sanitation, and education for children zero to four years old—are primarily supported by the ECCD Council (Constantino, 2022).

Nevertheless, despite these initiatives, some children still fail to avail themselves of daycare education, which should not be the case. Teachers have observed that kindergarten children who lack daycare education show poor performance and behavior as compared to those who have been exposed to a daycare program. This is revealed in the study of Armecin et al. (2006),

wherein they conducted an assessment of the early childhood development initiative of the Philippine government. The authors used longitudinal data that they had collected for more than three years. Nearly 6,700 children, aged 0-4, were considered in the study. Their findings indicate that those children in areas with early childhood development programs displayed significant improvement in terms of their cognitive, social, motor, and language skills as compared to those children in areas without the intervention. Meanwhile, Aquino et al. (2019) in their study also considered 568 nursery children, who were evaluated by their respective teachers. They found out that the nursery children were ready for the kindergarten program since they gained very satisfactory competence in the seven learning domains. These findings suggest that daycare education is indeed important to children's development and that it prepares them with the requisite skills and competencies essential for formal education (Gyekye-Ampofo et al., 2023).

There have been very limited studies that tackle how daycare programs contribute to the development of children in kindergarten and higher year levels (Armecin et al., 2006). Thus, the researchers were motivated to gather more evidence about the significance of daycare

education particularly to a child's holistic development. This study, therefore, intends to reveal the following: (a) pupils' profile in terms of sex and exposure to daycare education; (b) pupils' performance in the seven domains during enrolment when grouped according to their daycare exposure and sex; (c) pupils' performance in the seven domains after the second assessment when grouped according to their daycare exposure and sex; (d) difference in the pupils' performances during enrolment when grouped according to their exposure to daycare education; and (e) difference in the pupils' performances after the second assessment when grouped according to their exposure to daycare education.

2.0 Conceptual Framework

The researchers utilized the **Input-Process-Output** diagram in presenting the flow of the study. The **Input** mainly consisted of the school readiness upon enrolment of the kinder pupils who were exposed to daycare education and those who were not. The ECD tool was used in the assessment. This is the tool utilized by kindergarten teachers in the Division of Bayawan. It determined the seven developmental domains, namely: gross motor, fine motor, self-help, receptive language, expressive, cognitive, and socio-emotional.

The **Process** involved the learning process undergone by the kinder pupils through the environment, social interaction, and the More Knowledgeable Other (MKO). It also included the acquisition of skills that are difficult to learn (ZPD) through the assistance of the MKO. Similarly, the ECD tool was utilized as an assessment tool.

The **Output**, on the other hand, would be the identified school readiness of the kinder pupils who were exposed and unexposed to daycare education after the second assessment and the implementation of the intervention plan.

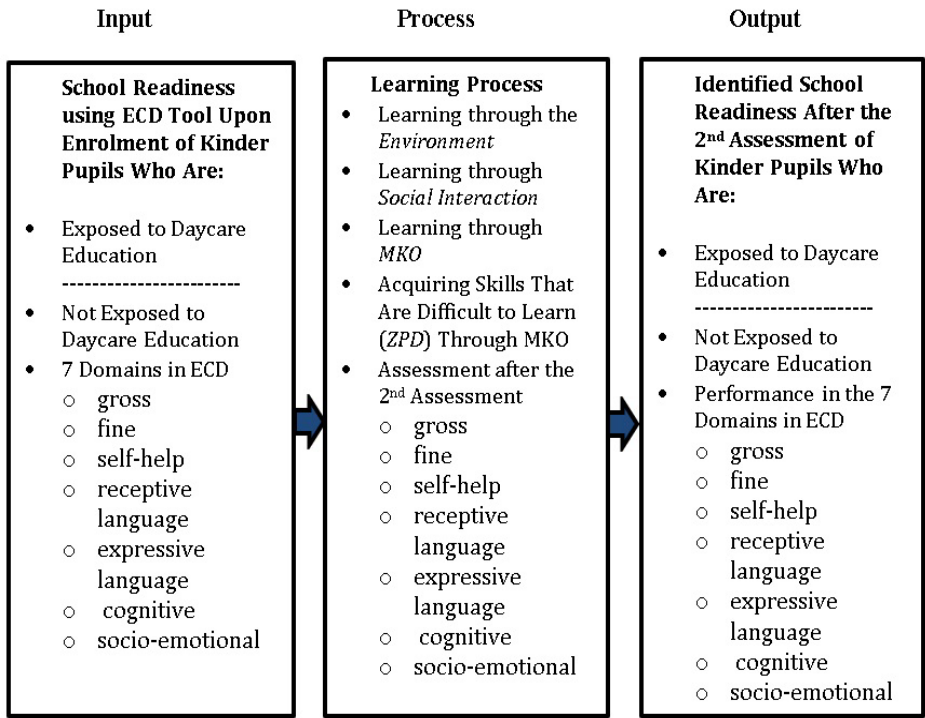


Figure 1: Conceptual Framework of the Study

3.0 Methodology

The research utilized the descriptive-comparative assessment. A total of 300 pupils from 15 kindergarten classes in District 1 of Bayawan Division were considered

in this study. The researchers applied the stratified sampling technique with a random start, wherein every second pupil in the list was a respondent. The researcher used the Early Childhood Development (ECD) checklist, a standardized tool

that contains the following seven developmental domains: gross motor; fine motor; self-help; receptive language; expressive language; cognitive; and socio-emotional domains. The scoring scale and interpretations of the results are as follows:

Scaled Score	Interpretation
1.00 – 3.49	Suggest significant delay in overall development
3.50 – 6.49	Suggest slight delay in overall development
6.50 – 13.49	Average Development
13.50 – 16.49	Suggest slightly advanced development
16.50 – 19.00	Suggest highly advanced development

RESULTS and DISCUSSIONS

Table 1 reflects that the majority of the pupils (52.33%) are male and most of (68.67%) have been exposed to daycare education.

Table 1: Profile of the Kindergarten Pupils (n = 300)

Variables	With Exposure	Without Exposure	Total
Male	101 (33.67%)	56 (18.67%)	157 (52.33%)
Female	105 (35.00%)	38 (12.67%)	143 (47.67%)
Total	206 (68.67%)	94 (31.33%)	300 (100.00%)

Table 2 reflects the performance of the kindergarten pupils when grouped according to their exposure and sex. Concerning male and female pupils exposed to daycare education, the data show that they have acquired an average development in all domains. On the contrary, male kindergarten pupils unexposed to daycare education appeared to have attained slightly delayed development in all domains except in the receptive language domain. Female kindergarten pupils also manifested a slightly delayed development in the following domains: gross motor, fine motor, self-help, and expressive language. They have acquired an average development in receptive language, cognitive, and socio-emotional domains. Synthesizing the results and with consideration of the difference in their performances in all domains, the overall development of male and female kindergarten pupils exposed to daycare education falls into the same verbal category.

ry, which is average development. ten pupils. Generally, both male
The same connotation could be and female pupils have a slight de-
observed in unexposed kindergar- lay in their overall development.

Table 2: *Performance of Kindergarten Pupils in Seven Domains during Enrolment when Grouped according to Their Exposure and Sex*

Variables	Male	Development Interpretation	Female	Development Interpretation	Diff.
With Exposure					
Gross Motor	9.53	Average	10.33	Average	0.80
Fine Motor	9.69	Average	10.17	Average	0.48
Self-Help	6.57	Average	7.96	Average	1.39
Receptive Lang.	9.43	Average	10.26	Average	0.83
Expressive Lang.	8.60	Average	9.14	Average	0.54
Cognitive	9.52	Average	10.50	Average	0.98
Socio-Emotional	9.01	Average	10.52	Average	1.51
Overall	8.91	Average	9.84	Average	0.93
Without Exposure					
Gross Motor	6.05	Slight Delay	5.13	Slight Delay	0.92
Fine Motor	5.23	Slight Delay	5.29	Slight Delay	0.06
Self-Help	4.66	Slight Delay	4.26	Slight Delay	0.40
Receptive Lang.	7.34	Average	8.16	Average	0.82
Expressive Lang.	4.91	Slight Delay	5.68	Slight Delay	0.77
Cognitive	5.80	Slight Delay	6.84	Average	1.04
Socio-Emotional	5.95	Slight Delay	7.11	Average	1.16
Overall	5.71	Slight Delay	6.07	Slight Delay	0.36

Table 3 signifies that the per- cation are on average development.
formances of the male and female This implies that both groups have
kindergarten pupils whether ex- developed the necessary skills af-
posed or unexposed to daycare edu- ter six months of formal education.

Table 3. *Performance of Kindergarten Pupils in Seven Domains after the Second Assessment when Grouped according to Their Exposure and Sex (n = 300)*

Variables	Male	Development Interpretation	Female	Development Interpretation	Diff
With Exposure					
Gross Motor	10.58	Average	10.77	Average	0.19
Fine Motor	11.51	Average	11.63	Average	0.12
Self-Help	9.16	Average	10.06	Average	0.90
Receptive Lang.	11.62	Average	10.91	Average	0.71
Expressive Lang.	10.08	Average	10.69	Average	0.61
Cognitive	11.75	Average	12.15	Average	0.40
Socio-Emotional	10.81	Average	11.48	Average	0.67
Overall	10.65	Average	11.10	Average	0.45
Without Exposure					
Gross Motor	8.50	Average	8.26	Average	0.24
Fine Motor	9.93	Average	9.50	Average	0.43
Self-Help	7.29	Average	7.21	Average	0.08
Receptive Lang.	10.14	Average	10.24	Average	0.10
Expressive Lang.	8.23	Average	9.16	Average	0.93
Cognitive	9.84	Average	10.32	Average	0.48
Socio-Emotional	9.89	Average	10.05	Average	0.16
Overall	9.12	Average	9.25	Average	0.13

Table 4 reveals all the necessary data that identify if the performances of the two groups of pupils significantly differ at the beginning of the kindergarten year. As shown, all the performances of the pupils with daycare exposure are numerically higher than the performances of the pupils without daycare exposure. To statistically test the difference, the z-test was applied.

The data reflect that all p-values in the seven domains are less than the level of significance (0.05). This means that there is a significant difference in the performances of the pupils with daycare exposure and those without exposure to daycare education. Moreover, this signifies that the former group has a better performance than the latter group in all seven domains upon enrolment.

Table 4: Difference between Performances of the Pupils during Enrolment Assessment

Domain	Mean Scaled Score		Diff.	z-value	p-value	Remark
	With Exposure	Without Exposure				
Gross Motor	9.94	5.68	4.26	11.41	0.00	Significant
Fine Motor	9.94	5.26	4.68	12.70	0.00	Significant
Self-Help	7.28	4.50	2.78	6.95	0.00	Significant
Receptive Lang.	9.85	7.67	2.18	5.27	0.00	Significant
Expressive Lang.	8.88	5.22	3.66	9.20	0.00	Significant
Cognitive	10.02	6.22	3.80	10.51	0.00	Significant
Socio-Emotional	9.78	6.41	3.37	8.57	0.00	Significant
Overall	9.38	5.85	3.53	10.26	0.00	Significant

Note: Level of Significance = 0.05

Table 5 shows the results of the comparison between the performances of the two groups of pupils after the second assessment. As shown, all the performances of the pupils with daycare exposure are numerically higher than the performances of the pupils without daycare exposure in the seven domains. The data reflect that all p-values in

the seven domains are less than the level of significance (0.05). This also implies that there is a significant difference in the performances between the pupils with daycare exposure and those without exposure to daycare education. The former group has better performance than the latter group in all seven domains after the second assessment.

Table 5: Difference between Performances of the Pupils after the Second Assessment

Domain	Mean Scaled Score		Diff.	z-value	p-value	Remark
	With Exposure	Without Exposure				
Gross Motor	10.68	8.40	2.28	6.90	0.00	Significant
Fine Motor	11.57	9.76	1.81	6.92	0.00	Significant
Self-Help	9.62	7.26	2.36	6.48	0.00	Significant
Receptive Lang.	10.77	10.18	0.59	3.74	0.00	Significant
Expressive Lang.	10.39	8.61	1.78	5.14	0.00	Significant
Cognitive	11.96	10.03	1.93	6.75	0.00	Significant
Socio-Emotional	11.15	9.96	1.19	3.98	0.00	Significant
Overall	10.88	9.17	1.71	6.29	0.00	Significant

Note: Level of Significance = 0.05

4.0 Discussion

The study mainly focused on identifying the performances of the kindergarten pupils exposed and unexposed to daycare education. It covered the following seven developmental domains: gross motor; fine motor; self-help; receptive language; expressive language; cognitive; and socio-emotional domains.

The results indicated that there were still children who had not availed of the free daycare education despite the Philippine government's allocation of budget for this. Through daycare education, children can develop themselves holistically. Among other things, daycare education helps enhance the child's life skills, social interaction skills, relationship-building skills, and self-confidence (Montejano, n.d.).

The findings also revealed that all the performances of the pupils exposed to daycare education are significantly higher (all p -values $< \alpha = 0.05$) than the performances of those pupils not exposed to daycare education in all domains during enrolment and after the second assessments. Daycare education is indeed essential nowadays. Bassok et al. (2016) found that teachers in 2010 differed from their counterparts in 1998 in terms of how they viewed pre-K education. The authors also recognized the long-term benefits of daycare education and stressed how

important it is for every family and the community to support and promote the program. The current findings also support that of Armecin et al. (2006), who found that children in areas with ECD programs displayed remarkable improvement in terms of their cognitive, social, motor, and language skills as compared to those children in areas without the intervention. In addition, Ansari and Winsler's (2016) conclusions are also in consonance with the current findings. They revealed that children with pre-kindergarten education demonstrated the highest kindergarten readiness and continually showed better performance towards the end of the school year. Furthermore, Haddow (2016) claimed that pupils who attended preschool education obtained better scores in cognitive, socio-emotional, and oral language skills than those who did not.

On the other hand, female pupils exposed and unexposed to daycare education generally outperformed the male pupils during enrolment and the second evaluation. Most of the ratings of the female pupils are numerically higher than the male pupils. Cliff et al. (2009) have opposing findings on the gross motor domain. They found that boys and girls possess equal capabilities of executing object control skills. However, the findings of Hardy et al. (2010) strengthen the current result. They claimed that

girls had higher mastery of locomotor skills such as running, hopping, and jumping, while boys had higher mastery of object control skills such as catching, throwing and kicking. Also, the study of Macay (2016) negates in particular the finding on the overall school readiness of the pupils. In her study, male pupils were found to have higher or better performance than female pupils.

5.0 Conclusion

The research provided evidence of the importance of daycare education in ensuring that children are ready to make the shift to formal education. It has shown that the majority of the pupils avail themselves of the free daycare education program of the government. Being exposed to daycare education is an advantage to the pupils especially the females as they generally manifest better performance in most learning domains during the first evaluation and after the second assessment. Thus, exposure to daycare education is very essential as it helps the pupils acquire the basic skills in the seven developmental domains necessary for the transition from daycare to kindergarten. Investing in early education programs promises long-term benefits.

RECOMMENDATIONS

In the light of the findings and conclusions drawn, it is recommended that:

1. parents send their children to daycare institutions to prepare the latter for formal education.
2. kindergarten teachers and the pupils' parents utilize the results of the assessment during enrolment. This will serve as the basis for teachers to provide appropriate classroom intervention to address the specific needs of the pupils. Parents as well should come up with home-based activities to supplement the learning of their children.
3. pupils without daycare education be given more attention by their teachers so that they will not be left behind by those pupils with daycare education.
4. kindergarten teachers create activities and avenues that will further develop the self-help and expressive language skills of the pupils.
5. kindergarten teachers come up with more activities for male pupils to enhance their skills.

REFERENCES

- Ang, L., Lipponen, L., & May Yin, S. L. (2021). Critical reflections of early childhood care and education in Singapore to build an inclusive society. *Policy Futures in Education*, 19(2), 139-154.

<https://doi.org/10.1177/1478210320971103>

<https://doi.org/10.1177/2332858415616358>.

- Ansari, A., & Winsler, A. (2016). Kindergarten readiness for low-income and ethnically diverse children attending publicly funded preschool programs in Miami. *Early Childhood Research Quarterly*, 37, 69-80. <https://doi.org/10.1016/j.ecresq.2016.06.002>
- Aquino, L. N., Mamat, N., & Mustafa, M. C. (2019). Levels of Competence in the Learning Domains of Kindergarten Entrants. *Southeast Asia Early Childhood*, 8(1), 37-46. <https://doi.org/10.37134/saecj.vol8.no1.5.2019>
- Armecin, G., Behrman, J., Duazo, P., Ghuman, S., Gultiano, S., King, E., & Lee, N. (2006). Early childhood development through an integrated program: Evidence from the Philippines. <https://doi.org/10.1596/1813-9450-3922>
- Bassok, D., Latham, S., & Rorem, A. (2016). Is kindergarten the new first grade?. *Aera Open*, 2(1), 2332858415616358.
- Claessens, A., Engel, M., & Curran, F. C. (2014). Academic Content, Student Learning, and the Persistence of Preschool Effects. *American Educational Research Journal*, 51(2), 403–434. <http://dx.doi.org/10.3102/0002831213513634>
- Cliff, D. P., Okely, A. D., Smith, L. M., & McKeen, K. (2009). Relationships between fundamental movement skills and objectively measured physical activity in preschool children. *Pediatric exercise science*, 21(4), 436-449. <http://dx.doi.org/10.1123/pes.21.4.436>
- Constantino, K. K. R. (2022). Examining ECCD Structures and Service Delivery Mechanisms in Local Government During COVID-19. *Philippine Journal of Public Administration*, 66. <http://dx.doi.org/10.5281/zenodo.10042666>
- Dewi, K. H. (2013) *Social Policy and Practices of Childcare Services in Jakarta: An*

- Assessment1. effective? Educational Evaluation and Policy Analysis, 38, 88–112. doi: 10.3102/0162373715587965
- Gyekye-Ampofo, M., Opoku-Asare, N. A., & Andoh, G. B. (2023). Early Childhood Care and Education in The 21st Century: A Review of the Literature. *British Journal of Education*, 11(4), 81-95. <https://doi.org/10.37745/bje.2013/vol11n468195>
- Haddow, A. (2016, September 5). Studying early childhood education in the Philippines. Australian Council for Educational Research - ACER. <https://www.acer.org/au/discover/article/studying-early-childhood-education-in-the-philippines>
- Hardy, L. L., King, L., Farrell, L., Macniven, R., & Howlett, S. (2010). Fundamental movement skills among Australian preschool children. *Journal of Science and Medicine in Sport*, 13(5), 503-508. <https://doi.org/10.1016/j.jsams.2009.05.010>
- Jenkins, J. M., Farkas, G., Duncan, G. J., Burchinal, M., & Vandell, D. L. (2016). Head Start at ages 3 and 4 versus Head Start followed by state pre-K which is more effective? Educational Evaluation and Policy Analysis, 38, 88–112. doi: 10.3102/0162373715587965
- Karuppiah, N., & Poon, K. (2021). Early Childhood Education in Singapore. *International Handbook on Education in South East Asia*, 1-20.
- LoCasale-Crouch, J., Moritz Rudasill, K., Sweeney, B.D., Chattrabhuti, C., Patton, C. and Pianta, R. (2012), “The Transition to Kindergarten: Fostering Connections for Early School Success”, Karabenick, S.A. and Urdan, T.C. (Ed.) *Transitions Across Schools and Cultures (Advances in Motivation and Achievement, Vol. 17)*, Emerald Group Publishing Limited, Bingley, pp. 1-26. [https://doi.org/10.1108/S0749-7423\(2012\)0000017004](https://doi.org/10.1108/S0749-7423(2012)0000017004)
- Macay, M. (2016). Grade I Pupils’ School Readiness in Relation to Their Division Unified Testing Program Results. Foundation University
- Manuel, M. E. (2011) Early

- childhood care and development: An overview. The University of the Philippines Manila Journal, 14(), 11-12. <https://www.herdin.ph/index.php/partners?view=research&cid=39307>
- Montejano, C. (n.d.). "The Purpose of Somerset Day Care". Retrieved from: <http://www.somerset-preschool.com/purpose.html>.
- NAEYC (2009). Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8. Retrieved from: <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/PSDAP.pdf>
- Ochiai, E. & Molony, B. (editor). Asia's New Mothers: Crafting Gender Roles and Childcare Networks in East and Southeast Asian Societies (United Kingdom: Global Oriental, 2008). Asia's New Mothers: Crafting Gender Roles and Childcare Networks in East and Southeast Asian Societies (United Kingdom: Global Oriental. <https://doi.org/10.1163/ej.9781905246373.i-232>
- Pianta, R. C., & Cox, M. J. (1999). The transition to kindergarten: A series from the National Center for Early Development and Learning. Retrieved from ERIC database. (ED438026)
- Qi, X., & Melhuish, E. C. (2017). Early childhood education and care in China: History, current trends and challenges. *Early Years*, 37(3), 268-284. <http://dx.doi.org/10.1080/09575146.2016.1236780>.