



THE DEVELOPMENT OF NATURAL LEARNING MODULE BASED ON ENVIRONMENTAL AWARENESS IN TK IN TAPA BONE BOLANGO DISTRICT

Mitra Nursita Jusuf, Wenny Hulukati, Asni Ilham, Abdul Rahmat

Postgraduate Nonformal Education, Gorontalo State University

Email: mitrajusuf01@gmail.com; abdulrahmat@ung.ac.id

Article history:	Abstract:
Received 11 th February 2022 Accepted: 11 th March 2022 Published: 28 ^h April 2022	The aims of this study were (1) to determine the objective conditions of environmental awareness-based learning in Kindergarten in Tapa District, Bone Bolango Regency, (2) to determine the conceptual model of environmental awareness-based learning in Kindergarten, Tapa District, Bone Bolango Regency, (3) to determine the implementation Environmental awareness-based nature learning module in Kindergarten in Tapa District, Bone Bolango Regency. This study shows that the nature learning module based on environmental awareness produces a product in the form of a learning module for early childhood in Kindergarten, Tapa District, Bone Bolango Regency. This module has been suitable for use by Kindergarten teachers as a learning resource in providing the learning process because it has gone through expert validation tests, respectively by early childhood education experts, Indonesian language experts and learning media design experts as well as product trials conducted by kindergarten teachers. However, this product still requires further development in order to be mass-produced.

Keywords: Nature Learning, Environmental Care and Module

INTRODUCTION

Natural learning is the natural environment will provide a number of direct learning experiences (Real Learning) or real learning (Real Instructions), the concept of nature-based learning will provide an atmosphere or opportunity for children to develop sensitivity, concern or sensitivity to various natural conditions.

Nature-based learning will also help children obtain meaningful learning processes and outcomes as well as practical functional learning and nature-based learning for children to discover, understand and apply learning directly to various aspects of real life. The development of the natural learning model is one approach that can be referred to in environmental care-based learning, according to Ridlo (2005:12), the characteristics of learning activities with the natural environment approach are: (1) related to the natural surroundings directly, indirectly or using media, (2) there are forecasting activities, explanations, (3) there are reports to be communicated either orally, in writing, pictures, photos, or audiovisuals.

Natural learning can be interpreted as learning that utilizes the natural environment around students, both the physical environment, social and cultural technology as objects based on environmental concerns.

In this regard, from the results of the researchers' observations, which were carried out during initial observations on February 22, 2022, it can be stated that the gaps that exist in Kindergarten institutions in the Tapa District, Bone Bolango Regency in the use of natural learning models based on environmental awareness are still small. use more Children's Worksheets (LKA) in learning in the classroom, so that it seems monotonous learning that only uses Photocopy sheets, even though we all know that learning in Adak is more emphasized on real or direct learning in nature, learning that encourages children to develop the attitude of caring for the environment in schools is less than optimal, the use of learning resources that support children to develop an attitude of caring for the environment is less varied. In reality, children do not really care about the environment. Many children's behavior and activities do not only show their indifference to the environment, but even their behavior damages the environment.

Taking into account the conditions that occur, it is very necessary to innovate in a learning model based on caring for the environment. Nature-based learning invites children to actively learn through the real natural environment. This learning offers children direct interaction with nature and the main source of this learning is the surrounding environment. Through interaction with the environment, children can organize sensations, experiences, and their brains develop so that children can build their own intelligence (Morrison, 2012). This is supported by Jiwaningrum & Suryono

(2014) which states that the involvement and interaction of children with the surrounding environment is very important in the development of children's intelligence.

According to Sue (2003: 43) that environmental concern states general attitudes towards environmental quality which are manifested in self-willingness to state actions that can improve and maintain environmental quality in every behavior related to the environment.

Because concern is expressed by actions, someone who cares about the environment is not only good at writing essays about the environment, but the results of the writing are realized in real actions. According to Suparno (2004:84), the attitude of environmental concern is indicated by the appreciation of nature.

The essence of respect for nature is the awareness that humans are part of nature, so loving nature also loves human life. Loving the environment and nature must be directed so that there is an attitude to love life. If everyone loves the environment and nature, then everyone will care to maintain the survival of the environment, never damage and exploit it so that in the future an environment is created that benefits all humans who are part of that environment. With nature-based teaching, all problems will be solved. Natural learning is teaching that can be interpreted as a process of changing the behavior of students so that they become adults who are able to live independently as members of society in the natural environment where the child is. And what is meant by the natural environment includes the family, school, community and surrounding environment. This means that students are taken out of class/school so that they can learn from the real environment, family and community.

This nature-based learning allows children to actively observe, investigate and study the environment, so that children will have an understanding and also a wealth of knowledge that comes from their own experience as a result of their direct interaction with the surrounding natural environment. Through this understanding and knowledge, children will be more concerned with the natural environment. Nature-based learning also invites children to be more familiar with nature (Yudistira, 2014). When the child is familiar with nature, the child will have a strong mental attitude, he will become affectionate towards plants, animals and also the natural environment. Thus, children become accustomed and skilled in interacting with the nature around them well (Susapti, 2010).

Children who are accustomed and skilled in interacting with nature will form a caring character for the environment. This opinion is supported by the results of 10 studies which state that activities such as picking, planting seeds or caring for vegetables can increase children's pro-environmental attitudes (Lohr & PearsonMims, 2005; Wells & Lekies, 2006) and strengthened by the results of research conducted by Collado (2015). that interaction with nature can improve ecological behavior. Recent research conducted by Cheng, J. C and Monroe M. C (2017) also shows that children who can easily access or play in nature can develop stronger connections to the environment or nature. The conclusion from the research findings shows that through direct interaction with nature can increase children's affective attitudes towards nature or children's interest in protecting the environment or nature.

Learning resources used in nature-based learning are learning resources available in the environment around children, so it will be easy for children to see, remember and practice which makes nature-based learning more practical (Badan Research and Development of Education Ministry of National Education, 2008) .

The problem that occurs is that natural learning based on environmental care has not become a priority as an innovation in nature learning in Kindergarten in Tapa District, Bone Bolango Regency which is presented in the form of a Teacher Module. The nature learning module based on environmental awareness is an alternative in the context of fulfilling teaching materials in the form of modules in implementing learning related to nature. Thus the teacher has teaching materials in providing the learning process for early childhood in Kindergarten.

THEORETICAL STUDY

1. Natural Learning

Silvana (2011:11) Humans live in a certain environment, humans are bound to their environment and cannot be separated from that environment. More than that, humans should be able to take advantage of their environment as far as possible, both for the benefit of their daily life and for the benefit of the development of the human personality itself. This is the basis for the concept of teaching the environment. The nature around children is used as the base for children's education efforts.

Muhibbin (2000:92) The word learning comes from the basic word learning which has the prefix *pe* and the suffix *-*. According to Muhibbin Syah, learning means the stages of change in all individual behavior that are relatively permanent as a result of experience and interaction with the environment that involve cognitive processes. Meanwhile, according to Sardiman (2000: 20-21) understanding of learning is divided into two, namely broad and specific understanding. In a broad sense, learning can be defined as a psychophysical activity towards complete personal development. Then in a narrow sense, learning is intended as an effort to master scientific material which is part of an activity towards the formation of a complete personality. In this sense implicitly in teaching there are activities to choose, determine, and develop methods to achieve the desired teaching results.

So in the learning, there are two actors, namely the student and the learner. Students are subjects who learn, while students are subjects (teachers) who "learn" students (students). Learning itself is a teacher activity programmed in instructional design to make students learn actively. Meanwhile, instructional design is a teaching program made by conventional teachers which is also known as teaching preparation. Based on some of the definitions of learning above, the writer can conclude that learning can be interpreted as a change in the behavior of students as a result of interactions between themselves and educators and/or learning resources in a learning environment in meeting their needs.

Education can be interpreted as a process of changing the behavior of students so that they become adult humans who are able to live independently as members of society in the natural environment where the individual is located. And what is meant by the natural environment includes the family, school, community and surrounding environment. This means that students are taken out of class/school so that they can learn from the real environment, family, and community.

The pioneers of this learning include Fr. Finger (1808-1888) in Germany with "haimatakunde" (teaching of the environment), and J. Lighthart (1859-1916) in the Netherlands with "Het volle Leven" (real life).

Both have their own principles, and both named the learning model the haimatakunde movement and the Het volle Leven movement. Where the movement refers to education that brings children closer to the natural surroundings which they call the environmental education movement.

The principles of the haimatakunde movement (Teaching the environment) are:

- a. With the teaching of nature, the teacher can demonstrate directly according to the nature or with the basics of teaching.
- b. Teaching the natural environment provides as many opportunities as possible so that children are active or active, not just sitting, listening, and taking notes.
- c. Nature's teaching makes it possible to provide totality teaching.
- d. Teaching the natural environment provides children with a strong intellectual appreciation material that is not verbal.
- e. Teaching the natural environment provides emotional aspirations, because the natural environment has an emotional bond with children.

With this, the environment is no different for children or adults, because all events in nature and its surroundings are part of their own lives in joy and sorrow. Because the natural surroundings are also included in the category of scope in education, namely education in a broad sense, where the object of education is the local environment.

2. Environmental Concern

Taqiya, (2013:16) Caring for the environment means participating in preserving the environment as well as possible, this can be done by maintaining, managing, restoring and preserving the environment. Guidelines that must be considered in caring for or preserving the environment include:

- a) Avoid and save the earth's resources from pollution and damage.
- b) Avoid actions that can cause pollution, damage health and the environment.
- c) Utilize renewable natural resources (which cannot be replaced) as well as possible.
- d) Maintain and improve the environment for future generations.

Taqiya, (2013:16) We can interpret environmental management as a conscious effort to maintain or improve the quality of the environment so that our basic needs can be met as well as possible.²⁵ Environmental awareness is awareness to direct people's attitudes and understanding of the importance of a clean, healthy environment. etc. Factors influencing environmental awareness:

- a) Ignorance factor

Not knowing is the opposite of knowing. Poedjawijatna stated that being aware and knowing are the same (aware = knowing). So when we talk about ignorance we are also talking about the unconscious. Someone who knows the importance of a healthy environment for living things, then that person will always protect and maintain the environment.

- b) Poverty Factors.

Poverty makes people not care about the environment. Poverty is a state of inability to meet the minimum needs of life. In a poor situation, it is very difficult to talk about environmental awareness, which is only thought about how to overcome the difficulties, so that the idea of environmental management becomes neglected.

- c) Humanity is defined as human characteristics.

According to Chiras (1991) it is said that humans are part of nature or natural regulators. Regulators or rulers here mean that humans have a greedy nature, namely the nature that considers everything for themselves and their descendants. The existence of a human nature that wants to be in power, the human being put aside the nature of caring for others.

- d) With the development of Science and Technology (Science and Technology) and information and communication technology which is very rapid, of course it will also affect human lifestyle.

Lifestyles that influence human behavior to destroy the environment are hedonism (extravagant), materialistic (prioritizing material), secularism (prioritizing the world), consumerism (consumptive life), and individualism (self-interest).

Taqiya, (2013: 18) The view that considers nature is valuable only to the extent that it is beneficial to human interests will lead to shallow environmental concerns and attention to environmental interests is often ignored. The environment is initially in balance and harmony, because the components of the ecosystem function properly as they should. However, it is very unfortunate that the current state of nature compared to 10-20 years ago, there is a striking difference, this is none other than the occurrence of massive exploitation by humans, both consciously and unconsciously. The environment, both biotic and abiotic, influences and is influenced by humans.

Environmental care is an internal attitude or ability to take action on everything that is around us, able to choose firmly between several possibilities, according to Winkel (2006:104) taking a defensive attitude in a certain attitude or changing attitudes, all of which play an important role in life. human beings and is a source of mental energy.

RESEARCH METHODOLOGY

Research on the development of a natural learning model based on environmental awareness in Kindergarten in Tapa District, Bone Bolango Regency, Gorontalo Province. In this study, researchers focused on developing a Nature Learning Model Based on Environmental Concern and would be used as a learning medium or teacher guide in Kindergarten Se Tapa District, Bone Bolango Regency. At this stage researchers can formulate goals to improve students and can minimize students who have low knowledge. To solve the problems faced by students, so that researchers can find out how to help students in solving these problems, and can make it easier for researchers to make a product in accordance with the problems that have been analyzed previously.

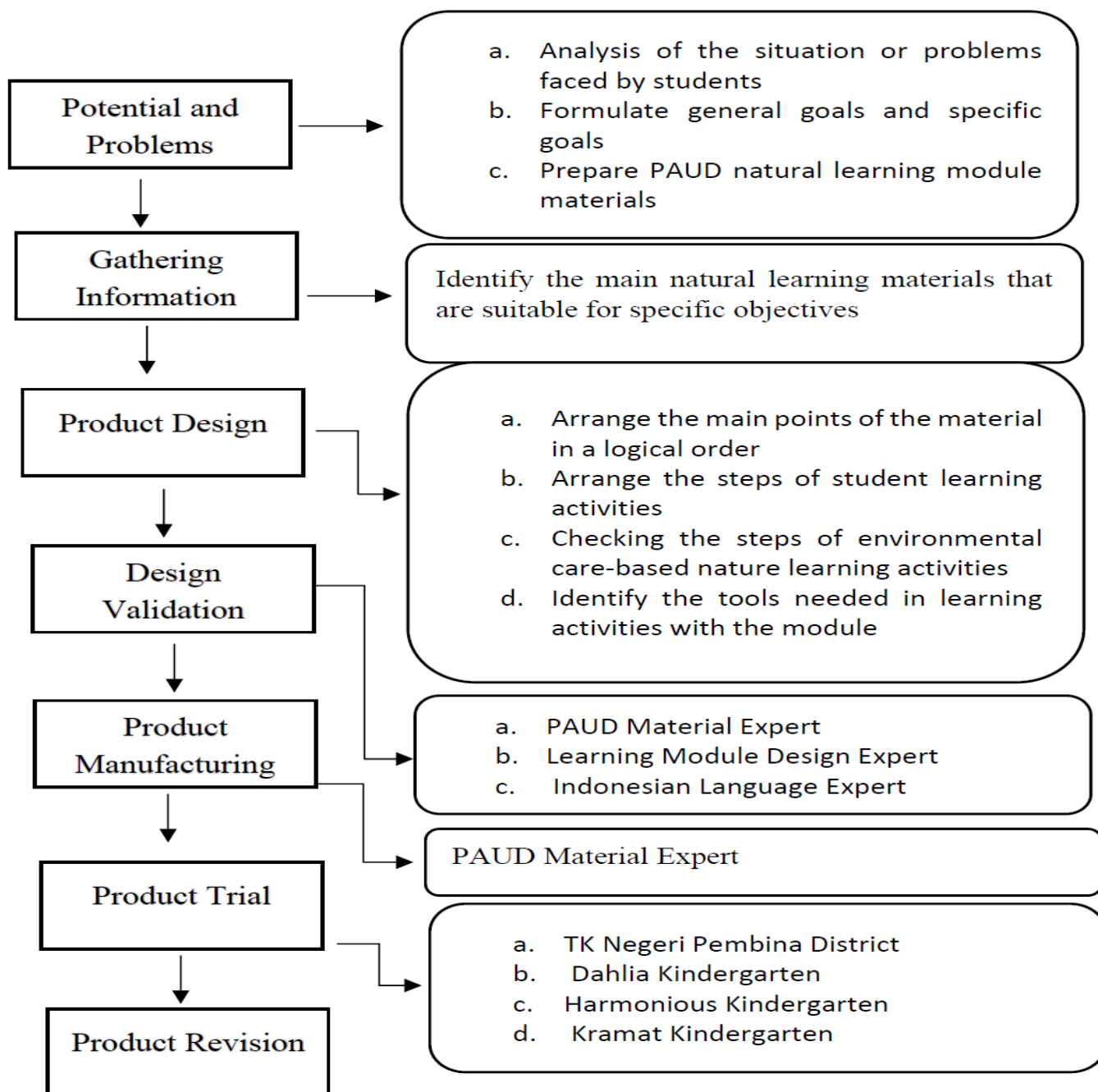


Figure 3.3 Stages of Development of Environmental Care-Based Nature Learning Module (Adaptation of Sugiyono Development Research)

RESEARCH RESULTS AND DISCUSSION

1. Objective Conditions Learning nature based on environmental awareness in Kindergarten, Tapa District, Bone Bolango Regency

Based on the profiles of the three Kindergarten Institutions in Tapa District, Bone Bolango Regency, according to the observation that the initial condition that can be stated by researchers is that teachers in Kindergarten do not yet have teaching materials in the form of modules related to environmental care-based nature learning. With these limitations, researchers need to develop a natural learning module product based on environmental care with research and development stages.

Researchers conducted direct observations and interviews with Kindergarten (TK) teachers in Tapa District, Bone Bolango Regency, in this case analyzing the needs of students to uncover facts and data to develop environmental awareness-based nature learning modules as Teacher Modules in the application of Educational learning. early childhood. The researchers can raise several problems including the lack of natural learning modules related to environmental care provided by kindergarten teachers. Researchers also conducted observations and interviews so that information from the teachers in the Kindergarten in Tapa District, Bone Bolango Regency, that in this kindergarten institution, learning resources in the form of modules to apply natural learning was still lacking. The geographical location of Kindergarten has good and interesting natural potential so that it can be used as a learning resource based on the natural environment, so that students can get to know the environment and also have a concern from an early age.

2. Conceptual Model Learning nature based on environmental awareness in Kindergarten, Tapa District, Bone Bolango Regency

The design of the initial conceptual module for learning nature based on environmental care for early childhood students, which was compiled as an initial concept designed as a general paradigm for the design of the module for developing learning modules for early childhood students. This paradigm provides an initial overview of learning modules, especially about nature for early childhood students, which is carried out in general, which consists of three components, namely (1) Input Components, as raw input materials are students, educators, and curriculum. (2) Process Component, namely the implementation of activities consisting of steps, namely planning, implementation, and evaluation. (3) The output component is an output that is expected to have a maximum impact on the design of a natural learning module based on environmental care.

In this case, to see the steps of learning nature for early childhood students, it will be described in detail as follows: (a) Learning in nature, (b) Learning about nature, (c) Learning to use nature, (d) Learning together with natural

Second, the process component is an activity organization that has a major influence on the implementation of environmental care-based nature learning for students. What is meant by the first implementation step is as follows, educators must know, know, about nature and identify the surrounding environment.

The evaluation stage is a series of final stages in the process component, which is always monitoring the users of nature learning modules based on environmental awareness by all parties involved in kindergarten. As for the strategy to see the occurrence of feedback between students and educators, that can be seen by how far the enthusiasm of students in participating in environmental care-based nature learning is whether it runs effectively or not. The next step is to carry out the supervision stage, which may experience difficulties and obstacles. Thus, the occurrence of difficulties and obstacles will become input and hope for improving the design of nature learning modules based on environmental care.

Third, the output component is the expected output so that students are able to recognize simple learning in nature from ignorance to knowing in everyday life through Kindergarten Education (TK).

3. Implementation of Environmental awareness-based nature learning module in Kindergarten, Tapa District, Bone Bolango Regency

After the product design was carried out, the researcher conducted a validation test on several experts. The book design for environmental awareness-based learning modules for early childhood was validated by 1 validator of PAUD material experts and 1 design validator and 1 Indonesian language expert. Based on suggestions from the validator, the design was jointly revised to improve natural learning and then revised with the help of a supervisor so that it resulted in the development of a valid nature learning module based on environmental awareness.



Development of the book The environmental care-based nature learning module was evaluated by 3 experts in their field (Validators). The assessment was carried out using a validation sheet that had been prepared previously by the researcher. The validation technique is carried out by asking the validator to provide corrections for the environmental care-based nature learning module that has been developed by the researcher. The results of this validation are in the form of comments and suggestions from the validator which is equipped with an assessment score for each aspect that is assessed and provides conclusions on the feasibility of the product.

The process of making the development of this module book is complete, henceforth the learning module book is reviewed or validated by an expert who will assess the suitability of the content and validity of the module book. The validators are material experts, as well as Indonesian language experts. Each expert fills out an evaluation questionnaire that has been prepared based on the aspects that have been determined and discussed with the supervisor. In addition to the questionnaire on the scores of the components of the natural learning module, the questionnaire is also provided with an entry section to provide criticism and suggestions. In general, the results of the validation according to the input carried out by 3 experts, namely PAUD material experts, design experts and Indonesian language experts who have academic capacity can be seen in the attachment of the validation instrument.

At this stage, the researcher conducted a product trial in the Kindergarten, Tapa District, Bone Bolango Regency, which consisted of 10 institutions, but the researchers only conducted trials on 3 school representatives according to the ability of the researcher. This aims to test the feasibility of the product to be further applied to the implementation of learning in kindergarten and or early childhood. This research was conducted at Pembina Tapa State Kindergarten, Dahlia Kindergarten and Harmonis Kindergarten in Tapa District, Bone Bolango Regency. The subject of this research is the teacher to be a pilot of the environment-based nature learning module by asking questions according to the environmental awareness-based nature learning indicators which have 4 indicator aspects with 13 questions distributed to 12 teachers.

Based on the results of the presentation above, it can be concluded that the teacher's ability to apply natural learning based on environmental awareness can improve children's development. From the 12 informants as teachers who became the source of product trials, it can be concluded that they already have the understanding and books. Environmental care-based nature learning modules can be used by teachers in learning nature in each kindergarten institution in Tapa District, Bone Bolango Regency.

Table 4.1 The results of the revision of Design expert validation

No	Suggestions/Feedback	Information	
		Before revision	After revision
1	The front cover still uses images from the internet		
2	The picture must be an original photo, if necessary a picture at your school	Don't have an attractive image design yet	The front design has been designed to be more attractive and uses real photos

Write detailed programs and products in the form of environmental care-based nature learning modules for early childhood that are ready to be tested. At this stage this product has been made similar to learning modules in general. And it has been validated and revised.

DISCUSSION

This final product is a module for developing a natural learning module based on environmental care. This module consists of: (a) book cover design for environmental awareness-based learning modules, (b) introduction, (c) table of contents, (d) introduction, (e) theoretical studies, (f) steps for learning nature, (g) Daily and Weekly Lesson Plans, (h) Closing, and (i) References. This module contains material on environmental care-based nature learning which is designed into a book and becomes a guide for PAUD or Kindergarten teachers in the learning process. The process of developing this module goes through several stages, namely finding potentials and problems by observing and interviewing kindergarten teachers in Tapa District, Bone Bolango Regency. Based on these potential problems, the researcher then conducted a literature review from various literatures and prepared module material. Next, the researcher designed the module book and compiled the material, determined the picture and made the cover design. The environmental care-based nature learning guide was then validated to get an assessment from early childhood education experts, learning media design experts and Indonesian language experts. Based on the validator's suggestions and input, improvements were made to the nature learning module based on environmental awareness. After that, the researchers conducted a product trial on 12 Kindergarten teachers by providing a questionnaire with 4 aspects of the indicator which had 13 questions in total to obtain information on the validity of the Nature Learning Module book based on environmental awareness. After going through the product trial, the product was then revised again according to suggestions/input from the Kindergarten Teacher in Tapa District, Bone Bolango Regency in order to get the final module product that is ready to be used.

The nature learning module based on environmental awareness can be used as a learning medium for early childhood because it is based on the assessment of the validator, materials, images, language and display presentation and obtained a suitable category for use. In addition, based on the results of the trial for Kindergarten teachers in Tapa District, Bone Bolango Regency, they also obtained a suitable category for use according to the percentage of answers given to a questionnaire on questions about aspects of natural learning based on environmental care.

Sugiyono (2019: 202) argues that "at the design improvement stage, the product design is already in the form of a module book from a development that can be used". Sukmadinata (2016: 153) explains that "The research steps

of development can be modified and simplified without reducing the essence". Mulyatiningsih (2011: 198) also said that the development procedure is divided into two activities, namely expert appraisal to assess the feasibility of product designs by experts in their fields, and development testing to test products on real target subjects. It can be concluded that the essence of a development is a process or stage of planning to produce a real product/form that has gone through expert validation tests and product trials.

The nature learning module based on environmental care is not without its drawbacks, but it still has its advantages. The advantages are:

- a. Presenting information about nature learning based on environmental care, such as self-understanding, understanding the world of work, as well as self-understanding and understanding the world of work.
- b. Create more complex material.
- c. Attractive display design
- d. Equipped with
- e. Easy to understand and use in the implementation of learning in early childhood.

Thus, Kindergarten (TK) teachers can use nature learning modules based on environmental awareness as an attractive learning medium for early childhood in Bone Bolango Regency.

CONCLUSION

Based on the description of the research results, the researcher can suggest that the nature learning module based on environmental awareness produces a product in the form of a learning module for early childhood in Kindergarten, Tapa District, Bone Bolango Regency. This module has been suitable for use by Kindergarten teachers as a learning resource in providing the learning process because it has gone through expert validation tests, respectively by early childhood education experts, Indonesian language experts and learning media design experts as well as product trials conducted by kindergarten teachers. . However, this product still requires further development in order to be mass-produced.

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