

**DEVELOPMENT OF PROJECT BASED LEARNING METHOD USING
RECYCLED WASTE MEDIA IN GROUP B OF INTEGRATED ISLAMIC
KINDERGARTEN WIHDATUL UMMAH MAKASSAR**

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ABSTRACT

Methods of project-based learning is a unified way or a distinctive pattern in the use of various basic principles of education as well as a variety of models, techniques and resources related to enable the learning process on learners by emphasizing the element of giving task or activity in order to generate a product that can assist learners to find their learning experiences as well as to hone their knowledge, attitudes and skills. The problem of this method is whether the development of project-based learning model can improve the ability of the child to know the concept of patterns using recycled waste media. The purpose of this study is to develop project-based learning model which can improve the ability of the child to know the concept of patterns using recycled waste media. The subject of this research is the development of project-based learning method in a group of children in integrated Islamic kindergarten Wihdatul Ummah Makassar. The data analysis technique is descriptive qualitative. The results showed the successful development of project-based learning method from all the meeting of all the observation of teachers and students showed increased ability to recognize the concept of patterns using recycled waste. From these results it is suggested to teachers to continue to hone their quality of teaching so that they can produce the best learning process and the best product.

Keywords: *Method of Learning, Media Waste Recycling, early childhood*

INTRODUCTION

Teachers are one the most trusted person by children so that in teaching, teachers are expected to use the media that is obvious and easily understood by children when teaching. Teachers should be creative in developing their imagination and creativity. Learning in kindergarten have a variety of themes that will be taught to children, stated in WAP (Weekly Activity Plan) and DAP (Daily Activity Plan). In the process of learning in kindergarten still many educators who use conventional method monotonically in learning activities in the classroom, so that the learning environment seemed stiff and dominated by the teacher. In the delivery of learning materials teachers usually use a type that is not understood by children where children just sit, look and listen, and

imitate what the teacher present and there are only few opportunities for children to be creative. Thus the learning process becomes less conducive so that children become passive. Yeni (2010: 52), pointed out that kindergarten is a form of an early childhood education, which is one form of formal education which provides programs to basic education. The program and learning activities of Kindergarten objectives is to help lay the foundation for development of attitude, knowledge, skills, and creativity required by students to adjust to the environment for further growth and development. Growth and development that was achieved is an actualization of the optimal potential of child development in all aspects and stage of its development. The level of achieved development illustrates growth and development expected of children to reach

at a certain time span. The level of achievement of the child's development includes aspects of the understanding of religious values and moral, physical-motoric, cognitive, language, and social-emotional. All aspects of these developments is essential to be developed and is expected to grow in a balanced way between one aspect and the other. This shows the importance of efforts to develop the potential of children, one of them through the development of teaching methods that will determine the success of a child's later.

Learning methods can be interpreted as a unified way or a distinctive pattern in utilizing various basic principles of education as well as a variety of models, technique and other related resources so there's a process of learning to the learners themselves. Nana Sudjana (2005: 76) describes that learning method is a way that teachers do to make contact with students during the course. M. Sobri Sutikno (2009: 88) also outlines that the teaching methods are ways of presenting the subject matter by educators so there's a process of learning on students in an effort to achieve the goal. Also described by Agus Suprijono (2010: 46) The learning method is a pattern used as a guide in planning lessons in class or tutorial.

Project-based learning method always starts with finding what is the real underlying problems, which will be the basis to provide project assignment for students (activity). Of course, the handout is to be adapted to the thematic of the current month. Furthermore, with the help of the teachers, learners will design the activities to be carried out on their respective projects. The greater the involvement and ideas of the students (group of students) used in the project, their curiosity on that project will be greater. Furthermore, teachers and learners determine the time limit to complete the task (activity) of their project.

Project-based learning method emphasizes the element of giving tasks / activities in learning. Learners carry out all activities ranging from the preparation of their project and report it while teachers monitor the progress and completion of the project of learners and provide the necessary guidance. In the next phase, after the students reported the results of projects they do, teachers assess the achievement the learners gain in terms of both knowledge related to the concepts that are relevant to the topic, to skills and attitudes that go with it. Finally, the teacher then provides the opportunity for students to reflect on all the activities in project-based learning that they have done so in other learning opportunities and project completion activities they can improve.

The word media is derived from the Latin meaning *medius* which means the middle, midst, center, interval. *media*, is the plural form of the word "medium", which etymologically means the intermediary or introduction. Dictionary of Science (in Dagon, 2006: 634). According to Arsyad (2002: 4) media are all forms of intermediaries used by humans to communicate or spread ideas, ideas or opinions, so that ideas or opinions expressed can be understood by the intended recipient.

Waste can be defined as objects that can not be used, did not want to use or not needed anymore. Waste can be things that are not used anymore such as paper, sawdust, plastic. These objects are usually composed of several sizes and colors. For some people, these things will be reused or in other words recycled, to create a pattern of a particular object that is useful both as an accessories or into other useful objects. To process it the tools and materials used is usually, hvs paper, drawing paper, glue, paper glue, scissors and pencils, as well as using natural materials, and paper materials. By recognizing the nature of the material or

device used they are expected to train their creative expression in filling pattern of images and combining colors.

The use of waste media will also provide additional understanding the importance of protecting the environment. Activity in using recyclable waste is done in order to develop children's knowledge about the environment, especially the awareness to protect the earth from damage by utilizing pencil sharpener waste. In addition, children can do activities and explore the media and becomes a more varied work patterns, so it does not make them bored. The use of the environment as a learning resource will encourage the appreciation of the values or aspects of life that exist in the environment. Awareness of how important the environment in life can be implanted in children early on, so that when they become an adult these consciousness is maintained.

Utilization of recycled waste is an activity that involves a variety of activities such as cutting, gluing, sticking to the varied pattern, paint and so forth. This activity will synergize with the improvement of the children cognitive ability in recognizing various patterns of creative works that has artistic merit. Getting to know the activities of processing the recycled waste in terms of the funds are also quite cheap because it uses the pencil sharpener waste. Not only it was beneficial to provide awareness and concern for the environment, the creativity of the children will be increased by exploring a variety of media that exist around the child environment into a work / creation.

RESEARCH METHODS

Type and Research Subjects

This study is a qualitative research. Referring to the article of Moleong (2012: 6) Qualitative research is research that aims to understand the

phenomenon of what is experienced by the subjects of the study such behavior, perception, motivation, action, etc., Holistically, and descriptively in the form of words and language, in a naturally specific context by using various natural methods.

The research was carried on in integrated islamic kindergarten Wihdatul Ummah Makassar Abdullah Dg Sirua St. No. 52 J Makassar.

Research focus

Learning activities is focused on the development of project-based learning method. Aspects that will be observed in the development of this project-based teaching methods is the children's ability to recognize the concept pattern of using waste recycled media including bottle caps, pencil sharpener, paper plates and so forth.

The study design

1. Planning

In this planning stage the teacher determines the number of samples that is 10 of 15 children and formulate grille observation instrument which provides observatory guidance for the teacher as well as the child. Subsequently made the observation assessment instrument of the teacher and the observation of the child based on specified development variables.

2. Implementation

Implementation of developed actions is the implementation or development of a draft, which carry out a development actions in the classroom. At this stage the teacher should remember and abide the plans that have been agreed and formulated by the teacher and composer. At this stage the teacher carry out actions according to the Daily Lesson Plan and Procedure that has already been agreed. Teachers act as a practitioner and the composer act as an observer of the learning process. The implementation actions are the following

- a. Teachers prepare DLPP based on the current thematic month.
- b. Preparing Equipment and recyclable waste materials such as pencil sharpener waste, bottle caps, leftover paper plates, sawdust, pipette / straw etc., as well as paper with an image of various creative patterns. Giving environmental footing.
- c. insert recycled waste material into the container in order to maintain the neatness and cleanliness
- d. The teacher divides the children into several groups
- e. Teachers provide a starting point in the form of rules and explanation of playing and learning with project-based learning method
- f. Child utilizing recycled waste as a material to make the projects that have been set into a pattern that have been prepared as they observed and supervised by teachers
- g. Creating on the patterns based on the skills and the imagination of the children
- h. Understanding the concept of the pattern after the pattern become a work of creative art
- i. Motivating and appreciate the children's work

3. Observation

The act of observation is a technique or method of implementation of learning by way to make observations on project activities recognizing pattern through the recycled waste medium. And what the researcher carried out during the observation is to observe the development of project-based learning method in recognizing the concept of patterns using recycled waste media. Observation is split in two; The first observation is focused on the activities of the teacher, the second observation which focused on children in working on the project activities. Development Observations giving a variety of project with a different

kind of pattern and then the child identified what pattern that was generated after playing with recycled waste. Results of the assessment will be *checklisted* on each item on the instruments sheets used in the assessment.

4. Documentation

Any activity that happened required documentation as physical evidence. This is done to obtain data directly from the place of development and learning such as activity reports.

5. Reflection

Reflection activities performed directly after the lesson is completed by discussing the results of the development of learning that has taken place.

Data Analysis Techniques

Data Analysis Techniques used in this research is qualitative descriptive analysis was developed by Miles and Huberman (Sugiyono, 2009: 337) suggests that activity in the qualitative data analysis performed interactively and continuesly through to completion. The activities in the data analysis consists of reducing the data, presenting data and draw conclusions as follows:

- a. Reducing the data is to simplify all the data that have been obtained from the initial data collection to the preparation of the report of the learning development
- b. Presenting the data is the activity of organizing and arranging result of the reduction by arranging the narrative set of information that has been obtained from the reduction to provide the possibility of drawing conclusions
- c. Draw conclusions and data verification is to provide conclusions on the results of interpretation and evaluation include achieving the meaning of the data and provide explanations, further verification activities that test the correctness, robustness and suitability of meanings that emerge from the data

Standards Achievement

Standards of achievement in learning development include indicators of teacher's teaching and learning outcomes of children during the learning process. Indicators of success that the author desire is $\geq 80\%$ of the number of students who has been observed their performance which has successfully met the level of development and competency that will come.

Once all the data obtained before and after the project activities in recognizing the concept of patterns using recycled waste media were then analyzed using descriptive assessment results. Project-based learning process by collecting data based on the grade that has been achieved by the students based on further observations in the analysis with a description of the assessment results. With the components of the assessment:

No.	symbol	Category Rating
1	DAE	Developing According to Expectation
2	QD	Quite Developing
3	NDY	Not Developing Yet

RESULTS

In this case the researchers wanted to give a description of Development Project-based learning Method about what and how to do so can provide an increase in the ability of the child to know the concept of pattern and how children utilizing the learning environment as an enjoyable experience.

Learning Development Planning

Before the author conducting the development of learning from the first meeting to the last, first author is discuss

with the teacher in charge of the group B which the author made the object of research, to prepare daily lesson plan (DLP). The steps are as follows:

1. Creating a Lesson Plan (LP)
Teachers and observer (in this case the author) developed LP that will be implemented based on a given theme that will be used as a reference implementation of the learning process. Of course it contains the initial activities, core and end. In this DLP will be visible development project-based learning method in recognizing the concept of patterns using recycled waste materials.
2. Reforming / setting up the room and preparing materials for the learning development

Before starting the learning process teacher with the help of the observer arrange the classroom in order to create an atmosphere of fun and ready to support the development of learning that will last

3. Setting up the instrument or observation sheet

Existing instruments based on initial picture contains variables that will be developed in the implementation of development project-based learning in a familiar pattern by using the concept of waste recycled media.

Implementation of Learning Development

1. Class activity

The first meeting was carried out on Thursday September 15, 2016. The theme is animals with a sub theme is "fish". In the classroom there are two teachers paired in the learning process. Researcher sitting in the corner of the classroom where the observation range can see everything so the whole process of implementation of the development of learning activities observed well. This activity consists of:

- a. The initial activity
Teachers open the activity with initial greeting *Assalamu Alaikum warahmatullahi wabarakaatuh*. Followed

by habituation greet by greeting the children one by one. Say hello and give a spirit pat and motivation through nasyid / song "Beloved Fish".

b. The core activity

The teacher asks the children to form a circle to give it a foothold in the core activities. Development of the project-based method characterized by footing that was given

- 1) **Environmental footing**, recalled the children with the task of finding a used paper plates, leftover colored paper and bottle caps
- 2) **A starting point**, aims to prepare students in the alpha state or condition ready to learn, followed by exposure to the development of project-based learning method in recognizing the concept of patterns using recycled waste media. Teacher mentioned the projects that will be undertaken by mentioning the name of the project activities. "Ornamental fish and my aquarium" then the children mention again the name of the project as evidence that they understand about the project the children will be assigned.
- 3) **Stepping before the play**, the teacher mentions rules of play and learn, introducing the material to be used (they are waste paper plates, sawdust, closing bottles, waste paper, etc.) and measures of project of ornamental fish and aquarium (children are still in listening condition)
- 4) **Footing when playing**, kids divided themselves according to the group of teachers has been mentioned according to the rules. Read prayers before work "*Bismillah*". Then the students takes the material as directed by the teacher at the beginning, then sat in groups started project activities "ornamental fish and my aquarium". Group 1 makes the project of ornamental fish and group 2 made

an aquarium project. This activity is carried out in stages, some children coloring paper plates waste that has been formed into a fish shape, and then they cut out on patterns, some decorate the fish tail. Occasionally teachers see the condition of children who have difficulty to get guidance and assistance. When completed, the teacher asks each child to find a partner which one is coloring the body and which one is coloring the tail and then they work together applying glue to put it all together. Furthermore, the second group working on the aquarium project, some children coloring the background of the aquarium from waste paper plates with *crayons*, some make a fish body from the bottle cap and then attach the eyes and tail. After that they all gather to put the fish in their mini aquarium with a strong glue and then covered it with a pattern of tank cover that has been made. Collaboration and cooperation between the children with other children is essential to the project activities so that the completion of the project can be resulted in producing fish and miniature aquarium pattern.

At this point the child has a creative process in which children begin to develop their learning experiences and imagination.

- 5) **Footing After the play**, at the end of the lesson the teacher did a *review*, asking questions about the implementation and project activities "ornamental fish and my aquarium". What fun is fun, what is an obstacle in the working process and conclude the end of projects that produce miniature ornamental fish and aquarium. Then the children display their work. All activities in the classroom observed and documented by researchers.
- c. The rest

- 1) Wash hands and pray before and after meals
 - 2) Teachers guide the children how to wash hands properly and regularly they should not be pushing and shoving each other, they have to queue to wash their hands
 - 3) The teacher asks the children to play outside the classroom under the guidance and supervision of one teacher
- d. The end activity
- 1) Reiterate the project activities that they have done, teacher asked about their project activities.
 - 2) Being grateful and motivate learners to take pride in his work by saying Alhamdulillah
 - 3) Pray before going home: Teachers guide the children together to perform a way to pray solemnly so that the activities that have been done is well received and pray before going home.

2. Observation activities

a. Observations on teachers

At the first meeting the observation of the teachers who presented with observation sheet for teachers in the appendix of this report with the variable to be observed as follows:

1. Introduce and mentioned the project activities will be done in recognizing the concept of patterns of fish and fish habitat miniature.
2. Ask the children to pay attention and mention the recycled waste material in this case paper plates and sawdust used in the project activity in recognizing the concept of patterns of fish and fish habitat miniature
3. Explaining how to do more than one project activity in recognizing the concept of patterns of fish and fish habitat miniature
4. Guiding children in implementing and working on the project activities in recognizing the concept of patterns of

fish, and a fish habitat miniature by emphasizing the work group / team

Results obtained on teacher observation **in point 1) the value is enough**, the teacher simply shows learners pattern of fish and miniature aquarium that has already done without mentioning the name of the project. **At point 2 value is less**, Teacher is not requesting or directing all Children to pay attention and mention the name of the waste recycled material, sawdust and bottle caps used on the project activities in recognizing the pattern concept of fish and a miniature aquarium so there are still children who do not focus and do not pay attention to the direction of the teacher, the teacher just focus on projects they had on the sheets. **At point 3 the value is less**, the teacher did not explain in a coherent way on how to working on the projects to the children. **In point 4 value enough**, Teacher has not given the correct guidance in implementing and working on the project activities in recognizing the concept of miniature patterns of fish and its place of life

b. Observations on Children

At the first meeting on the observation on the children presented with observation sheet for the child in the appendix of this report with the variable to be observed as follows:

1. Mentions and shows the project activities in recognizing the concept of patterns of fish, flowers and houses.
2. Identify and mention the waste materials used on the project recognize the concept of activity in fish, flowers and houses.
3. Working and completing project activities within the familiar concept of patterns of fish, flowers and houses using recycled waste materials to emphasize the element of group or team work

3. Reflection

From the observations obtained at the first meeting of the students who received grades Developing According to Expectations (DAE) approximately 30% of the target mastery learning or is lacking, this is due to the teacher that are not well prepared in introducing the project activities that will take place, materials or media like waste paper plates and sawdust that are used rarely found by children even though in their daily life around them this medium is available. Therefore these shortcomings in introducing recycled waste material and how project activities in the first meeting is the subject of an evaluation to be fixed at the next meeting.

DISCUSSION

Integrated learning in integrated islamic kindergarten Wihdatul Ummah Makassar provides great opportunities to their educators to continually develop all aspects of values, attitudes, knowledge and skills. Prior to the observation of the development of project-based learning method in recognizing the concept of patterns using recycled waste media learning experience of students has not increased. There is the impression of monotony in the learning process. To get the learning experience more fun and creative, educators in this case the researchers also are educators trying to develop project-based learning method in recognizing the concept of patterns using recycled waste media in group B of integrated islamic kindergarten Wihdatul Ummah. Giving a projects that vary, more than 1 pattern (in this case the child is directed to recognize the concept patterns of fish, flowers, home resulted in the diverse as a result of creativity) makes students less bored, monotony, and challenging for the children learning experiences (try to finish 1 activities to switch to other activities that so interesting to play and learn for the children). Along with the development of project-based

learning methods, knowledge of children in recognizing the concept of pattern develops. This is shown by the results graph that continues to increase in the child's ability to move up. Which if accumulated throughout the indicators of achievement of mastery learning Developing According to Expectations (DAE) in percentage; Meeting I (accumulated percentage of each indicator divided by the total percentage) 90 divided by 300 equals 30%, the second meeting 150 divided by 300 equals 50%, the third meeting 240 divided by 300 equals 80% and the fourth meeting 280 divided by 300 is equal to 93.3% ,

From the review above, this exposure adds confidence to us as researchers that the development of methods for project-based learning will improve the achievement of the goals of competence and targets learning mastery and play early childhood especially its ability to recognize patterns using media recycled waste in Intergrated islamic kindergarten wihdatul Ummah Makassar. Development of project-based learning method can spur the spirit and desire of teachers to be more creative, innovative and foster the spirit of learning technology as a source of learning through on the internet and other media. For children raises a sense of comfort and encouragement in the hope of learning something new every day that raises curiosity of the children thus increasing the motivation to always come to school.

CONCLUSION

From the research development of project-based learning method to recognize the concept of a pattern using recycled waste material is done in group B of integrated islamic kindergarten wihdatul Ummah can be argued that the development of methods for project-based learning in recognizing the concept of pattern using recycled waste media gave a

very good contribution in helping to achieve learning mastery goals, make children more creative, more intelligent, more happy in school and honed his skills (*skills*) as well as further improve the attitude of cooperating, patient and proud with his work and has a caring attitude to the environment by utilizing waste that can be recycled into a play and learn media. This increase also automatically increase the professional competence of a teacher or educator with the creativity and innovation of learning more so that we will see good quality and process quality (*the best process*) and the product (*the best product*) of an early childhood learning. This of course would be a high value in the community to obtain great trust so that people deem it was necessary learning in kindergarten.

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REFERENCE

Arsyad. (2002). *Media Pembelajaran*. Jakarta: Rajawali Press

Barrows, H.S. 1996. "Problem-based learning in medicine and beyond: A brief overview" Dalam *Bringing problem-based learning to higher education: Theory and Practice*. San Francisco: Jossey-Bass.

Dagun, M. Save. (2006). *Kamus Besar Ilmu Pengetahuan/*, Jakarta: Lembaga Pengkajian Kebudayaan Nusantara Departemen Pendidikan Nasional, Direktorat Jenderal Pendidikan Tinggi, Direktorat Pembinaan Pendidikan Tenaga

Kependidikan dan Ketenagaan Perguruan Tinggi.

- Depdiknas. (2005). *Kamus Besar Bahasa Indonesia*. Jakarta: Balai Pustaka.
- Ginting, Abdurrahman. (2008) *Esensi Praktis Belajar dan Pembelajaran*. Bandung: Humaniora.
- Igak Wardhani, dkk. (2007). *Penelitian Tindakan Kelas*. Jakarta: Universitas
- Jamaris, Martini (2006). *Perkembangan dan Pengembangan Anak Usia Taman Kanak-kanak*. Jakarta: PT. Gramedia Widiasarana Indonesia
- Kementerian Pendidikan dan Kebudayaan. (2015). *Permen 147*. Jakarta: Direktorat PAUD
- Moeslichatoen (2004). *Metode Pengajaran di Taman Kanak-kanak*. Jakarta: Rineka Cipta.
- Mukhlis, yahya Muhammad dkk. (2012). *Belajar dan Pembelajaran*. Bandung: Alfabeta. Depdiknas
- Pada Anak Usia Taman Kanak Kanak. Jakarta: Departemen Pendidikan Nasional, Direktorat Jendral Pendidikan Tinggi, Direktorat Pembinaan Pendidikan Tenaga Kependidikan dan Ketenagaan Perguruan Tinggi.
- Rahmawati, Yeni dan Kurniati, Euis. 2010. *Strategi Pengembangan Kreativitas Pada Anak Usia Taman Kanak-Kanak*. Jakarta: Kencana.
- Ruseffendi, E.T. (1991). *Pengantar kepada membantu Guru Mengembangkan Kompetensinya dalam Pengajaran Matematika untuk Meningkatkan CBSA (Cetakan Kedua)*. Bandung:Tarsito.
- Sumanto. (2005). *Pengembangan Kreativitas Senirupa Anak Tk*. Jakarta:



Suprijono, Agus. (2010). Cooperative Learning. Yogyakarta: Pustaka Pelajar

Susanto, Ahmad. (2011). Perkembangan Anak Usia Dini. Jakarta: Kencana Prenada Media Group. Terbuka.

Sutikno, M Sobri. 2009. Belajar dan Pembelajaran. Bandung: Prospect.

Wahyudi, CHA dan Dwi Retno Damayanti. (2005). Program Pendidikan Anak Usia Dini di Prasekolah Islam. Jakarta: Gramedia Widiasarana Indonesia.