Implementation of EoREA'S Model for Child Independence Development:
A Study at Preschool Institutions in the Post-covid-19

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Abstract. The purpose of this study was to describe the implementation of the Ergonomic of Reggio Emilia Approach (EoREA)'s Model in developing the child independence in the post-covid-19 era. This research is a qualitative descriptive study. Sources of data used in this study are informants (teachers and principals), places/events (preschool institutions), and documents/archives (results of child development assessment). Data collection techniques using observation, interviews, and documents/archives. The informant retrieval technique used was purposive random sampling. For the validity of the data using source triangulation and method triangulation. The data analysis technique uses an interactive analysis model. Based on the results of the study, it was found that not all preschool institutions in the Bantul DI.Yogyakarta (Indonesia) implemented EoREA's model in the development of child independence in the post-covid-19 era. Although the learning models used are varied, there are three learning models commonly used in preschool institutions in the Bantul DI.Yogyakarta (Indonesia) province in the post-covid-19 era, namely the learning model with "area" settings, the learning model with "corner" settings, and the Beyond Center and Circle Time (BCCT). The three learning models implemented did not pay attention to ergonomics as in the Reggio Emilia approach with its *atelierista*. The development of independence has not utilized ergonomics so that it is not optimal, especially by using the Reggio Emilia Approach. Looking at the results of assessments of child development in preschool institutions and interviews with teachers and principals, it was found that the child independence was not in accordance with the goals to be achieved (not as expected). Thus, it can be concluded that further research needs to be carried out to determine the application of the EoREA's model which develops child independence.

Keywords: EoREA Model · Child Independent Development · Preschool Institutions

1 Introduction

Early childhood education must be quality because it is the foundation that determines whether or not the building of further education, and determines the quality of one's life in the future. Siegler & Alibali (2005) states that early childhood is a time when

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children grow and develop by having many questions in their minds. Through education, the child's potential moments are expected to be stimulated properly. Essa (2003) argues that early childhood education must be programmed correctly in order to produce the expected outputs. But according to him, the programming of course depends on the goals of early childhood education. The main purpose of early childhood education is to stimulate child development according to stages of development. So, there is no coercion or abused of children.

Stimulation must be comprehensive, covering both the right and left hemispheres of the brain (Jensen, 2008). This balance will make children become great when they find their future. He is not only academically smart, but intelligent in non-academic fields. So as to create strong humans who are in accordance with the cultural character of the Indonesian people, especially independent humans.

Independence in early childhood is not the same as independence in adults. Independence for adults is more likely to begin with decision making without being dependent on others. For early childhood, independence is more likely to the ability to perform activities independently starting from basic activities related to personal needs. Shrier (2015) highlights the importance of developing children's independence, whose development is greatly influenced by stimulation from the surrounding environment, namely the adults around them. If independence is not fostered from an early age, it is likely to become a dependent person when he grows up.

Bowlby (2018) argues that the lack of good development of early childhood independence is largely due to the mistakes of parents and adults around children who are too pampering children to make children dependent. So do not be surprised if you find children who have started growing up teens are still served by parents related to their personal needs due to lack of confidence in themselves due to the mistaken stimulation received since childhood. This independence is also often interpreted as trust in oneself or self reliance (Smart and Smart, 1978; Mussen, et al., 1979). Tasuah (2016) considers the importance of developing independence or self-reliance in early childhood so that it conducts research using the role playing method in early childhood learning. The variables developed in his research were not only self- reliance of early childhood, but also developed creative entrepreneurship in early childhood. Research conducted by Putra and Jannah (2013) shows that there are still early childhood (in this case, kindergarten children) who have poor development of independence. Seeing some of the results of researches, it can be said that the stimulation carried out for the development of children's independence is very important (from preschool institution).

A good preschool institution, aside from routinely holding parenting activities, also certainly carry out the learning process properly and correctly. Kartini (2003) explained the education component consists of three main pillars of learning in early childhood education (PAUD), namely environmental management (ergonomics of PAUD), play activities and educational play tools, and teacher-child educational interactions. Furthermore Getswicki (2007) explains that environmental management (PAUD ergonomics) must be based on two categories, namely: Knowlegde and Play.

The two things above, namely knowledge and play, as described previously, are closely related to environmental management (ergonomics). There is a learning model that is very concerned about ergonomics in learning, namely the Reggio Emilia Approach

(REA). As said by Tzuo & Chen (2012) that there is a difference between the Project Approach developed in the United States and the REA developed in Italy. This study only focuses on REA. This is proven by the existence of a teacher who is specifically tasked with preparing and managing everything that has an ergonomic odor called an *atelierista.*

In the field, preschool institutions, particularly kindergartens, were found that had not yet conducted learning to use REA appropriately and adapted to the character of education in Indonesia, especially the maximization of ergonomics applications by atelierista. Even kindergartens are also found that have not applied the learning model or approach according to its designation, including the application of REA. For example, the Area learning model that should only be suitable for Group B Kindergarten, is also applied in Group A Kindergarten. In the Special Region of Yogyakarta, only about 5% of TKs implement REA, and even then there is no *atelierista* where there are only classroom teachers who do all the work (Rolina, 2013).

The REA with the *atelierista* and its project method are inseparable from ergonomics, so the term Ergonomics of Reggio Emilia Approach (EoREA) appears. A good EoREA will certainly influence the learning process which leads to the achievement of learning outcomes in the form of children's independence. Lueder & Rice (2008) explains that children's play activities are exercises for their lives and the arrangement of the playing environment is very influential; even the size of the furniture and shelves, as well as the placement of toys and places of activity influence children's development including independence and responsibility. Through EoREA which focuses on structuring instructional media along with furniture layouts that are in line with the learning themes and characteristics of children, children's independence can be stimulated well; for example the storage place for Educational Games (APE) which is not only interesting but also easy for children to reach so that children can rearrange the APE that they have finished using. This can indirectly trigger the development of child independence.

Seeing the above explanation, EoREA becomes important for the development of early childhood independence. But the author does not know whether in Province of The Special Region of Yogyakarta, especially in Bantul District, preschool institutions have implemented EoREA or not. For this reason, this research is important to be carried out to find out how EoREA is implemented in Indonesia for developing children's independence.

2 Method

This research is a qualitative descriptive study with data sources in the form of informants, places/events, and documents/archives. The informants referred to in this study were teachers and principals of public institutions in Bantul District, Special Region of Yogyakarta, Indonesia. The places/events in this study are PAUD institutions which are also scattered in Bantul District, Special Region of Yogyakarta, Indonesia. To complete the data, the documents/archives referred to are documents of the results of the assessment of the development of children who become students in PAUD institutions in Bantul DI.Yogyakarta (Indonesia).

Data collection techniques using observation, interviews, and documents/archives. Observation and interviews are used to gather data or information about EoREA implementation for the development of children's independence in preschool institutions. And documentation is used to obtain data about the description of the object under study. In addition, documentation is also to complete the data from observations and interviews. The informant taking technique used is purposive random sampling. From.

1.346 preschool educational institutions, samples of respondents or informants were taken from 300 preschool educational institutions. For data validity using source triangulation and method triangulation. Data analysis techniques using an interactive analysis model.

3 Result

Bantul District, which is located in the southern part of DI.Yogyakarta (Indonesia), has 1,346 preschool institutions spread across various districts and consists of 564 kindergartens, 488 playgroups, 57 child care parks (TPA), and 237 similar preschool units (SPS). Of the many preschool institutions, there are only 7 institutions that have the status of a state, the rest are private institutions. The seven state institutions are kindergartens.

The learning model used by preschool institutions in Bantul District, DI.Yogyakarta (Indonesia) varies, but which is very commonly used there are three learning models, namely learning models with area settings, learning models with angular settings, and Beyond Center and Circle Time (BCCT) models. The reggio emilia approach has not been used in its entirety and only merges with other learning models that are usually adapted to the vision and mission of the institution concerned. In fact, compared to the three learning models, the REA is more focused on ergonomics with the presence of *atelierista.*

EoREA that is planned and implemented correctly will certainly have a positive impact on children's development, including independence. The development of children's independence was found to have not utilized ergonomics so that it was less than optimal, especially by using the REA. Looking at the results of observations, interviews with teachers and school principals, and completed with documents on the results of child development assessments in preschool institutions studied, it was found that the independence of early childhood is not in accordance with the objectives to be achieved (not as expected). Thus it can be concluded that further research needs to be carried out to determine the effect of EoREA on the independence of early childhood.

4 Discussion

Maryatun (2010) also explained the history of REA which is not much different. Reggio Emilia is actually the name of a small town in southern Italy. REA is an approach developed by Loris Malaguzzi, an elementary school teacher who worked in Reggio Emilia in 1945. This approach uses the philosophy of John Dewey in carrying out his approach and uses the theories of Piaget and Vigotsky.

Kelemen (2013) adds that REA is centered on society and culture, but the fact that the idea is based on the principles of preschool education developed through studies

such as John Dewey, Jean Piaget, Lev Vygotsky, David Hawkins, Jerome Brunner, and Howard Gardner. Furthermore Santin & Torruella (2017) said that REA is a philosophical approach that focuses on listening and paying attention to children's potential through their behavior, which aims to reformulate or reformulate the practical activities, ideas, and projects that children will do. Schools that carry the REA philosophy recommend a participatory and democratic education system, and emphasize research and experimentation.

Wood, Thall, & Parnell (2015) explained that REA has a perspective that shifts the focus of events in the classroom far from before, the teacher views students more as children who are capable, independent, intelligent, curious, and creative. Edwards et al. (2007) explained that in the implementation of learning that uses REA there are 3 important components of learning implementation. All three have duties and obligations that cannot be separated. The three components are teacher, *pedagogista,* and *atelierista.*

In Indonesia, playgroup teachers are only known as class teachers and accompanying teachers whose tasks are not much different from those of teachers and *pedagogista* in REA. *Atelierista* which actually has a very important role, is not so well known in learning in playgroups in Indonesia. The ability of *atelierista* which is closely related to ergonomics and urgently needed in playgroup can help improve student learning outcomes.

Ergonomics derived from Greek namely ergon (work) and nomos (rules), is technology, art, and science to harmonize tools, ways of working, and the environment with human capabilities and constraints, so that a healthy, safe, comfortable, effective environment is obtained, and efficient (Mustika & Sutajaya, 2016). Almost in line with the conclusions of Mustika and Sutajaya, Kroemer (2006) states that ergonomics is the application of scientific principles, methods, and the inference of data from various arrangements in the design of engineering systems in which humans play an important role. Kroemer added, in ergonomics there are differences and nuances between various fields of ergonomics (including education), but in general have similarities, namely harmony between humans and the environment created.

It can be said that ergonomics is harmony between the environment and humans. If related to the world of education, ergonomics is more likely to be in harmony or harmony between the learning environment and humans who are involved in it (in this case are students and teachers). This structuring of the learning environment is related to the arrangement of classrooms that are comfortable and enjoyable for students.

The ideal design of school furniture which is still being debated among experts around the 1960s, as well as the influence of gadgets and information technology that makes school students rarely move physically; making the reason for ergonomics education experts to pay more attention to structuring the learning environment and then forming the International Ergonomics Association Technical Committee which consists of 120 people from 22 different countries. This association discusses the development of ergonomics education every year which is expected to be updated by teachers to improve their abilities (Bennett & Tien, 2003).

Heyman & Dekel (2009) highlights ergonomics in schools. They argue that ergonomics education (ergonomics) aims to find group solutions in the classroom as well as individual solutions in using learning materials or media available in schools.

The same opinion that says about ergonomics education is very important, as stated by Woodcock (2014) which states that ergonomics education helps teachers develop individual abilities of students.

The importance of ergonomics in schools was also discussed by Lueder & Rice (2008) who examined it in a special section titled Children and School and contained 6 chapters. They added, a good environmental design for children, especially early childhood, not only the type of furniture but also pay attention to other things, such as variations, dimensions, settings, construction, colors, fabrics, ease of cleaning, storage, and repositioning.

Referring to early childhood education, Lueder & Rice (2008) highlights that the physical environment in PAUD plays an important role in children's development, such as cognitive, social, physical (motor), and emotional development. They added that good and organized stimulation and nurturing can help children develop vocabulary, attention and memory skills, and social interactions with their peers. This is in line with the opinion of Edwards, Gandini, & Nimmo (2014) which states that the development and intelligence of children in PAUD are strongly supported by an adequate physical environment. Furthermore, Lueder & Rice also stated that ergonomics for PAUD must at least pay attention to the following matters, namely: Impact of the Physical Environment, Environmental Considerations, General Design Requirements,Caregivers,andDetailedDesign According to Age (infants, toddlers, preschoolers).

Opinions about the physical environment in the process of early childhood learning that can develop all aspects of child development and intelligence, also conveyed by Santin & Torruella (2017) who explained that the environment (environment) is part of the third teacher (atelierista) in the REA, so it can be said that ergonomics which is the art or science of structuring the learning environment is an important part of the REA. The relationship between ergonomics and atelierista is discussed in detail by Gandini, Hill, Cadwell, & Schwall (2005) in the chapter on The Role of The Atelierista which contains assignments along with examples of the work of the atelierista as one of the teachers in REA. The EoREA can be developed through a marriage of Lueder & Rice's opinion on five important things in ergonomics in PAUD with the role of atelierista in REA. Of course the estuary of all that is the learning outcome of students. In this discussion, the focus is the independence of early childhood.

Knowles (Leckie, 2002) argues that people who behave independently usually tend to be responsible for what they do. Merriam & Caffarella (1999) said that people who behave independently are people who are able to plan things, maintain and assess their own actions. Covering all of the statements, Wiryawan & Rolina (2008) states that independence is a person's freedom from the influence of others so that on the basis of trust and encouragement from within oneself; and people who behave independently can take their own initiative, overcome their own difficulties and want to do things that are good for themselves. And from all these opinions it can be concluded that independence is a behavior whose activities are directed by oneself and based on self-confidence without any influence from others so that they can overcome their own difficulties, take their own initiative, and do things that are good for themselves.

Independence for adults is more likely to begin with decision making without being dependent on others. For early childhood, independence is more likely to the ability to

perform activities independently starting from basic activities related to personal needs. Independence of early childhood is part of the slices of social emotional development and also religious-moral-values. Through EoREA, early childhood independence can be stimulated by involving *atelierista.* The learning environment is set in such a way as to maximize the development of child's independence. However, the results of this study indicate that there are no preschool institutions in Indonesia that have implemented EoREA. For this reason, further research is needed on this matter.

5 Conclusion

EoREA with *atelierista* is important for the development of early childhood independence. But the author does not know whether in DI.Yogyakarta (Indonesia), especially in Bantul District, preschool institutions have implemented EoREA or not. Because of this, the research is important to be carried out to find out how EoREA is implemented in Indonesia for developing children's independence. The results show that preschool institutions in Indonesia mostly use three learning models, namely BCCT model, Area Model, and Sudut Model. EoREA is still unfamiliar in Indonesia. Given the importance of EoREA in the development of early childhood abilities, especially child independence, it is necessary to conduct further research on the development of this child independence.

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