



THE EFFECTIVENESS OF CONTEXTUAL TEACHING AND LEARNING SCIENCE WORKSHEET TO IMPROVE THE PROCESS SKILL FOR PRIMARY STUDENT

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Abstract—This research aimed to know the effectiveness of CTL Science Worksheet to improve the process skill for 4th grade of primary students. This research used quasi experimental design in nonequivalent pre-post control group design. Based on the results of the effectiveness test, the gain score (N-gain) of experimental group showed (0.70) > control group (0.35) and student process skill have improved for each indicator. Based on the research that have been done, it concluded that CTL Worksheet capable to improve the process skill of 4th grade student.

Keywords: Worksheet, Contextual Teaching and Learning (CTL), Process skill

Introduction

That focuses student's center. IPA learning today is more emphasis on learning critical thinking skill, creative and capable of solving problem. This is stated regulation of Natural Education number 22 of 2006 mentioned that the science subject to learners know the concept in regulation to people's lives with their environment, being able to think logically, critically, Solve problems, skilled in

social life, have social and humanitarian value, able to communicate and compete [1].

The low quality of human resources today due to the lack of education. It can also be seen from various indicators including the results of the study Trends in International Mathematics and Science Study (TIMSS), results show the average of Indonesia's student score is below the international mean score is below the international average score. The lack of Indonesian scores due to the learning process of school IPA multiple choice and math problems that are given to learners are not in the form of problem solving questions. In contrast to the problems given to IPA literacy or TIMSS that better prioritizes the problem-solving process compared with the end result.

IPA learning in schools especially in elementary school (SD) is expected to be a vehicle for learners to study themselves and the environment, as well as further development prospects in applying them to daily life. This is in accordance with the understanding of natural Sciences (IPA) related to how to find out about nature



systematically. So that IPA is not only mastering the knowledge set in the form of facts, concepts, or principles, but also a process of discovery. An important aspect that teachers should be aware of in the implementation of IPA learning in elementary school is to engage students actively in learning To develop his thinking skills. IPA learning begins with the conception/knowledge Students who are relevant to what will be learned. Subsequent learning activities are designed through a variety of real Natural. Real experience activities with this nature can be done in a class or laboratory with a learning aids or done directly in the outdoors. Through real activity with this nature, Students can develop process skills and scientific attitudes such as Observe, try, conclude the outcome of the activity and communicate the conclusion of its activities. IPA study conducted By raising problems in the real world experienced by Children will be more attractive to children, So that children are actively involved in developing their skills.

The problem arises is that the education is still dominated by the view that knowledge as a device of facts should be memorized, including IPA subjects. On the other hand there are many facts that the teacher mastered the subject matter well but could not conducting well-learning activities. This is because learning is not based on specific learning models so that Student-

generated learning outcomes. Education can undergo better direction to be needed Renewal. One of the renewed efforts in the educational world is the renewal in the learning model used. Learning models are said to be relevant if they are able to reach learning objectives.

Learning models are the means or presentation techniques teachers use in the learning process to achieve learning objectives. The selection of learning models will determine the success of teaching learning. Therefore a teacher must be able to make combinations or variations in choosing the right learning model to facilitate students to receive subject matter

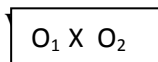
Methods

The research design used was quasi experimental design in the form of nonequivalent pre-post control group design. This design is used to see the comparison of student progress after learning with prior learning between the experimental class and the control class. This study only uses 3 stages, namely defining, designing, and developing, while the fourth stage, namely dissemination, was not carried out because the results were limited to the school where the research was conducted, namely SDN Kebraon and not enough time was available.

In a research design, the experimental unit is subject to treatment with two measurements. The first measurement (O1) was carried out pretest before the treatment



was given, the second measurement (O_2) was carried out posttest after the treatment was carried out, using only one group without a comparison group (Tuckman, 1978) The first step is to take measurements as an initial test (pretest), then subject to treatment within a certain period, then a final test (posttest). This research trial uses One Group Pretest-Posttest Design:



Analysis Data obtained in this study are quantitative data and qualitative data Quantitative data obtained from students' competency scores which include the mastery scores of basic concepts of science concepts and their application in daily life, kineria scores of students both cognitive and psychomotor. While qualitative data is obtained from the notes obtained when observing the implementation of learning.

Result And Discussion

The effectiveness worksheet test is conducted on two classes, those are experimental class and control class. The experimental class is a class which uses CTL worksheet in the learning process, while the control class uses commonly worksheet that students used. This effectiveness test was conducted to determine the increase of pre-test score with post-test, to know the difference of the mean score in experimental class and control class, and also the

improvement of the students' process skill. To know the increase of pre-test score with post-test, we can use N-gain test. The average score of N-gain test result in experimental class and control class can be seen in Table 1.

Experimental Class			Control Class		
Pre Test	Post Test	N-Gain	Pre-Test	Post-Test	N-Gain
41.3	80.4	0.70	24	56.5	0.35

The effectiveness test results obtained the score of experimental class, that is the average post-test (80,4) > than pre-test (41,3). Moreover, the average score of N-Gain in experimental class (0.70) > than in control class (0.35). Based on the calculation of N-Gain in the experimental class, it showed that 41.85% of students are in the high category and 56.14% of the students are in the medium category. In the control class, it was known that 5% of students are in the high category, 90% of students are in the medium category, and 5% of students are in the low category

Conclusion

The study of the effectiveness of CTL Science Worksheet to improve the process skill for 4th grade of primary students in the cognitive learning outcomes created learning



instruments consisting of: (1) Lesson Plan (RPP), (2) Worksheet (LKS), (3) Evaluation Test. Based on the results of data analysis and research discussion about the effectiveness of using CTL Science worksheets students to improve the process skills for 4th grade of primary students, it was concluded that: learning using Inquiry worksheet can achieve the high N-Gain (0.70).

References

- [1] Arsyad. 2004. Media Pembelajaran. Jakarta: PT. Raja Grafindo Persada.
- [2] Bambang, S dan Siti, M. (2013). Pengembangan Kreativitas Keterampilan Proses Sains Dalam Aspek Kehidupan

Organisme Pada Mata Pelajaran Ipa SD. Jurnal Cakrawala Pendidikan, pp 365-381. ISSN

[3] Depdiknas. (2006). Lampiran Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 22 Tahun 2006 Tentang Standar Isi untuk Satuan Pendidikan Dasar dan Menengah. Pp 484

[4] Mulyasa. (2009). Menjadikan Guru Profesional. Bandung: PT. Remaja Rosdakarya.

[5] Okka, R dan Zainal, A.H.S. (2017). Effectiveness of The Use Of Inquiry Learning Approach Towards Students' Improvement In Process Skills of IV Graders In Cikeas Natural School. Jurnal EDUTCEHNOLOGIA, pp 1-12.

[6] Sanjaya. (2011). Model-Model Pembelajaran. Bumi Aksara: Jakarta