

**Management of Early Children's Learning With Steam Loading With Loose Parts at RA Ummatan Wahidah Curup**

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**Abstract:** Early Childhood Learning Management with STEAM Content Made from Loose Parts at RA Ummatan Wahidah: Implementation of Early Childhood Education faces many problems in the learning system. Just as the lack of creativity and progress of educators, as well as educational game devices that are less supportive, so the learning system does not encourage the ability of students to innovate and think higher. The research objectives are learning management, and implementation of STEAM content made from Loose Parts. The research used descriptive qualitative method. Research data sources include primary and secondary sources. The research instrument, data collection using observation, interview, and documentation techniques. Then the data is analyzed through the stages of data collection, data reduction, data display, and conclusions. The results of this study that the management of STEAM content learning with Loose Parts: planning the form of learning for RPPS, RPPM, RPPH, preparing Loose Parts. Organizing teaching tasks, teachers allocate learning materials. Implementation starts from the introduction, core activities, closing activities. Assessment in the form of performance, observation, conversation. Implementation of early childhood learning with STEAM content made from Loose Parts: applying all stages of play by paying attention to playing strategies, cleaning, storing things, and strategies to develop early childhood creativity. The activity plan is adapted to the needs of the child and takes into account the principles of PAUD learning.

**Keywords:** Learning Management, Early Childhood, STEAM Made of Loose Parts

## 1. Introduction

The ability to plan a program as one of the important things that must be possessed by the era of the Industrial Revolution 4.0 must be developed from the start, on the grounds that investigating imaginative thinking at the beginning of the school period is very important. A central part of the human instinct to innovate and all early childhood can understand and cultivate their creativity (Nehe 2021). There are several important things that need to be considered in the educational environment in facing the Industrial Revolution 4.0, including the presence of an innovative technology literacy culture, especially the ability to see how machines and innovation applications work (*Coding, Artificial Intelligence, and Engineering Principles*), human literacy culture, namely the growth of human beings who are humanist, communicative and able to design (Nurjanah 2020).

Early Childhood is a newborn to children who have not yet reached the age of 6 years (Peraturan Presiden RI No. 60 2013). Rosmala said that early childhood experienced brilliant times during kindergarten, namely ages 4-6 years. At this time the child will experience tremendous improvement both mentally and physically (Anna 2010). The child's brain will progress very quickly. The encouragement that young people get today will be very helpful for endurance in the future (Rosmala 2005)

In this brilliant era, the importance of education for early childhood is to develop the potential they currently have (Warlizasusi and Ifnaldi 2019). The learning system must be able to equip students with basic abilities that are adapted to the current situation of children and the needs of special opportunities for students, so that the learning system must provide benefits for children and learning objectives can be achieved actively and proficiently (Sumarto, Harahap, and Kasman 2019). Educators can take advantage of different learning settings by connecting learning materials with regular daily life, so that learning can provide real experiences to children so that they can investigate and combine information that has been obtained and new information provided by educators later at that time, handled by children usually create intellectual constructions according to their emotions and psychomotor (Artobatama and Irman 2018).

The implementation of Early Childhood Education (PAUD) faces many problems in the learning system. As well as the absence of creativity and progress of educators, as well as educational game devices that are less supportive, so the learning system does not encourage the ability of students to innovate and think

higher (Sofia 2011). Given this problem, early childhood education requires learning progress to turn students on to think fundamentally, imaginatively and have a good time for children. One of the effective learning strategies that can be used to rebuild children's learning ideas is the STEAM content (*Science, Technology, Engineering, Art, and Mathematics*) made from *Loose Parts*. So that early childhood education can improve the quality of education, the right education plan must be used as a guide during the learning process (Dini 2020).

So what is the relationship between the principle of learning with *Loos Parts* and STEAM. STEAM stands for *Science, Technology, Engineering, Art, Mathematics* is one approach that uses these 5 (five) sciences. The end result is expected from the application of this method is that students can take risks involved in experiential learning and can work through a creative process that based on children's ideas, interests and needs (Siantajani 2020a). While *Loose Parts* itself is a medium that we can use that can support the principles of early childhood learning itself and the character of *Loose Parts* itself, including no targets, no expectations, and no right or wrong (Siantajani 2020a). STEAM learning made from *Loose Parts* is a method that uses teaching materials derived from used or natural materials that are easily moved and manipulated and how they are used is determined by the child.

Raudhatul Athfal (RA) Ummatan Wahidah is a private educational institution in Talang Rimbo Baru Village, Curup Tengah District, Rejang Lebong Regency, Bengkulu Province, which was established on July 15, 1995, which strives to improve the quality of learning with STEAM content made from *Loose Parts*. Based on the results of interviews and initial observations conducted by researchers with the head of RA Ummatan Wahidah Curup, Mrs. Purgiyanti said that learning STEAM content made from *Loose Parts* was only implemented in the 2021/2022 school year. Because it is relatively new, the process of change is very clearly experienced by educators who have to adapt and learn more about STEAM learning made from *Loose Parts*, the previous method, namely learning not centered on children but on educators (Results of Interviews and Observations with Mrs. Purgianti as head of RA Ummatan Wahidah on Wednesday, October 21, 2021).

Even though they have conducted training on STEAM learning made from *Loose Parts* in 2020, educators still do not fully understand STEAM content learning made from *Loose Parts* so they think that they are not optimal in implementing this method in learning. The inadequacy of educators regarding the

use and utilization of STEAM content made from *Loose Parts* is one of the obstacles in education that must keep up with the times. This, in turn, hinders early childhood in various inventiveness and competencies that should be directed at using STEAM content made from *Loose Parts*.

From several findings, learning management is considered important and interesting to study. The research was carried out at RA Ummatan Wahidah Curup, because at the time the researchers were going to carry out research in Rejang Lebong district, which had used STEAM learning made from *Loose Parts*, it was only at RA Ummatan Wahidah Curup, while the other levels of the Early Childhood Education unit in Rejang Lebong were new and is conducting trainings on this learning. Therefore, researchers are interested in conducting research, entitled: "Early Childhood Learning Management with STEAM Content Made of *Loose Parts* in Raudhatul Athfal Ummahan Wahidah Curup"

## **2. Methods**

This study uses descriptive qualitative methods (Sugiyono 2013) to describe the management of early childhood learning, the implementation of STEAM content learning using *Loose Parts* at RA Ummatan Wahidah. The research will be carried out on January 7, 2022-July 07 2022. The next research instrument is used as a reference to make interview and observation guidelines (Sukardi 2010). The sample size in this study is based on the depth of the description (Tarjo 2019). The respondents in this study were principals, educators and parents/guardians of students. The data analysis technique is a series of activities after returning from the field, in this step the analysis of existing data from sources, namely interviews, observations that have been recorded and collected by researchers (Lexy J 2019), in addition to using the interview method, also the observation method or observation is to gain an understanding through the process of a problem (Kunto 2006). Various sources of data in articles including journals, results reports research, scientific magazines, newspapers, books relevant, seminar results, articles unpublished scientific papers, sources, bibliography, video graphics, and so on. Next is the validity of the data (Putra 2012) including persistence in observation, triangulation, adequacy of references.

## **3. Result and Discussions**

### **a. Management of Early Childhood Learning with STEAM Content made**

## **from *Loose Parts* at RA Ummatan Wahidah**

### **1) *Planning of Management of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah***

Learning planning is something significant for starting learning practices and influencing the course of educational attainment (Fakhrudin 2019). The method of preparing educational plans is to master the Standards for Child Growth Achievement Levels (STPPA) as a result of improvement, master basic competencies as educational outcomes, and determine educational modules as content to enrich children's experiences. Regarding planning for early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah on Wednesday, February 02, 2022):

*Early childhood learning planning with STEAM content made from Loose Parts began to appear in the teacher's nervousness about the child's perspective, for example, the lack of energy in investigating, imagining, and getting tired quickly in investigating examples. Departing from this, a leading group of Educators examined how to introduce students to STEAM content produced using Freelancing. Therefore, there was a plan to use Loose Parts media to introduce children to what Science, Technology, Engineering, Art and Mathematics are fun and exciting, children are also given time to play, explore, make what they want, so learning. Feels good for kids.*

The planned learning program must be made in stages, so that the existing program will run according to its stages, both daily, weekly, and semi-annually which are the guidelines in learning. This can be explained as follows:

- a) Semester Learning Implementation Plan (RPPS), containing a list of themes and sub-themes in one semester, as well as the basic competencies selected for that theme, including time allocation for each theme by adjusting the effective day of the flexible educational calendar;
- b) Weekly Learning Implementation Plan (RPPM), is an activity plan prepared for one week of learning. Learning content/materials are developed from KD and linked to the chosen theme/sub-theme;

- c) The Daily Learning Implementation Plan (RPPH), in which several activities are selected in the RPPM, adjusted to the learning approach used by the institution, the daily activities contain the opening, core and closing lessons.

**The Daily Learning Plan (RPPH)**  
**RA Ummatan Wahidah**

<b>Semester/ Month/ Week</b>	<b>: I/ July/I</b>
<b>Grade/ Age</b>	<b>: B6/ 5-6 Years</b>
<b>Theme/ Sub-theme/ Sub-theme</b>	<b>: Self/I/self identity, body parts, body characteristics, likes</b>
<b>KD : NAM : 3.1-6, 1.1-1, 3.1-6, FM 1.4-5, 1.3-7, 1.3-4, KOG 3.5-5, 4.6-6, 17.5-18, 6.5-7, 4.6-10, 4.6-16, BHS 4.10-2,4.10-4, SOSEM 2,8-13, 4.14-32, 2.5-1, SN 4.15, 3.15-4,4,15-4</b>	

**MATERIALS**

- Self-identity (Dhuha prayer in congregation, Concentration exercise Singing a song, I created Allah SWT Knowing the letter "aku", Imitating kahinar Pointing and telling the work)
- Members of the body (Dhuha prayer in congregation, Singing the song "Head Shoulders Knees Feet", Body parts, pointing and telling the work)
- Body rings (Dhuha prayer in congregation, Concentration exercise My body is created by Allah, body characteristics, skin colors, hair, body shape. Appreciate the work in various forms)
- Favorite food (Dhuha prayer in congregation Konsemast exercise Food created by Allah Favorite food Pointing and telling the work)
- Favorite color (Dhuha prayer in congregation, Gymnastics together. Prayer for cooking at home. Picture of clothes. Dare to appear in front of friends and educators. Play and sing colorful songs in English)
- Favorite games (Dhuha prayer in congregation, marching, praying in the name of prayer, saying the right words to Allah's creation, favorite play. Pointing and telling the work)

**MATERIAL TOOLS**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
- Legos/blocks	- Playdough	- Image	- Beads	- Dress	- Playdough
- bottle cap	- Turn/lego	- Classmate	- Dacron/cotton	- pictures	- Beams/legs
- buttons	- Pictures of body parts		- Patchwork	- Pencil	- Beads
- rocks	- Buttons		- Rocks	- hvs paper	- bottle cap
- letter card	- Rocks		- Buttons	- Beads	- buttons
- pencil	- bottle cap		- Bottle cap	- Rocks	- Grains
- Books	- watercolor		- Legos/block	- Nuts	- Rocks
- Clams	- hvs papers		- Hvs paper	- Shirt	- Foliage
- Grains	- Markers		- Pencil	- buttons	- hvs paper
			- Clams		- pipette
					- Used

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- Clams

- Grains

bottles

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1. Gross Motor Activities, 07.30-8.00

- Duha Prayer
  - Motion and song
  - Pat a pious child
  - Enggram gymnastics
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2. Opening Activities, 08.00 - 09.00

- Regards
  - Pray
  - Muroja'ah letter
  - Muroja'ah hadith
  - Muroja'ah daily prayer
  - Asmaul Husna
  - Sing
- 

3. Core Activities, 09.00-10.00

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
- Let's pray dhuha	- Let's pray dhuha	- Let's pray dhuha	- Let's pray dhuha	- Let's pray	- Let's pray dhuha
- Let's do concentrati on exercise	- Let's sing.. do your children	- Let's do concentrati on exercise	- Let's do concentrati on exercise	- Let's exercise together	- Let's line up together
- Let's sing...	- Tell me what children know about body parts?	- Who created our bodies?	- Who created the food?	- Let's read the prayer of entering the house	- Let's read the prayer of entering the house
- Who created me?	- Let's make body parts	- Tell me what do your children know about body characteris	- Can you tell me what your child knows about your favorite food?	- Let's prayer of entering the house	- Let's say the phrase "Masha Allah"
- Let's make the letter "a ku"	- What is the name of the limb you made?	- What color is the skin on your body?	- Shall we make your favorite food?	- How many clothes are there?	- Tell me about your favorite game?
- Let's repeat the sentence "aku"	- Where are artificial limbs?	- What color is the skin on your body?	- Shall we make your favorite food?	- Who wants to count it?	- Let's show you how great your favorite toy is
- Where's your work?		- What's your hair shape?	- What food do you make?	- Let's color the picture of this	- Let's make your favorite toy
		- Can you	- Can you show me		

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show me your dress  
 your body favorite - Sing the  
 shape? food? song  
 - How do "colours  
 you feel finger  
 when your family"  
 stomach  
 growls?  
 - What are  
 the  
 characteris  
 tics of the  
 body of the  
 friend next  
 to you?  
 - Let's make  
 the order  
 of your  
 friend's  
 body  
 characteris  
 tics from  
 high to low

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4. Break, 10.00-10.30

- Eat together
  - Free play
- 

5. Closing Activities, 10.30-11.00

- Asking how you feel during the day
  - Discuss what activities have been played today, what toys are your favorite
  - Short stories containing messages from ummi,abi
  - Informing activities for tomorrow
  - Pray
  - Home pat
  - Giving thanks
- 

Knowing  
 the Principal

Homeroom teacher

Purgianti, S.Pd

Epita Sari, S.Pd.I

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RPPH document class B6 RA Ummatan Wahidah



2) **Organizing of Management of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah**

When it comes to education, the organization is a place to carry out educational activities to achieve the desired learning goals (Warlizasusi 2018). While organizing education is a process of establishing a place or system in order to carry out educational activities to achieve the desired educational goals (Kurniadin, Machali, and Sandra 2012). Childhood Education *Early*. Head of RA at RA Ummatan Wahidah (Wednesday, February 02, 2022):

*Organizing early childhood learning with STEAM content made from Loose Parts is the division of tasks carried out at meetings before the new school year or new semester, all are divided according to the capacity of each educator. For example, there is an educator who is now ready to get STEAM content produced using Loose Parts that is adapted to the material introduced, then at that time, so that educator becomes a homeroom educator.*

From the results of the research on organizing early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, starting with a coordination meeting before the beginning of the new school year and the beginning of the semester led by the principal, namely departing from the lesson plans that have been formed. To achieve the objectives of the lesson plan, the principal holds a meeting to map educators according to their field of ability in teaching. After the division of tasks by the principal, educators begin to organize the learning process according to the division.

3) **Actuating from Management of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah**

The learning strategies implemented by RA educators Ummatan Wahidah are in accordance with general references consisting of three stages, including (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Wednesday, February 2, 2022)

a) Introduction

During the preliminary session, the educator has carried out the routine of praying dhuha in congregation and praying together before carrying out an educational process;

b) Core Activities

During the core activity sessions, educators at RA Ummatan Wahidah carried out a series of educational exercises with students to achieve educational goals with STEAM learning content made from Loose Parts;

c) Final Activity

At the last stage, the teacher asked about feelings during the learning process, researching what activities have been played with what STEAM content made of *Loose Parts* you like the most.

Based on the results of the research findings, that when carrying out STEAM learning the teacher only acts as a facilitator, the teacher prepares an invitation: the *Loose Parts*, in the arrangement it is made as attractive as possible, so that they are excited to make the work they want. Then the teacher explains a little about the topic of learning to the children through stories, videos and pictures.

4) ***Controlling from Management of early childhood learning with STEAM content made from Loose Parts at RA Ummatan Wahidah***

Learning assessment is carried out to determine whether or not the achievement of learning plans that have been formulated, organized, and realized in the implementation of learning have been achieved (Fakhrudin 2021). The form of learning assessment with STEAM content made from *Loose Parts* at RA Ummatan Wahidah can be divided into several types of assessments carried out in it. Assessment is carried out in daily activities, mid-semester and end-semester examinations. The learning assessment system used at RA Ummatan Wahidah is carried out every day. After learning, structured and unstructured conversations are carried out, performance; observations are presented in the form of reports and children's daily scores.

Ibu Fitri said that she has a slightly different way of assessing children's learning. In the interview explained: I did an assessment of learning since the first time learning. At first I will open questions about the material I teach, to find out the child's knowledge of the material I convey. In addition, after each lesson I will ask about what lessons they have learned while studying at school.

From the results of research at RA Ummatan Wahhidah, assessments are carried out all the time, starting from the time the child arrives at school, plays, until he returns home. Assessment is carried out in various ways. The determination of the assessment method used is always accompanied by the determination of the use of assessment data collection tools. The assessment techniques used at RA Ummatan Wahhidah include assignments, conversations, observations, performances, works, and portfolios.

**b. Implementation of early childhood learning with STEAM content made from Loose Parts at RA Ummatan Wahidah**

Learning with STEAM content made of *Parts* Wahidah RA at starting to get acquainted with STEAM loads made from *Loose Parts*, so to fulfill their curiosity, children explore objects with various textures, colors, shapes and sizes (Siantajani 2020b). Children when they are in the exploration stage in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Ms. Pita said (Results of Interview with Ms. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, 03 February 2022):

In the exploration session, children are very excited and eager to explore or explore the objects or components that have been provided. Children observe and work on these components themselves and after that children make their own decisions regarding what components to use and what children use them for.

Children when they are in the experimental stage in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, 03 February 2022):

At the experimental stage, children are very excited to carry out various experiments or experiments using various components that children have seen and learned when carrying out exploratory activities. When carrying out the experiment itself, usually the child does the experiment by linking one by one the components that the child considers suitable for use.

Children when they are in the creative stage in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, 03 February 2022) :

In the creative stage, the child has made a decision that had been tested in the experimental session. Children begin to design and make various products using various components that have been tested before. Children are very enthusiastic and try to make something as good as possible according to the skills they have.

Educators carry out educational stages in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Mrs. Pita said (Results of Interview with Mrs. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Date Thursday, February 03, 2022):

In learning activities The educational stage is carried out by introducing play strategies, cleaning strategies and placing objects to children. Usually in the guidance session, educators also guide and facilitate children to make rules before carrying out playing activities.

Educators carry out an expansion stage in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Ms. Pita said (Results of Interview with Ms. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Thursday, 03 February 2022):

In the expansion stage, educators prepare invitations and provocations for children's play activities. The invitation itself is prepared in the form of arranging a play area in the form of grouping the components that have been determined and equipped with provocations in the form of instructions or commands intended to provoke children to do or make something with the various components provided.

Educators carry out developmental stages in early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, Mrs. Pita said (Results of Interview with Mrs. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Thursday, February 03, 2022):

Stages of educator development implement it with documentation and evaluation. This development session is tried when the child is in a

creative session. So when the child is focused on making or creating something, educators carry out documentation and evaluation activities on the child's growth. The evaluations that were attempted were basically the same as those that were attempted by the usual early childhood institutions. But what makes the difference is the evaluation is tried for the same activity or marker in one week.

Educators and children when they are at the stage of building the meaning and purpose of playing, Mrs. Pita said (Results of Interview with Ms. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, 03 February 2022):

After the children finished tidying up and putting all the components contained in the locker or storage area, the teacher invites the child to express what the child has done today in turn one by one, after that the educator reviews again what the child has learned today from the activities the child is undergoing.

Strategy in introducing playing with STEAM content made from *Loose Parts* to children, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, February 03, 2022):

Generally, before starting core activities, the teacher introduce play strategies to children by stimulating and allowing children to explore and produce or express their imagination. After that, make sure the children don't forget the rules while carrying out the play activity they want to try.

Educators introduce cleaning and storing strategies to children, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah on Thursday, 03 February 2022):

Children really need to be introduced that each object has its own home or place, and every object needs a push to return to its place. So, after finishing playing activities, children can immediately carry out cleaning activities and put their things in the right place.

Educators provide provocations to children regarding the use of *Loose Parts* in early childhood learning with STEAM content, Ms. Pita said

(Results of Interview with Ms. Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Date Thursday, 03 February 2022):

The provocation itself adapts to the themes discussed, so from the themes and subthemes being discussed, then developed and poured into the form of questions or invitations to produce something. Biasanya guru menggunakan kata “Bagaimana” dan “Ayo” untuk menstimulasi anak mengeluarkan serta menunjukkan kreativitas, ide, dan gagasan yang dimilikinya.

Educators give invitations to children regarding the use of *Loose Parts* in learning, Ms. Pita said (Results of Interview with Ms. Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah Date Thursday, February 03, 2022):

For invitations, generally they are familiar with the provocations that have been made. The materials or components used are generally *mixed* or mixed in various meanings, some are in the form of natural materials added to the rest of the packaging, plastic materials, seeds, clothing buttons and so on. All adapted to the provocation given.

Educators apply product creation strategies in early childhood learning with STEAM content on *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Thursday, 03 February 2022):

Product creation This is done by providing opportunities for children in the creative session to write or create something that suits their individual skills and desires. The creation of the product itself can take the form of producing something new or modifying existing goods or products.

Educators apply imagination strategies in early childhood learning with STEAM content for *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Guardian of Class B 6 at RA Ummatan Wahidah Date Thursday, February 03, 2022):

In learning activities, playing activities inside or outside the classroom, children are directed to express their imagination, starting from exploration sessions to creative sessions. Children must be able to

imagine or realize the imagination they have to create or make something.

Educators apply exploration strategies in early childhood learning with STEAM content for *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah Date Thursday, February 03, 2022):

We implemented an exploration strategy at the beginning of the activity. . This is because the exploration itself is the initial session in the use of *Loose Parts*. So children are given the widest opportunity to explore, observe and work on the various components that have been provided.

Educators apply experimental strategies in early childhood learning with STEAM content on *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah on Thursday, 03 February 2022):

The experimental strategy was carried out by providing stimulation to The child through the invitations and provocations that have been prepared then focuses the child on deciding what kind of experiment the child should undergo, or what is the ultimate goal of the experiment that the child wants to undergo, so that the experiment becomes a planned activity that the child must undergo, or what the ultimate goal of the experiment will be. children live, so the experiment is planned.

Educators apply project strategies in early childhood learning with STEAM content for *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah Date Thursday, February 03, 2022):

We educators carry out project strategies usually prepare 6-8 activities per week. So for that one week, children are given a great opportunity to complete the provided play activities. So for an activity there are as many things as possible for children to do. Until when the child is not satisfied with the results, the child can continue it at another time or especially on another day.

Educators apply music strategies in early childhood learning with STEAM content for *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah Thursday, February 03, 2022):

We apply music strategies in learning, each component can create a different sound or sound. Especially when one component is combined with other components, it can also produce a different sound or sound. This is what teachers use to use music strategies in education using the *Loose Parts*.

Educators apply language strategies in early childhood learning with STEAM content on *Loose Parts*, Ibu Pita said (Results of Interview with Ibu Epita Sari as Class B 6 Guardian at RA Ummatan Wahidah Date Thursday, February 03, 2022):

In implementing the language strategy we did from The first activity is playing until it's finished. For example, communicating with children regarding the achievements of children to be able to complete their work. Furthermore, at the end of the activity, the child is given the opportunity to communicate the various types of play activities that have been carried out and what the children have learned from these activities.

In the core activities of STEAM learning, there are stages that must be carried out, but these stages do not have to be done sequentially, the most important thing in a series of learning activities must include the following elements:

1. *Questioning*: asking questions about objects that occur around them (Putri 2019). For example, today's topic is related to water, the teacher then asks the children what is the use of water, what are the benefits of water, where does water come from? with answers they know in everyday life. After asking about the topic, the educator explains in more detail about water through story books, pictures or videos. From the results of the study, when the educator was explaining the theme, many children asked questions and then they told stories about their daily lives related to the theme. Although when explaining many active children walking around, the educators were patient in explaining, even to the point of making very loud noises so that the children could pay attention.



2. *Exploring and observing* : conducting exploration activities using their senses (Putri 2019). In STEAM learning, educators only act as facilitators, before learning begins, educators conduct invitations. Where children are given the opportunity to explore tools and play materials to encourage children's curiosity to ask questions. In the invitation, the educator also prepares provocation sentences in each of *Loose Parts* , for example the topic is Water, What kind of place to store water will you make? Write down the word "Water" and its uses. With the provocation sentence to provoke the children to be interested in what to do? before they play, the teacher explains the sentences, after that they are free to make whatever according to their imagination. At the time of the research conducted by the researcher, the children's curiosity increased and they were happy and happy when they made their work from *Loose Parts* with STEAM learning. After completion, the work is submitted to the educator to be assessed and then photographed which will be sent to the parents.
3. *Developing skills and processes*: from the results of observations children can describe, create something, and can solve problems (Putri 2019). For example, the theme is recreation, sub-theme of the temple. They can learn from STEAM words such as *Science*, children can make experiments such as painting, making temple shapes, *Technology*, children can learn simple technology such as scissors, colored pencils, carpentry tools. *Engineering*, children will think how to build a temple. *Arts*, children can make works according to their own interests, *Mathematics* when children are making temples they also learn to count how many buildings are needed to make a temple. From the results of research conducted by researchers, in STEAM learning with *Loose Parts* students can combine five components such as science, technology, *engineering*, *arts* and mathematics. For example, the theme of the universe, an interesting thing that can be obtained in learning the introduction of natural objects is that children can conceptualize numbers and children only understand that if a pebble is put in a bottle it will produce sound or sound.
4. *Communication*: discussing ideas through conversing, listening, and writing activities (Putri 2019). The results of the research that the researchers did when the children were making their work, they could

ask the educators, communicate whether or not something needed to be added to their work, and they also communicated with their friends, for example the theme is water, the water container you make is like what ? by asking the theme, the child's curiosity will be higher, and the child's imagination will be broad.

5. *Playing*: learning takes place by applying the principles of play (Putri 2019). In the implementation of STEAM learning, children are free to imagine according to their wishes, according to their growth and development. They are given the freedom to play, without any coercion so that they get satisfaction and pleasure. The principles of playing are as follows (Hayati1 and Khamim Zarkasih Putro. 2017): Have a clear goal; Done freely; Emphasize the process not the result; Pay attention to safety; Fun and enjoyable. From the results of observations or observations, children in playing are in accordance with the principles above. Children are given the freedom to express themselves and be creative according to their wishes so that it creates satisfaction for themselves. The tools used in playing are very safe because they have been checked before learning begins and there is strict supervision from the educators.

Meanwhile, class activities show that learning uses the STEAM approach made from *Loose Parts* directly provide experience to children about:

a) *Science*

Learning *Science* in schools for early childhood is focused on learning about oneself, the environment and natural phenomena. The picture below shows that children recognize peanuts, water and plants. The benefits of learning science in early childhood are to: learn to observe and investigate objects and natural phenomena. Learn to develop basic science process skills, such as making observations, measuring, communicating the results of observations. Learn to develop curiosity, pleasure and willingness to make inquiries or discoveries. Learn to understand knowledge about various objects both characteristics, structure and function.



Observing how pea plants can grow  
Picture 4.1 Activities *Science*

b) *Technology*

Learning activities are not only related to computers, but in early childhood learning, technology refers to the use of equipment and developing children's gross or fine motor skills. The picture below shows the child knowing how to use simple technological tools, such as a straw. The use of a straw here will be used to accommodate blowing.



Straws

Picture 4.2 Activities *Technology*

c) *Engineering*

*Engineering* is a skill possessed by an early child assembling (operating), building a certain form using various media.

*Engineering* activities contained in the above activity are the techniques used by children in entering and placing the *Loose Parts* on top of the picture of chicks. For example, there are those who put pebbles by sprinkling them, there are those who put them one by one into the image

of the chicks starting from the edge to the center or in a circle according to their respective creativity.



The child puts various *Loose Parts* the drawing of chicks  
Picture 4.3 Activities *Engineering*

d) *Art*

Skills in early childhood include recognizing and demonstrating various artistic works and activities, such as drawing, painting with a brush, painting with fingers, stamping, folding, meronce, playing music, expressing movement according to rhythm, designing a work. sing, tell stories, dance and explore with usable objects. *art* contained in the activity below is that children are able to make works in the art of meronce from *Loose Parts*, some are made of buttons with various shapes.



Button ringing  
Picture 4.4 Activities *Art*

e) *Mathematic*

Mathematics that children do such as determining the number (number) size and color, shape, recognizing patterns. The picture below shows the child doing the activity of counting the buttons used, knowing what colors are used and what geometric shapes the buttons are using.



Counting the buttons used  
Picture 4.5 Activities *Mathematic*

#### 4. Discussion

1. Management of Early Childhood Learning with STEAM Content made from *Loose Parts* at RA Ummatan Wahidah

a. **Planning of Management of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah**

Learning planning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, in everyday life it is already contained in the RPPH guidelines. There is also a sequence, namely that there are sub-themes, after which the educator chooses the right method for learning, the details of the stages starting from the opening, the core, and the end of the lesson. Not only that, educators prepare *Loose Parts* day before to support children's understanding. As for educators who have variations in teaching that do not always refer to books, but are combined with *games* to make students not easily bored and easily understood by children. The statement above is in accordance with the notion of planning, namely (Wiyani 2015a):

- 1) Planning is an activity process that systematically prepares various activities to be carried out to achieve certain goals;
- 2) Planning is a process of systematic thought activity related to what will be achieved, activities that must be carried out, steps, methods,

- and implementation needed to carry out activities to achieve goals that are formulated rationally and logically and are oriented towards the future;
- 3) Planning is the setting of goals, policies, procedures, budgets, and programs of an organization.

Based on the results of interviews and observations, it can be synthesized that the STEAM learning planning made from *Loose Parts* carried out at RA Ummatan Wahidah Curup, is (1) preparing a one-year activity program by the principal and educators which is contained in the form of a syllabus. In the syllabus there is a set of plans and arrangements for learning activities in the form of Semester Education Implementation Plans (RPPS), Weekly Education Implementation Plans (RPPM), and Daily Education Implementation Plans (RPPH), (2) ensuring that educational steps use content procedures. STEAM made from *Loose Parts*, (3) carried out the steps for the invitation made from *Loose Parts*, (4) followed by structuring the activities undertaken after the module was fulfilled.

b. ***Organizing of Management of early childhood learning with STEAM content made from Loose Parts at RA Ummatan Wahidah***

Organizing is the process of determining the resources and agendas needed to achieve goals as well as designing and developing working groups and organizations including delegating responsibilities and giving authority to working groups (Terry 2021). Organizing is the process of dividing work into these tasks to people who have expertise and allocate resources and coordinate them in order to effectively achieve organizational goals (Wiyani 2015b).

The method used by RA Ummatan Wahidah Curup in dividing work into operational tasks that must be carried out by educators and education staff in learning and teaching activities is based on coordination meetings before the beginning of the new school year and the beginning of the semester led by the principal, namely departing from lesson plans that have been formed. The most common way to do this at RA Ummatan Wahidah Curup is to divide the roles of each existing personnel according to their field of work and specifications, so that the

work of drawing up plans is easier. For example, for learning for the age group under 5 years and 5-6 years, each is handled by a different educator, so that a set of plans and arrangements for development and education activities designed as a guide in organizing early childhood education activities is called a generic menu. For each age group is also different. In preparing lesson plans and in managing them, each has different specifications, so the manager makes a kind of specification in learning management (Joenaity 2009).

Although this method also has a bad impact because each educator is only very familiar with the generic menu which is their responsibility, but they are not very familiar with learning in other age groups. To overcome this, within a certain period of time, the manager rotates the duties of each educator, so that each educator is expected to be able to manage learning well in different age groups of children. As for the overall organization, for example learning time, *Loose Parts*, APE or teaching aids that will be used, are coordinated by the manager directly, so that it is more orderly. Learning management cannot cause mismatches; therefore the role of managers in regulating learning is needed so that the learning process is more active.

Based on the results of interviews and observations, it can be synthesized that the organization of STEAM learning made from *Loose Parts* carried out at RA Ummatan Wahidah Curup, is (1) Educators are given tasks by the principal that match their skills for implementing education in the study room; (2) Educators integrate modules according to the generic education menu of each; (3) even organization, for example education time, *Loose Parts*, APE or props to be used, coordinated by the manager. Other things that need to be organized in education include organizing children's playgrounds, media games, religious education, sports, learning agendas, and certain education.

c. ***Actuating* from Management of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah**

Terry said implementation (*Actuating*) includes activities carried out by a manager to initiate and continue activities determined by the planning and organizing elements so that the goals can be achieved (Terry 2021). Implementation is the mobilization of existing resources to

move to carry out what should be carried out by them with the intention of achieving the initial goals that have been formulated (Syaifurahman and Ujiati 2013).

Implementation of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah, namely by first having the initial activity of praying dhuha in congregation, asking and answering questions with children regarding the material that was delivered the previous day, then the teacher invites children to have a conversation about the material to be delivered. by connecting with children's experiences in everyday life. The second is the core activity of delivering material with STEAM content made from *Loose Parts* to attract students' attention. After the material is delivered, the teacher will test the child's understanding through performance activities and *games* related to the material presented. At the end of the lesson, the teacher will strengthen the material that has been presented by making conclusions and giving children the freedom to express their opinions.

Based on the results of interviews and observations, it can be synthesized that the implementation of STEAM learning *Loose Parts* carried out at RA Ummatan Wahidah Curup, are (1) preliminary activities, core activities, and closing activities; (2) Carrying out STEAM learning by applying all stages of playing *Loose Parts* by paying attention to playing strategies, cleaning up and storing things that children do every day; (3) Learning is carried out by combining seven strategies to develop early childhood creativity which include product creation, imagination, exploration, experimentation, projects, music and language.

d. ***Controlling of Management of early childhood learning with STEAM content made from Loose Parts at RA Ummatan Wahida***

*Controlling* includes continuing tasks to see if activities are carried out according to the plan (Terry 2021). From the results of research at RA Ummatan Wahidah, assessments are carried out all the time, starting from the time the child arrives at school, plays, until he returns home. Assessment is carried out in various ways. The determination of the assessment method used is always accompanied by the determination of the use of assessment data collection tools. The assessment techniques



used at RA Ummatan Wahhidah include assignments, conversations, observations, performances, works, and portfolios.

Based on the results of interviews and observations, it can be synthesized that the assessment of STEAM learning made from *Loose Parts* carried out at RA Ummatan Wahidah Curup, is (1) Process assessment is carried out all the time, starting from the time the child arrives at school, plays, until he returns home; (2) The assessment of the results of the techniques used at RA Ummatan Wahhidah include assignments, conversations, observations, performances, works, and portfolios, conversational assessments are divided into two, namely structured conversations and unstructured conversations.

## 2. Implementation of early childhood learning with STEAM content made from *Loose Parts* at RA Ummatan Wahidah

Based on the findings of the researchers conducted at RA Ummatan Wahidah, activity in the classroom showed that learning using STEAM content made from *Loos Parts* directly provide experience to children about:

### a) *Science*

Learning *Science* in schools for early childhood learn to understand knowledge about various objects, both in terms of their characteristics, structure and function. There are several elements of *science* that occur in peanut planting activities at RA Ummatan Wahidah, children recognize peanut seeds, water and plants, the benefits of learning. *Science* in early childhood is to learn to observe and investigate objects and natural phenomena. Learn to develop *Science*, such as making observations, measuring, communicating the results of observations.

### b) *Technology*

Learning activities are not only related to computers, but in early childhood learning, technology refers to the use of equipment and developing children's gross or fine motor skills. The technology found in STEAM activities made from *Loose Parts*, children know how to use simple technological tools, such as straws.

### c) *Engineering*

There are several elements of *Engineering* that occur in the activity of making chicks, namely the technique used by children to enter and place *loose parts* on the image of the chicks. For example, there are those who

put pebbles by sprinkling them, there are those who put them one by one into the image of the chicks starting from the edge to the center or in a circle according to their respective creativity.

d) *Art*

Skills in early childhood include recognizing and demonstrating various artistic works and activities, such as drawing, painting with a brush, painting with fingers, stamping, folding, meronce, playing music, expressing movement according to rhythm, designing a work. Sing, tell stories, dance and explore with usable objects. Children express their ideas and works together.

e) *Mathematic*

*Mathematics* that children do such as determining the number (number) size and colour, shape, recognize patterns. Mathematical activities carried out by children such as determining the number (number) size and colour, shape, recognizing patterns. There are several elements of mathematics that occur in meronce activities. In terms of calculating the buttons used, and knowing the colour and shape of the buttons.

Based on the results of interviews and observations, it can be synthesized that the implementation of early childhood learning with STEAM content made from *Loose Parts* carried out at RA Ummatan Wahidah Curup, is (1) Implementing STEAM learning by applying all stages of playing *Loose Parts* by paying attention to playing strategies, cleaning and store things that children do every day; (2) Learning is carried out by combining seven strategies to develop early childhood creativity which include product creation, imagination, exploration, experimentation, projects, music and language. (3) The use of the STEAM approach made from *Loose Parts* in RA Ummatan Wahidah activities, namely facilitating children in developing their potential and making learning implementation fun, meaningful and quality.

## 5. Conclusion

One effective learning strategy that can be used to rebuild children's learning ideas is the STEAM content (*Science, Technology, Engineering, Art, and Mathematics*) made from *Loose Parts*. RA Ummatan Wahidah is an institution

that strives to improve the quality of learning with STEAM content made from *Loose Parts*.

Ensuring the quality of learning in schools requires planned and systematic activities in the form of management in the form of planning, namely the teacher prepares the RPPS, and then it is described in the RPPM, which is compiled in the form of opening, core, and closing activities in the RPPH, then preparing the *Loose Parts* needed in STEAM. Organizing is the division of teaching tasks. In this method the teacher allocates the learning material. Implementation starts from the introduction, core activities, closing activities. This is so that children can face the era of the industrial revolution. The assessment is in the form of performance, observation, structured and unstructured conversation.

Implementation of STEAM learning *Loose Parts* at RA Ummatan Wahidah uses strategies for playing, cleaning up, storing things, increasing creativity (product creation, imagination, exploration, experimentation, projects, music, language), the application is in accordance with the 10 principles of early childhood learning.

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