# PROTOTYPE OF THE MODULE TEACHING SCIENCE BASED NATURAL SURROUNDINGS IN GRADE 1 PRIMARY SCHOOL

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Abstract:

This research aims to describe design a module based teaching natural surroundings. This research is the research development, carried out in elementary school class 3 se-Sub Bendosari 2015/2016 Festive Year. In the study of engineering development only on the development of design-based teaching module natural surroundings. The subject of this research is the science subjects teachers in district Bendosari. The collection of data in this study using a variety of data collection techniques, Focused Group Discussion (FGD), interview, observation, and also documentation. This research instruments include: Guide to structured Interview Guide, FGD, sheets of observation, and pieces of documentation. The analysis of the data used is qualitative data analysis for data results of the study of narrative against a wide range of research findings. This analysis consists of FGD assessment design prototype teaching module based natural surroundings, the evaluation of the teaching module based natural surroundings, limited trials, product-based teaching module natural surroundings, implementation of extensive trials, product teaching module based natural surroundings. This research follows the design of the module science is module teaching practical instructions in order to establish the concept of learning and science in elementary schools and help teachers in the archive a practical work has been done by grade 3. The initial product is then discussed along with some categories and validated by expert learning materials dpembelajaran science in elementary schools. result is still need for a repair pad it evaluation and keterlaksanaan in learning science.

Keywords: Modules, Practical, Sciences, natural surroundings

## A. Introduction

One of increased quality of learning, the learning resource is a very decisive factor in achieving learning objectives. Determination of appropriate learning resources by teachers is indispensable in order for learning to take place in accordance with the subject matter that will be taught and in accordance with the level of development of thinking students. The right learning resources are expected to increase the interest and activity of student learning so that students learn in a pleasant atmosphere of the learning outcome achievement (Aqib, 2003).

The module is a learning materials which are arranged in a specific form for the purposes of the study, as expressed by Prastowo (2013) is a module that learning materials are arranged systematically with language that is easily understood by the learners appropriate level of knowledge and their age, so that they can learn their own (independent)

with minimal guidance or assistance from educators. A module should be able to be used as learning materials as a substitute for the functions of educators. So if the educator in this teacher has the function of explaining something, then the module should be able to explain something with an easy language accepted students as well as teachers.

The module is very necessary in practical activities, in addition to guiding practical modules can also be designed to steer students to work with scientific measures. Learning materials module has to be compiled in a systematic and interesting so that students can learn independently, as revealed by Anwar (2010) learning modules are materials arranged in a systematic and draw that includes the content of the material, method of and evaluation that can be used independently to achieve the expected competency.

The module can be said well if in it using the theory of learning that can support the achievement of basic competencies. Learning theory that prioritizes activities students to earn himself his knowledge of learning theory of Constructivism is. According to Kaniawati (2010), strategies that stand out in the learning konstruktivistik include collaborative learning strategies, prioritize the activities of students, get to know the activities of the laboratory, field experience, case studies, problem solving, discussion, brainstorming, and simulation.

Science subjects in analytical study with regard to the natural symptoms of either objects or events of nature. Learning resources from nature is absolutely necessary because the natural form of learning resources about can make it easier for students to learn. Learning by utilizing the natural surroundings will provide an opportunity to teachers to not only tell you verbally but teachers can take students to observe real media in nature so that knowledge gained more students are concrete and students can better understand the material being taught. How can ditem puh with bringing students out of class for exploring nature around like a natural laboratory, forest or the environment around the school that supports the material being taught at that time (Kartijono et al, 2005).

Approach natural surroundings is an approach to human nature in an effort to recognize the natural environment (Ridlo, 2005). According to the Kartijono learning approach and Mariati hike around (JAS) can be defined as a learning approach that utilizes the natural environment surrounding the lives of the learners both physical environment, social, technology and culture as an object of biological study in fenomenanya learn through working of science.

Learning about natural surroundings, formed the students develop its potential as a human being who has a mind. The emphasis of learning activities that are associated with the environment around student life and the real world, in addition to can open diverse thinking

insights, students can also learn a variety of concepts and how to mengkaitkannya with problems real life. The purpose of this research is to know 1) to analyze the needs of practical module science based Elementary school in Bendosari. 2) prototype Design module practical sciece based Elementary school in Bendosari.

## B. Research Methods

This research was carried out in may 2016 until August 2016. This research was carried out in elementary school Sub se-Bendosari. The subject is the teacher and grade 3 Elementary school in Bendosari.

This research method using research development. According to hobri (2010) development oriented research on methods of product development where development process described seteliti and the product may be finally evaluated. The products dikembangan in this research is a study of module teaching based natural surroundings. On the development model used in this study mengadabtasi Plomp (2001) using five stages, namely (1) a preliminary investigation, (2) design, (3) realization/construction (4) test, evaluation, revision and (5) implementation.

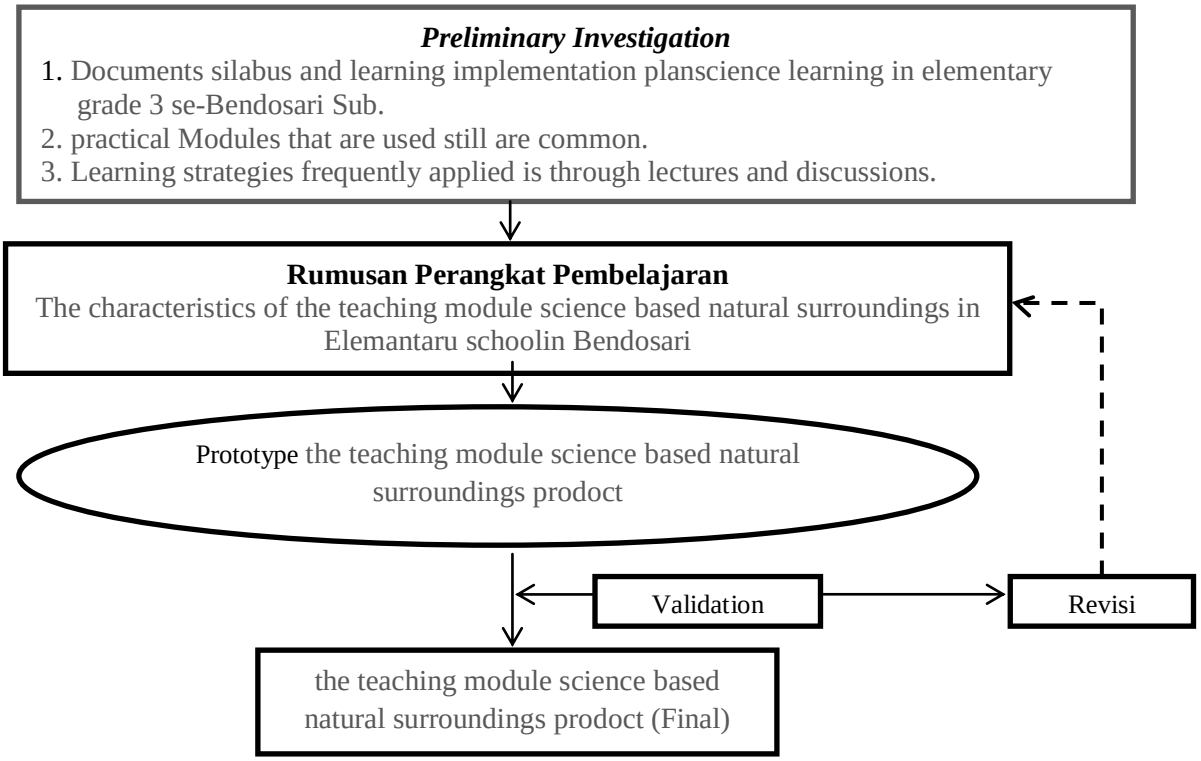


Figure 1. Flow Research

## C. Results and Discussion

1. Requirements analysis

Based on the preliminary results of the study, there are two things that need practical ability of students to learning meaningful in the science for the better. a)Students need to master the workings of practical science. b)Mastery Learning includes science natural surroundings. c)The Mastery against the subjects of the science.

Prior to the development of devices and associated research, beginning with the preliminary survey associated with the views of teachers towards learning science, mastery of students towards fields of study the science, as well as the views of students against the ability to understand science lab course. Surveys are also conducted to obtain secondary data, i.e. the teaching module provided students.

Observations indicate that upon learning science, students had been carrying out practical work, science with associate natural surroundings as teaching material. Examples of practical work which has been carried out, namely the students plant and measuring the growth of sprouts, invites students to observe the growth of corn around the tree at the school. Science experiment have implemented less coordination in terms of making practical instructions in separate modules. Teachers take resources and procedures for teaching comes from the book the package already exists. So between the book package and praktiku still not documented independently.

The teaching module is not yet available dala pemmbelajaran IPA IPA learning difficulties can cause. Students se-Bendosari sub plan after learning of students not given ample opportunity to explore the environment around schools and homes integrate subjects. In addition, the dominance of the teacher in the learning ability of students is so great that did not develop. Students also feel yet obtain applications science through practical work based natural surroundings.

Preliminary studies are also carried out to view the profile of primary school teacher in Bendosari with regard to the ability of composing learning practical skills, the ability of the science process and authentic assessment. The results of the survey showed that most elementary school teachers in Bendosari lacking in ability of composing learning practical work, especially in integrating subjects, lack of practical skills in performing the process of sceince. Surveys are also conducted to obtain data, i.e. secondary documents SKGK (standardized Competency master class), KTSP Curriculum materials, and Curriculum documents KTSP.

Based on those needs then disusunlah a module that can accommodate the needs of learning through scince experiment. Module teaching based natural surroundings that can be implemented in learning the science.

2. The design of the module teaching science

Science module based natural surroundings the question consists of three parts: the introduction, contents, and cover. Practical hints are revealed in this module deals with the experiment science grade 3 associated with the surrounding environment.

The introduction consists of the cover, preface, table of contents, basic standards of competency, competencies, learning objectives, student guidance, the role of the teacher, and check the readiness of the students regarding the material prerequisites before melakasanakan practical.

Part of the contents of the module discusses the growth and development of the living beings. On practical, first experiment discusses the growth of sprouts. Secon experiment, observation of animal development. third experiment, observations about human development. Each chapter consists of the summary section later, material, tools and materials used in performing the work instructions scince experiment. Science experiment do practical work, students sort and practical results in the form of analysis table table of observations accompanied the conclusions should be inferred by grade 3 students the tools and materials used in carrying out experiment work instructions, science to do practical work, students sort and practical results in the form of analysis table table of observations accompanied the conclusions should be inferred by grade 3 students and evaluation. A summary of the material contains a summary of the steps that can be used to menyelesaiakan the evaluation based on the results and conclusion praktikumyang has been implemented.

The closing section of the module consists of student assessment sheet contains values obtained from each section later and evaluation. Answer key evaluation is given to the teacher. The reference list is rendered at the end of the module. Bibliography shows books that author is used to compile the module.

Quality analysis results obtained from quality now provided to teachers. From the results of the analysis of the quality now judged by teachers, results can be obtained that the overall quality of the value obtained by teachers

Table 1. The results of the analysis of the quality of the modules by the teacher.

| **No** | aspect of the Assessed | Percentage | category |
|---|---|---|---|
| 1. | Aspects of convenience in use | 82,47 | very practical |

| No | aspect of the Assessed | Percentage | category |
|---|---|---|---|
| 2. | Aspects of compliance with time | 83,97 | very practical |
| 3. | This aspect of the appeal | 85,89 | very practical |
| Total | | 84,11 | very practical |

The results of the quality of the modules obtained from the assessment given by the teacher via the question form sheet quality modules. Aspects that are assessed on question form the quality of teachers consist of 3 i.e. aspect ease of use, compliance aspects of the time, and this aspect of the appeal. On the ease of use of the obtained average value of 82.47% by category is very practical. The second aspect of, of conformity of time gained an average rating of 83.97% by category is very practical. The third aspect, the aspect of the appeal of the retrieved value average of 85.89% by category is very practical.

The results of the analysis of the data from question form validation modules conducted in classroom teacher 3 se-Bendosari sub district achieved an average of 84.11% percentage. This suggests that the learning modules developed are on valid criteria. This module can also help students to learn scince actively and independently. Students can also practice to associate the material with the natural condition of science around school. In addition, by using this module students learn to apply the knowledge they have in everyday life.

Practical module science based natural surroundings this can motivate students learn science. This is due to the design used in this module interesting, practical instructions written in this module still haven't been read by students. Students feel challenged and eagerness to learn. In addition, Suprijono (2009:163) States that motivation has significance in studying, i.e. as encouragement, the catalyst, and determining the direction to achieve learning objectives. This shows that students need to have enough motivation to achieve success in their learning. Thus, this module is one of the materials that can be used to motivate student learning, especially in learning the IPA to assist learning through practical work, pendekatam.

This module can help students to learn science actively and independently. This is because the module is written in a systematic and come with instructions that can guide students. At the end of each chapter written summary of material that can be used to check the accuracy of students ' understanding of them. If students can learn independently, so the students can learn in accordance with its own merits, more active, and is not dependent on the teacher.

In addition, this module can help students to balance the psychomotor abilities. This is due to the learning module discusses the growth and development of living things. This is in accordance with statement (Paivio, 1991:149) dual coding theory, i.e., human behavior and the interrelated processes in verbal and nonverbal statements can be used to describe a variety of Tiger phenomenon in the world of education.

Furthermore, by using this module the students can learn to use the knowledge they had finish issues everyday. This is due to the practical work is carried out in accordance with the natural state school students. Thus, the students learn from the experiences they have and apply the concepts they earn in the real life. This is in accordance with the opinion of the (Suprijono, 2009:79) stating that contextual learning is the concept that encourages students to determine the relationship between knowledge assets with its application in real life. Students need to learn about the application of the science they are learning so that science is useful and not just stored away.

**D. Summary**

Based on the results of research and discussion that have been put forward, obtained summary as follows 1)Problems facing primary school grade 3 in Bendosari one is less used materials to assist students in learning because the numbers are limited and the need for guidance science experiment arranged systematically. Of these problems required a solution that is developing a practical module to support learning materials that already exist, in other words an extra book for students or teaching students made as attractive as possible. The material is taken from material researchers to be developed into a festive in module is the material of the growth and development of living things. Thus researchers do not develop new material but make a good and interesting modules so that facilitate students to understand the material and motivate students in learning.

The design of the prototype science module based natural surroundings consists of three parts: the introduction, contents, and cover. Practical hints are revealed in this module deals with the science experiment grade 3 associated with the surrounding environment. The introduction consists of the cover, preface, table of contents, basic standards of competency, competencies, learning objectives, student guidance, the role of the teacher, and check the readiness of the students regarding the material prerequisites before melakasanakan practical. The results of the analysis of the quality modules in terms of the practicality of modules that can be seen from three aspects, namely ease of use, the suitability of the time, and the appeal of the module. Science module based natural surroundings grade 3 primary school in

Bendosari are designed to evoke a very valid category activities and results of student learning. Thus, a module that has been developed can be said to be valid, practical and can be used in the process of learning science, especially on the growth and development of living things grade 3 primary school in Bendosari.

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