

# Early Childhood Protection Efforts in Using Science-Based Learning Media

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**Abstract:** The media used must meet the criteria for safe for children, size, shape and color according to the age of the child and their level of development, function to develop all aspects of child development, can be played varied / ways, stimulate active participation of children, according to the ability of children (not too difficult or too easy), attractive in terms of color and shape or sound (if voiced), durable / not easily damaged, easy to get and close to the environment of children, accepted by all cultures, the number of instruments used should be sufficient to the needs of children, not too little or not too much. protection efforts that can be done when science learning takes place include choosing the right material that is suitable for early childhood, looking for alternative materials without reducing the meaning of the original material, using safety devices that can protect children from danger, if forced to use tools and materials that can cause danger such as the use of fire, knives, scissors, soda, it must be carried out intense supervision by the teacher so that things do not happen.

**Keywords:** child protection, learning media, scientific

## 1. INTRODUCTION

Protection of early childhood is one aspect that must be considered. In Act 35 of 2014 concerning Child Protection, it is explained that children are an inseparable part of human survival and the survival of a nation and state. In order to be able to take responsibility for the survival of the nation and state, every child needs to have the broadest opportunity to grow and develop optimally, physically, mentally, and socially. For this reason, it is necessary to protect efforts to realize the welfare of children by providing guarantees for the fulfillment of their rights without discriminatory treatment.

The history of children's rights as a direct descendant of human rights is one of the long histories of the struggle for human rights. After World War II which caused many children to become victims, in 1979 a working group was formed to formulate children's rights. This working group then formulated the Rights of the Child which on November 20, 1989 was adopted by the United Nations and ratified as International Law through UN convention signed by UN member states.<sup>47)</sup> According to UNICEF Innocently Research in the word child friendly (CFC), child friendly means guaranteeing the rights of children as citizens of the city.

Whereas Indonesian children in child-friendly societies define the word child-friendly as an open society, involving children and adolescents to participate in social life, and encourage child development and welfare.

Therefore, it can be said that child-friendly means placing, treating and respecting children as human beings with all their rights. Thus, child friendly can be interpreted as a conscious effort to guarantee and fulfill children's rights in every aspect of life in a planned and responsible manner. The main principle of this effort is "non-discrimination", the best interests of children, the right to life, survival, and development as well as respect for children's opinions.

In accordance with Article 4 of Law No. 23/2002 on Child Protection, it is stated that every child has the right to be able to live to grow, develop, and participate appropriately according to human dignity and dignity, as well as get protection and violence and discrimination. One of the basic rights of the child is the right to participate which is interpreted as the right to voice opinions and be heard. Children have a strategic position.

According to Hariwijaya (2009) in the family, children are the top priority as the foundation of the family's future. In children, all hopes and ideals of parents are shed. But often this becomes a heavy burden that must be borne by children (Dewantoro, 2018). When parents make children as an outlet for their obsessions that have not yet been achieved.

Children are used as a means to manifest their dreams. so that this becomes unhealthy for children, they are forced to walk according to the tracks that their parents have laid down without being able to fight. In a community child also have a strategic position. Children are "embryos", a new community. Thus, the child determines

the fate of a community's journey. Children are also seen as young shoots that will become the new generation that determines the future of the community.

Then the child must be seen and treated as the chosen community in the larger community. Children will grow and develop optimally when in a supportive environment. Both the family, school and the surrounding community. Broadly speaking, there are several scopes where children live and live, where this environment is very influential on the creation of this Child Friendly School. The first is family and then community (both rural, urban or country). Even greater scope is the international world.

The UN Convention on the Rights of the Child on November 20, 1989, mentions ten rights which must be given by parents to children, namely: the right to play, the right to get Education, the right to get protection, the right to get a name (identity), the right to obtain national status, the right to get food, the right to access health, the right to recreation, the right to equality, the right to play a role in development.

In fulfilling the right to play, parents can facilitate children playing at home and at school. Playing at school is the responsibility of educating teachers and overseeing institutions. Nowadays we often hear legal cases that befall a teacher of a cause pupil injured when attending learning in school. This is due to the use of tools and teaching materials that are harmful to children. Even conflicts between teachers and parents cannot be avoided. Scientific learning that is synonymous with experimenting with hazardous materials and devices should receive closer attention (Asmariyani, 2016).

For example, when using color paint, fire, sharp objects and others. The above phenomenon requires an intelligent thinking so that the use of tools and materials does not cause danger to early childhood. From these phenomena protection efforts are needed for early childhood in order to avoid the things that are desired when scientific learning takes place.

## **2. EARLY CHILDHOOD PLAYING MEDIA**

The world of children is the world of play. In providing early childhood games must pay attention to the level of safety so that children are protected from danger. Type of game equipment must be adjusted to the age and stage of development.

Criteria for safe play tools for children include: safe for children, size, shape and color according to the child's age and level of development, functioning to develop all aspects of child development, can be played varied / ways, stimulating active participation of children, according to Dodson accounts for 90% of children's activities and 10% of play equipment activities, according to children's abilities (not too difficult or too easy), attractive in terms of color and shape or sound (if voiced), durable / not easily deer, easy to get and close with the environment of children, accepted by all cultures, the number of

instruments used should be sufficient, with the needs of the child, not too little or not too much.

PAUD Learning Media are all things that can be used as a distributor of messages from the sender to the recipient to stimulate thoughts, feelings, concerns and interests, as well as children's attention so that the learning process occurs. The definition of learning is an activity carrying out the curriculum of an educational institution so that it can influence students to achieve educational goals that have been set (Marsh, 2006). The role of the media in learning, especially in early childhood education is increasingly important given the child's development at that time was in a period of concrete thinking. Media in the learning process can enhance the learning process of students in learning which in turn is expected to enhance the learning outcomes achieved. In addition, the use of instructional media must be in accordance with the learning approach used.

## **3. SCIENTIFIC LEARNING**

One of the learning approaches used in the process of early childhood learning is a scientific approach. The scientific approach optimizes all children's senses. The scientific approach is a learning process that is designed in such a way that students actively build attitudes, knowledge and skills competencies through the stages of observing, asking questions, gathering information, reasoning, and communicating.

The scientific approach in PAUD needs to be implemented because it has several benefits including encouraging children to have the ability to think critically, analytically, and have the ability to solve problems, provide more meaningful learning experiences to children by encouraging children to observe, ask questions, gather information, reason / associating, and communicating, encouraging children to find out from various sources through observation and not just being told.

The scientific approach is carried out by observing, asking, gathering information, reasoning / associating, communicating. Observing is done to find out objects such as by using senses such as seeing, reading books, listening, breathing, feeling, and feeling (Thompson & Nelson, 2001). The question is to encourage children to ask questions, both about objects that have been observed and other things that want to be known.

Collecting information is done in various ways, for example: by doing, trying, discussing, reading books, asking questions, and summarizing results from various sources. Reasoning is the ability to connect information that already has with newly acquired information so as to get a better understanding of something. Communicating is an activity to convey things that have been learned in various forms, for example through stories, movements, and by showing the work in the form of images, various forms of dough, dolls from paper pulp, crafts from recycled materials, and woven products.

#### **4. EARLY CHILDHOOD PROTECTION EFFORTS IN SCIENCE LEARNING**

The development of science learning in children, including other fields of development has a very important role in helping cognitive development in early childhood. Awareness of the importance of equipping science to children will be higher if they realize that we live in a dynamic, developing and changing world continuously even into adulthood, the more complex the scope, and of course will increasingly require science. Conant in Nugraha (2008) defines science as a series of concepts and conceptual schemes that relate to one another.

Which grows as a result of a series of experiments and observations and can be observed and tested further. Science is closely related to the activities of exploring symptoms and natural facts that are around children. Science as a science of the natural surroundings which is a process that contains theories or concepts obtained through observation and research. Science as a series of concepts related to each other based on observations, experiments on natural phenomena and the contents of the universe.

The method chosen to improve children's science is a method that can move children to increase motivation, curiosity, and develop imagination. In developing children's science, the methods used are able to encourage children to find and find answers, create questions that help solve, rethink, rebuild, and find new relationships (Roza, 2012). Some examples of scientific activities in PAUD are secret messages, simple telephones, static electricity, toy boats, rockets, sun, tornadoes, volcanic eruptions, fire vines, fire engines, floods and waves, the concept of floating drowning, lighting fires in water, a mixture of oil and water, the concept of dissolving, melting, melting, freezing. All scientific activities require media.

The tools and materials used in the experiment activities are adjusted to the science topics that will be introduced to the child. Some of the tools used must pay attention to the elements of security and child safety. The use of fire in science experiments for young children requires close supervision. Teacher intelligence in using media and science teaching materials in early childhood will be fatal. If undesirable things happen, they will fall into the realm of law.

Some safeguards that can be done when science learning takes place include choosing the right material that is suitable for early childhood, looking for alternative materials without reducing the meaning of the original material, using a safety device that can protect the child from danger, if forced to use tools and materials that can cause danger such as the use of fire, knives, scissors, soda, so intense supervision must be carried out by the teacher to prevent the desired things from happening.

#### **5. CONCLUSION**

The use of media (tools and teaching materials) in scientific learning must meet safe criteria for children, size,

shape and color according to the age of the child and their level of development, function to develop all aspects of child development, can be played in various ways / ways, stimulate active participation of children, which according to DR. Fitzhugh Dodson accounts for 90% of children's activities and 10% of play equipment activities, according to children's abilities (not too difficult or too easy), attractive in terms of color and shape or sound (if voiced), durable / not easily deer, easy to get and close with the environment of children, accepted by all cultures, the number of toys used should be sufficient, with the needs of children, not too little or not too much.

In the process of scientific learning must pay attention to the level of security for children. Some safeguards that can be done when science learning takes place include choosing the right material that is suitable for early childhood, looking for alternative materials without reducing the meaning of the original material, using a safety device that can protect the child from danger, if forced to use tools and materials that can cause danger such as the use of fire, knives, scissors, soda, so intense supervision must be carried out by the teacher to prevent the desired things from happening.

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