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Webbed Model Integrated Learning on Problem Solving and Self-Regulation Skills for PAUD Student in Mojokerto

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ABSTRACT

Early Childhood Education or commonly called PAUD is one of the formal educational institutions that presented at the pre-school level or before students register in kindergarten. This education presents activities that provide more and intense touch and affection, generally because at this time children have entered the "Golden Age" which has need for direct guidance by adults with basic activities through playing for students' character development and learning motivation for children optimal growth. Webbed integrated learning model is one of the learning models developed at Pacet Mojokerto Kindergarten. This study shows how the influence of learning through conventional and integrated learning is associated with problem solving and self-regulation for kindergarten students at Pacet Mojokerto Kindergarten to 40 kindergarten students using quantitative methods with the assistance of SPSS type 22 Multi Variate analysis of variance (manova) to determine the effect of webbed model integrated learning on children's problem solving and self-regulation skills. From the research result, it was concluded that the Webbed Model Integrated Learning had a significant effect on increasing problem-solving and self-regulation abilities in early childhood education at the kindergarten level aged 5-6 years in the Pacet sub-district, Mojokerto.

Keywords: Integrated Learning, Webbed, Early Childhood Education

INTRODUCTION

Early Childhood Education or commonly called PAUD is one of the formal educational institutions that presented at the pre-school level or before students register in kindergarten. This education presents activities that provide more and intense touch and affection, generally because at this time children have entered the "Golden Age" which has need for direct guidance by adults with basic activities through playing for students' character development and learning motivation for children optimal growth.

PAUD itself has a crucial function and role in developing a child's early growth for preparing in more serious learning environment. In the National Education Standards Regulation no. 20 of 2003 Article 1 paragraph 14 has described how strategies and teaching patterns for children from birth until the age of 6 years that need an educational stimulus to help them in developing their physical and spiritual learning activities well and optimally before they reach higher educational level.

Before children goes to elementary school, the PAUD program is very effective in preparing children for more complex learning materials. The integrated curriculum is one of the curricula developed for PAUD with the main concept of uniting and combining. This is based on the fact that PAUD students still have comprehensive or holistic knowledge that they cannot accept the new knowledge separately, therefore integration becomes the main foundation of the PAUD curriculum for the children are able to understand the knowledge based on their age.

The self-regulation and problem solving in the majority of children in Kindergarten at Pacet District, Mojokerto Regency are still low. In line with the importance of this, one of the efforts that will be made to improve the self-regulation and problem solving in early childhood education, especially those in kindergarten group B is to use integrated learning through the webbed model.

The Webbed model is one of the models developed for PAUD which has the activity of combining several teaching materials into one structured learning theme like the shape of a spider web. This webbed model is recommended to be used at various levels of education with the hope of a learning approach will produces students in learning activities actively and voluntarily seek and explore their own knowledge holistically (Rosnawati., 2021) in which several fields of study will be linked in this model and the development process will begin with determining a central theme that related to other fields of study with a concept that is generally called the spider web model (Jubaidah St., 2021).

Problem solving is defined as a summary of the way of thinking focuses on changes in circumstances which occur at the beginning and at the end of a problem that the solution procedures are structured in an unsystematic way. Besides problem solving, there are other sources that make things problematic. This is explained in (Dostal, 2015) which states that a person's initial knowledge about the problem is

based on their condition. The activities that can be implement to achieve the outcome is with the available assistance. Meanwhile, to overcome this, it is not only by way of thinking but also requires motivational and emotional aspects. During problem solving, people faces many obstacles and fulfils the different possible solutions which he has to choose. This means that problem solving is a personal problem through the activities conduct by individuals during the problem solving process that lead to their personal goals (Utami, L. O., Utami, I. S., & Sarumpaet, 2017).

Therefore, an individual must identify the problem firstly, and look for possible solutions (Alkomah, 2021). It can be interpreted that problem solving can be described as a state characterized by the elimination or fading of difficulties, conflicts, unrest, feelings of uncertainty, or worries. Problem solving does not have to be based on the individual experiencing the problem and feeling it - other individuals or community that working together can contribute to the problem solving. In this case the individual does not have to experience difficulties or take any action and the problem can be solved as a result of a spontaneous change of circumstances or changes caused by others.

In learning activities, the modifications are needed in various situations and conditions, especially in early childhood education. This ability to self-regulate in learning is needed by every child in order to be able to direct himself to achieve the expected goals.

Self-regulated not only adjusts attitudes and behaviour between teachers, students and the surrounding environment or self-regulated themselves towards those concerned, but also requires motivation within them to achieve what is intended (Schun, 2010).

Self-regulated tries to adjust various behaviours from within a person related to their daily habits, motivations and influences as well as controlling mental and brain functions from thinking activities about someone or something. This self-regulated includes cognitive, metacognitive, behavioural, motivational and emotional/affective aspects of learning. Self-regulated has the aim of controlling actions. In this case, self-regulated means that the process by which students in an integrated manner direct their thoughts, feelings and actions towards the achievement of their goals (Panadero, 2017).

The definition of self-regulated is an active process that is able to build the students mindset to control their learning activities, motivation, behaviour and way of thinking (Panadero, 2017). Self-regulated is a process of thinking and acting skills, including mental monitoring and motivation generated from themselves, making it easier for them to achieve goals for they are more focused (Schun, 2010).

Teacher are one of the important components during the learning process, then the teacher must be able to make a learning process become more effective and interesting for students feel happy and motivated during teaching and learning

activities, have self-regulated and problem-solving abilities according to their age stage.

Teachers must be able to examine and understand the situation in learning process, then applying the appropriate methods to existing situation, especially based on students' characteristics and needs. This is necessary during teaching and learning process in achieving learning objectives.

Researchers found that smart students tend to have good self-regulation skills. When an individual is able to manage himself during the learning process, then his focus, thinking, emotions, and behaviour can be controlled properly to achieve a goal, then this is called self-regulation in learning (Dila, 2019).

Everything that will be passed down to students can be selected, sorted and combined as curriculum, then the curriculum must be active in operating the education run well indirectly. That is why the curriculum is always changing based on current issues. The children's development occurs naturally with cohesiveness, then they need to be directed to a coherent learning method that is able to improve and develop their cognitive, affective, psychomotor and spiritual aspects well.

The integrated learning process presents learning activities that demand cooperation, creativity, and solid collaboration between teachers and students, or students and their peers that resulting in a meaningful learning experience with learning activities which tend to be informal and have the final result in the form of a learning approach to children is slowly increases (Aulina, 2018).

This learning has the main characteristic where the problems that the teacher presents to their students are provided in the concept exploration and are given an inquiry approach for the students will collaborating with their friends in the planning, exploration, and idea-sharing activities. This learning indirectly directly connected with two or more concepts that have relevance to a subject family (intra) or the relevance of several subjects (inter).

This learning also has the belief that students who are directly involved in learning activities will grow and develop well (Lestari, 2020), resulting in a meaningful learning experience for students (Bahar Herwina. et al, 2017). This integrated learning is categorized as "natural" learning for children because the process of transferring knowledge from teachers to students occurs loosely with related topics from various subjects. Then, the meaningful learning activities is occurs through reading, counting and writing. It means the concept of various lessons are connected into one (Puspita, 2020).

Its comprehensive nature, integrated learning tends to be centred on both practical and theoretical problems and combines the school with the community environment, then the learning activities are well integrated and student behaviour is well directed (Puspita, 2020). This learning is created broadly rather than one subject learning, then it needs special attention in implementing it to students based on their interests, talents, and needs in learning by applying variation project

learning. Then, the students are directly learn and gain new knowledge in accordance with the teacher's direction.

It can be concluded that integrated learning is all learning that has the main focus of certain theme stages with efforts to understand the concepts of other themes, both from related science studies or non-related science studies.

Educational activities seek to link various scientific concepts that are differentiated into several fields of study with the hope of higher quality of learning for students in the areas of skills, attitudes, and a sense of humanity that results in meaningful learning (Fitra, 2020) with efforts from teachers in designing learning classes that deliver various fields of study that are adapted to the students' environmental conditions (Nurkolis & Muhdi, 2020).

The specification of webbed learning model in this research is through interesting and fun learning activities according to a pre-determined theme, then the students will be motivated in participating in learning. With the motivation to learn in students, the self-regulation will also develop well, including students' problem-solving abilities.

The reason for using webbed model of integrated learning is that the learning implemented can provide the direct experience to students in actively involved during teaching and learning process, as well to foster students' motivation in participating at the time of learning through various variations of activities according to the studied theme. The Webbed model that will be used for learning in this research is not only limited to its shape as used by PAUD institutions in general, but it is about the content of the webbed itself. The content of this research related to learning activities through webbed model will be designed to be more interesting and fun in motivate students to participate in learning process. when the students are motivated, the students' self-regulation will develop well, including the problem-solving ability.

RESEARCH METHODOLOGY

This study uses a quantitative method through SPSS type 22 Multi Variate analysis of variance (manova) to determine the effect of integrated learning with the webbed model on students' problem solving skills and self-regulation. (Creswell, 2014) describes that quantitative approach construes analysis of an idea by establishing narrow assumptions and use data gathering to support or controvert the assumptions. The subjects of this research were 40 early children aged 5 to 6 years at Pacet Mojokerto Kindergarten.

RESULT AND DISCUSSION

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The research conducted by (Bahar Herwina. et al, 2017) shows that al-Asma' Al-Husna-based thematic learning can provide opportunities for students to draw conclusions from various names of Allah that associated with certain themes, then they can develop all the phenomena they felt and are able to solve problems through different factors (in terms of various aspects). In addition, with an integrated curriculum, the learning process becomes relevant and contextual, then the students are able to participate actively in all dimensions, such as physical, social, emotional, and knowledge. The results of research conducted at TK Pacet Mojokerto are as follows:

Table 1. Descriptive Statistics

	MODEL	Mean	Std. Deviation	N
Problem solving	ONLINE_LEARNING	73,42	8,286	40
	KONVENSIONAL	65,43	6,377	40
	Total	69,43	8,377	80
Self-regulation	ONLINE_LEARNING	67,52	5,697	40
	KONVENSIONAL	67,57	5,728	40
	Total	67,55	5,677	80

Based on the table above, there is a motivation to get an average online learning value of 73.42 for 40 students and a conventional average value of 65.43. On self-regulation obtained an average of 67.52 through Webbed integrated learning model and 67.57 on the conventional learning model.

Table 2. Box's Test of Equality of Covariance Matrices^a

Box's M	3,682
F	1,193
df1	3
df2	1095120,000
Sig.	,311

From the Multivariate test above, it will be determined whether the integrated learning of the Webbed model affects problem solving skills and self-regulation simultaneously or not.

Table 3. Levene's Test of Equality of Error Variances

	F	df1	df2	Sig.
Problem Solving	4,520	1	78	,037
Self-regulation	,000	1	78	,994

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + MODEL

The findings of (Filgona J, 2020) which discuss the benefits of involving students with various abilities in learning and the benefits of learning initiated by students according to the theme, one of which is to increase students' motivation in participating during teaching and learning process. The results of (Puspita, 2020) show that the integration of Thematic learning with the webbed curriculum model has a significant effect on increasing students' reading comprehension skills.

Several studies have shown that webbed model learning through various activities can affect in early childhood development. By using the webbed learning model in this research, it is hoped that it can improve the problem solving and self-regulation skills in early childhood education. Since a child who has high self-regulation, good motivation, then the child also tends to have good problem solving skills. According to Thongnoum, students will subconsciously find a sense of not being easily discouraged when they have good study strategy. Then, it will form the strong self-regulation (Panadero, 2017). Indeed, with some supportive learning materials, one of them is mathematics (Husna & Veronica, 2019). From this, there is a need for in-depth research related to motivational, self-regulated, and problem-solving abilities in early childhood education through integrated learning using the webbed model.

From the theory above, it can be concluded that the webbed model in integrated learning has the concept of combining several development fields that are interrelated in it and is considered suitable to be applied in classroom learning.

From the results of observations made at kindergarten institutions in Pacet sub-district, Mojokerto, the majority of teachers are still use conventional learning, which tends to practice activities using students' activity sheets. Besides that, the teaching and learning process is also more teacher-centred. Even the students' activity sheets used are often not in accordance with the studied theme, make the students bored and not interested in learning since it is less interesting.

CONCLUSION

From the research result, it was concluded that the Webbed Model Integrated Learning had a significant effect on increasing problem-solving and self-regulation abilities in early childhood education at the kindergarten level aged 5-6 years in the

Pacet sub-district, Mojokerto. Also, from the results of observations made at kindergarten institutions in Pacet sub-district, Mojokerto, the majority of teachers are still use conventional learning, which tends to practice activities using students' activity sheets. Besides that, the teaching and learning process is also more teacher-centred. Even the students' activity sheets used are often not in accordance with the studied theme, make the students bored and not interested in learning since it is less interesting.

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