

Integrative Holistic Garden at Early Childhood Education to Reduce Children Stunting

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Abstract

This study aims to analyze and to describe the planning, organizing, implementing and supervising of the integrative holistic early childhood education garden program at Marsudirini Fioretti Kindergarten. This research used qualitative method and study case approach. The data resources were obtained from the mentors who were the headmaster of the kindergarten, teachers, and parents. The techniques of data collections were observation, interview and documentation. Integrative holistic garden at early childhood education is a program of growth and development services combined to meet the nutritional intake which is in accordance with the stage of age development of the child as an effort to support the independency of institutions and learning laboratories for children. The results of this study are that the planning for the integrative holistic garden at early childhood education is quite good with the preparation of the plantation program, funding and development of sub-activity plans, but organizing part is less effective in the distribution of tasks and setting schedules, for that, the implementation of direction, motivation and coordination needs to be done as well as the preparation for facilities. So that, the integrative holistic garden program could be more effective. The garden supervision from Marsudirini Kindergarten and related government regarding the program has been carried out but there is still a lack of follow-up in the form of guidance that is necessary in the management of garden products for the fulfillment of children's nutrition, supporting the independency of institutions and learning laboratories for children.

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INTRODUCTION

Early Childhood Education (ECD) has now become a priority in the international and national level. Early childhood development efforts are made to meet the diverse and interrelated essential needs of children simultaneously, systematically, and integrated. Based on the medium-term development plan of Kupang District number IV Year 2014-2019, the target of integrative holistic early childhood education implementation in Kupang district is to make the unit as a high quality education service center which is independent and sustainable and produce graduates of early childhood education who are really prepared to have personality of high integrity.

For this reason, the government of Kupang District collaborating with the Ministry of Education and Culture (*Kemdikbud*), UNICEF, the government of New Zealand and the organizer of the Alfa Omega foundation carry out the integrative holistic early childhood education program in Kupang Regency in collaboration with Indonesian government to produce the high quality early childhood education program in some rural areas and one of the program is to implement the integrative holistic garden program in Central Kupang to support the early childhood education independency and laboratory study for the children.

This is important to implement because of the consideration of the potential intelligent and behavior is formed in the age range of 0-6 years old. This could be implemented if there is cooperation from several policy implementers according to Purwaningsih (2017). Marsudirini Fioretti is one of the kindergartens that implements this program. Wulandari, Supriyati & Jalal (2018) said that the development program of integrative holistic early childhood education is a service program for early childhood brain growth and the development that is optimized with psychosocial stimulation combined with fulfilling nutritional intake. Its main purpose refers to the essential needs of early childhood to be fulfilled, so that, children can grow and develop optimally in accordance with the stage of

development and its age, proposed by Usnawati (2016) integrative holistic early childhood education garden can be implemented to reduce stunting of children institutions in Kupang-NTT Regency.

In social perspective of the integrative holistic discussion, children will improve their language skills, intelligence, personality, social protection, mental, psychosocial resistance, and academic achievement. The services include education, nutrition, physical and psychological preservation services for children, followed by parenting.

The previous research about early childhood education garden program which is revealed by Widyastuti *et al* (2016) was about school yard arrangement as the eco-education which focuses on special garden school programs, the results show that the program has been successfully implemented. Periodically, the stakeholder must check some schools that are identified to have malnutrition hiddend and also the stakeholder programs in providing good services for children physical development. It needs to be carried out carefully by discussing the priority of need factors (Kuntariningsih, 2018).

Improvement of the managerial competency of the headmaster at early childhood education (*TK/RA*) is crucially needed if various early childhood education activities programs are carried out optimally. According to Siswadi & Wiyani (2018) important things that need to be considered in the activity process are planning, organizing, implementing and supervising of an activity.

School gardens according to Andri (2017) are designed to increase the availability of vegetables for student consumption, the school garden is arranged, so that vegetables can be harvested almost every day and is designed to use a small area. It is because most schools in Indonesia do not have large yards, students are involved in the maintenance of vegetable crops as an exercise in growing vegetables. The results of the garden are used to familiarize the culture of planting and self-reliance in consuming, the gardens harvest themselves and can be sold as a

result of the gardens of the early childhood education institutions.

The school garden program has several advantages over the types of health promotion and other nutrition interventions. School gardens are relatively inexpensive for planting and maintaining and carried out in schools. Activities in school gardens can be integrated into the curriculum and improve the existing one, because school garden education can support educational goals while addressing many health-related problems because they are interconnected (Ratcliffe, Merrigan, Rogers & Goldberg 2011). Besides, early childhood education garden encourages children to use all five senses in learning about the environment in order to help students get to know the environment according to Prastiwi, Sigit & Sedayu (2015).

Based on the results of the initial interview with the mentor of Central Kupang sub-district the school has received the garden program and it has been running at some schools with the reference of the Standard Operational Procedure (SOP) of the program and also the technical guidelines, but it needs to be optimized due to obstacles that often occur in the form of sub-planning in the plantation program. What will be done in terms of organizing the garden is not effective and funding problem as well.

The research on the implementation of the integrative holistic at early childhood education garden program is interesting because it is an innovation developed by the Kupang district government and is applied to 100 early childhood education with integrity spread across 24 sub-districts, one of them is the central Kupang sub-district which is carried out by each institution for its independency and do not depend on government grants. The institution is namely Marsudirini Fioretti kindergarten. For that, that managerial head of kindergarten (*TK / RA*) is very necessary if the integrative holistic garden program at early childhood education can be implemented optimally.

METHODS

The research method used is a qualitative research using a case study approach, the researcher analyzed the integrative holistic early childhood education garden at Marsudirini Fioretti Kindergarten from planning, organizing, implementing to supervising with Standard Operational Procedure (SOP) and technical guidelines for the garden program. Research had been conducted at Marsudirini Fioretti Kindergarten located in Central Kupang Sub-district, Kupang-NTT Regency. The research subjects were school stakeholders including mentors, managers, teachers and parents involved in the program. As for the data collection techniques used in qualitative research consists of several types of data, namely observation, interviews, documentation. The data analysis technique used in this study is an interactive model adapted from Miles and Huberman in Sugiyono (2015), namely data collection, data reduction, data presentation, drawing conclusions or data verification about the program.

RESULTS AND DISCUSSION

The program was carried out in some stages started from planning, organizing, implementing, and supervising or monitoring with the guidelines of the operational standards for the implementation of the integrative holistic early childhood education garden program and the technical guidelines program in Kupang Regency. Planning for integrative holistic early childhood education garden program at Marsudirini kindergarten was started with setting the planning for the mentor to meet with the manager. The meeting held to discuss the size of each land that needs to be prepared and what plants will be planted. It was in accordance with the SOP of the program which had been agreed by Kupang Regency government and institutions regarding the garden program.

Based on the first meeting, mentors, managers, teachers, committees and the East Penfui village government held a meeting with

parents to discuss the procurement of garden. Local land and plants that could be processed into food for the students in the school garden within 100-200 meters were conditioned with seeds from the Kupang District, food Security Service, caring for, providing fertilizer, watering, harvesting and marketing as well as plants that need to be planted in school gardens that semester.

The purpose of the program is to plant in a plot of land with vegetables consisting of mustard greens, Chinese cabbage, cabbage, carrots, spinach, moringa leaf, tomatoes, chilies; nuts consisting of peanuts, green beans, rice beans; fruit and tubers consisting of papaya, banana, corn, jackfruit, mango, avocado, coconut, orange, sweet potato, pumpkin or flowers as a means of learning while playing and introducing children to the livelihoods of people living in rural Timor island as a livelihood to live and work as well as represent the primary sector.

Funding for school garden management could be obtained from the Kupang District Food Security Service by donating seeds to be planted, polybags, and fertilizer. Marsudirini Kindergarten provided the land and consumption funds for all those involved in the integrative holistic garden program at the specified time in Saturday morning and what all that was needed for gardening.

Findings from the planning of the integrative holistic early childhood education garden program at Marsudirini Fioretti Kindergarten are quite good but there are a number of problems that need to be carried out in accordance with the SOP of Marsudirini Fioretti and the garden program guidelines, namely the absence of a garden nameplate. Children have no preparation stage because they have not been socialized by the school and it is also because they are still reforming the main land. Preparation of plant seeds still depends on the Department of Food Security. Vitiello & Brinkley (2014) said that the scope of the garden planning system covers almost everything; planning sub-sector, for that it needs to be given more attention by planning tools. In its focus on agriculture, food planning is closely related to land use, the environment, and regional planning.

Then, at the organizing phase of the integrative holistic early childhood education garden program at the Marsudirini Fioretti Kindergarten consists of the division of tasks, the distribution of schedules, facilities and supporting infrastructure. The division of tasks of the integrative holistic early childhood education garden program at Marsudirini Fioretti Kindergarten was delivered through a meeting with mentors, managers, teachers and parents but it was not made in the form of a formal organizational chart but submitted and agreed by a joint decision. The schedule distribution of the plantation program at the Marsudirini Fioretti Kindergarten was carried out during a meeting with mentors, managers, teachers and parents as the result of a joint decision.

Distribution of parents' work day schedules at the Marsudirini Fioretti Kindergarten garden was done on Saturdays in every week at 08.00 am until it finished assisted by the manager and teacher, because almost all parents work on Monday to Friday, then it was addressed by the manager, teacher, with children. The supporting facilities of integrative holistic early childhood education garden program at the Marsudirini Fioretti Kindergarten are flush teapots, brooms, sickles, hoes, crowbars, and polybags. It is also the main land which is about 10x10 meters in front of the school yard, but the garden at the child's home has not been realized properly as in Figure 1.



Figure 1. Integrative Holistic Gardens

The cleaning and maintenance schedule was also adjusted to the schedule set but for the harvest was usually done on Friday and Saturday

and all school stakeholders and parents helped. However, what needs to be paid attention to is the schedule for more work distribution to teachers who need extra personnel to manage the gardens. Therefore, it is necessary to reform the integrative holistic garden program according to Davis & Somerset (2015). There is some evidence that not all schools have the capacity and willingness to carry out and accept the garden program and it is obvious that the involvement of the teacher and parents is very important from each school, in dealing with the garden program in the school, so it does not burden one of the parties. In terms of activities or programs, everyone must have clear duties, authority, responsibilities, relationships and work procedures, which is why organizational structures are needed in newly formed organizations, in developing and establishing conditions according to Paramita & Pandia (2015).

The implementation of the integrative holistic early childhood education garden program at the Marsudirini Fioretti Kindergarten was through guidance and direction from mentors who were accompanying each district. The mentor would accompany and give guidance to managers and teachers to run the program, then they conveyed it to parents and introduced the garden to the children. The motivation provided by the mentor always built the garden program, so did the manager to the teacher and parents to mutually motivate to run this garden program as in Figure 2.



Figure 2. Activities of Children and Teachers

Support and coordination between mentors, managers, teachers and parents is quite

good in running the program, from the Marsudirini Fioretti foundation also strongly supports programs made by the Kupang regency government but there is still a lack of training and guidance from the government for the integrative holistic early childhood education garden program that runs at Marsudirini Kindergarten as the implementation obstacle that needs to be handled by Widyastuti & Astuti (2016). This kind of training is very necessary, easily accepted and implemented, and it is useful for the target audience, kindergarten teachers need the knowledge and practical skills that are applicable and useful in the process of implementing every program in the school. The material provided can be well received and available, and there should be willingness of the school to maintain its sustainability and utilize it for the learning process through the garden.

Supervision of the integrative holistic early childhood education garden program at Marsudirini Fioretti Kindergarten in addition to mentors as well as managers had been done, visits were also conducted every 6 months by the Department of Education, the Department of Food and Agriculture, UNICEF, and YAO. The visit is to monitor all the implementation of the plantation program and other programs, Marsudirini Fioretti Kindergarten has received visits five times since mid-August 2019. The findings show that there is the the lack of guidance from the government at the Marsudirini Kindergarten. The Kindergarten also does not have a simple bookkeeping on the development of gardens according to SOP and technical guidance for the integrative holistic early childhood education garden program. The mentor only took the data on the implementation of the garden program to determine whether the harvest is successful or not, this garden needs improvement from the school to procure supporting documents and reciprocity from the government. Nathan, Sutherland Reilly, Delaney, Janssen & Wiggers (2016) purposed that monitoring performance and feedback during programs in running schools need to be given, written feedback reporting on implementation the plantation program needs to

be more clear in achieving the program's objectives.

CONCLUSION

Integrative holistic early childhood education at Marsudirini Fioretti for the planning and organizing stages is quite good but needs to be improved by coaching for local plants that can be planted on garden land and work schedules for school stakeholders and parents. In addition, the implementation is also quite good because it has been carried out by Marsudirini Fioretti Kindergarten despite the lack of guidance and training for gardening, supervision is also carried out both from school stakeholders and from the relevant Kupang District Government namely the Office of Education, the Department of Food and Agriculture, UNICEF, and the Foundation of Alfa Omega. The visit is also carried out once every 6 months.

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