JPSD Vol. 6 No. 1, Maret 2020
ISSN 2540-9093
E-ISSN 2503-0558

ANALYSIS OF STUDENT LEARNING ACTIVITIES IN SCIENCE LEARNING USING INQUIRY MODEL BASED ON LOCAL WISDOM

Encep Andriana, Endang Widya Ningsih, Nana Hendracipta, Mudmainah Vitasari, Callista Aulina

Universitas Sultan Ageng Tirtayasa
Andriana1118@untirta.ac.id

Article Info

History:
Submitted
January 30th, 2020

Revised
February 8th, 2020

Accepted
March 30th, 2020

Abstract

This research was aims to analyze the students' learning activity based on local wisdom using inquiry model on science subjects. The type of this research is descriptive-quantitatve. The object of this research is the 4th grade students of SDN Banjar Agung 4 with the total of 29 students. The instrument used in this research is observation sheets of students' learning activities. The final result of this study is an analysis of student learning activity indicators using a local-wisdom based learning model that has been developed previously that obtained the average score of student learning activities is 76.2% with "Good" category and the average score of learning implementation is 96% well implemented.

Keywords: local wisdom; inquiry model

A. Introduction

The local wisdom-based inquiry model is a product that had previously been developed by researchers with an average score of 92.12% with the category of “very feasible”. The development purpose of this product is to fulfill the needs in the field of a learning model based on local wisdom. Where the model does not only foster a love of local values developed in the community but also make students closer to the learning in the surrounding environment (Wuryandari, 2010). Through inquiry learning, students can be more active so it expected to improve students' learning outcomes in science subjects. (Hendracipta, N., dkk. 2017)

The use of models in teaching is not a new thing (Oktapyanto, 2016). The success of a model is not only limited to the feasibility but also on its utilization in the field. Therefore this model is made to see the extent of existin. To find out the achievement of student activities, it is needed indicators that show the student activities, namely in the form of solving problems, formulating problems, asking questions, discussing groups, and presenting the results of discussions (Dewi, N.L; dkk., 2013)

Learning activities have a major role in students' understanding of the concept of learning and also become one factor that has an important role in the student development stages (Laksana, DNL dan K. Rabu, 2015). Based on the characteristics of elementary school students whose development stages dominated by experience and high curiosity, it requires fun learning activities (Desstya, 2015). Fun learning activities will make students interested in learning and the concepts learned will be more easily remembered by students (Trinova, 2012).

The inquiry learning model allows students to be able to have an active role in the learning process (Ulandari, N; dkk., 2019). Science learning is oriented to scientific methods and work, so students are able to build in-depth concepts about the natural surroundings (Hendracipta, N., dkk. 2017). Learning by students will not be separated from the culture that developed in the community (Martini, E., 2018). Local wisdom provides opportunities for

students to know and understand the nature of life in a positive way as well as the efforts to maintain and develop wisdom through learning that conducted in schools that were previously outlined in a set of learning that can be implemented in the classroom (Ramdani, 2018). Science learning by integrating local wisdom can improve student motivation to be more creative and innovate with the materials that become the learning objectives (Andriana, E., dkk. 2017).

Until now the development of learning tools that prioritize student learning activities and introduce students to Indonesian local wisdom is still poor. Based on the observation results, there are no teachers who can design science learning tools that are integrated with the surrounding local wisdom to foster student learning activities, and many elementary school students do not know their own culture. On the research conducted by Dek Ngurah Laba Laksana and Fransiska Wawe shows the finding results of science learning with the help of media especially local culture-based media show the satisfying results. The learning activities improves accompanied by strengthening understanding of students' science concepts (Laksana, D.N.L & F. Wawe, 2015). This strengthens researchers to further analyze the use of inquiry models based on local wisdom towards students' learning activities.

The aim of this research are: (1) to find out students' learning activities through learning activities on local wisdom-based learning tools used; and (2) to find out the results of student learning activities towards the implementation of conducted learning.

B. Research Methodology

This research is quantitative descriptive research. The final result of this research is the analysis of students learning activity indicators using a learning model based on local wisdom that has been developed previously.

The population of this research was the elementary school students in grade 4 at SD Negeri Banjar Agung with a total sample of 29 people. Data collection techniques for student

learning activities using observation sheets.

Data analysis techniques in this research are :

a. Convert the qualitative assessment into quantitative according to the scoring guidelines as follows:

Table 1. Guidelines for Scoring Observation Sheets of Student Activities

Category	Score
None of the indicators appears	1
Only one indicator appears	2
Only two indicator appears	3
Only three indicator appears	4
All indicators appear	5

(Arikunto & Safrudin, 2009)

b. Nilai Values obtained by converting the scores that have been obtained by students using the formula.

$$NP = \frac{n}{N} \times 100\ \%$$

(Purwanto, 2012)

c. The scores obtained then calculated to find the average score of students in a class.

$$\bar{x} = \frac{\sum X}{N}$$

(Sudjana, 2009)

d. After obtained a percentage score, students' activities can be categorized based on table 2.

Table 2. Criteria for Student Learning Activities

Criteria	Category
81 – 100%	Excellent
61 – 80%	Good
41 – 60%	Fair
21 – 40%	Poor
<21%	Very Poor

(Arikunto & Safrudin, 2009)

C. Research Result and Discussion

When the learning tool implementation occurs, the assessment of the learning implementation was also conducted using the developed learning tools. The observation results of learning activities and assessments of learning implementation are described as follows:

a. Observation Results

Based on the observation results of student learning activities using student observation sheets, the average students' learning activity overall earned scores of 76.2% with a good category.

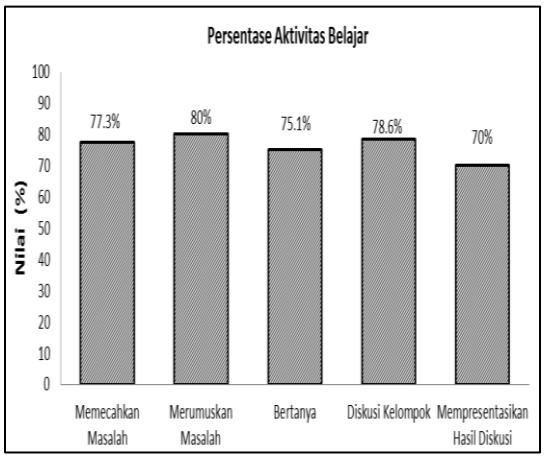

Diagram 1
The Average Percentage of Learning Activities in Each Aspect

Based on the results of student learning activities using local wisdom-based inquiry model, it can be seen that the indicator of solving problems get a score of 77.3%, formulating problems of 80%, asking questions 75.1%, group discussion 78.6% and presenting the results of the discussion by 70%. The lowest score is found on the indicator of presenting the results of discussion because students are not familiarized to do discussions and presenting it. While, the highest score found on the indicator of formulating problems. Indicators of formulating problems getting a high score because students are able to make experimental questions well. This is because students do a lot of activities in the learning that require students to do activities in the form of observation, discussion, and presentation (Atmojo, 2013).

b. Learning Activities Results on Learning Implementation Assessments

Based on the results of the observer assessment by grade 4 teacher named Towilah, S.Pd., the overall learning implementation obtain a score of 96% with the very good category. Evaluation of the learning implementation to determine the application of the model that has been designed and know the learning implementation in the class and assess student activities generally in learning activities. Student learning activities can be demonstrated through its activeness in the classroom during the learning activities that should be visible if students do have learning enthusiasm (Nurmala, D.A., dkk. 2014).

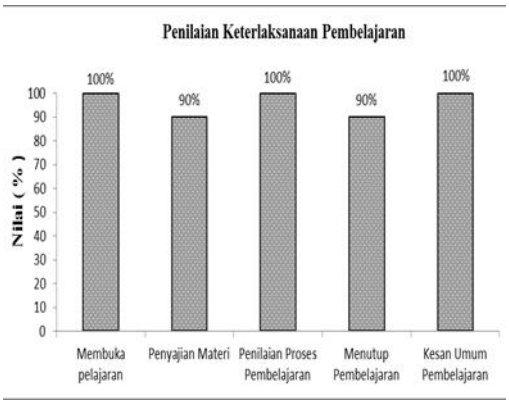

Diagram 2
The Average Percentage of The Learning Implementation Aspects

Based on the observation results of learning by using a local wisdom-based inquiry learning model, can be obtained that there are 3 learning processes that obtained the average score of 100%, namely opening lessons, learning process assessment, and general impression of learning. But there are 2 learning processes that obtain the average score of 90%, namely the presentation of material and closing the learning. In the presentation of the material, considered to be deficient because the time is more allocated for the experimentation process. While in the closing the learning, the teacher does not express the conclusions and follow-up of the material presented. Thus, the importance of interaction between teachers and students to know the description of the extent of understanding obtained by students (Hamzah, M. & Mahmudah, 2012).

D. Conclusion

Based on the results of research and discussion, can be concluded that the results of students' learning activities using inquiry models based on local wisdom in grade 4 students shows:

a. The average score of student learning activities is 76.2% with a good category. The highest value is on the indicator of formulating problems by 80%.
b. The average score of observation results of the learning implementation obtained result of 96% well done.

References

Andriana, E; dkk. 2017. Pengembangan Multimedia Pembelajaran IPA Berbasis Kearifan Lokal Di Sekolah Dasar. *JPSD 3(2).*

Arikunto, Suharsimi dan Safrudin. 2009. *Evaluasi Program Pendidikan*. Jakarta: Bumi Aksara.

Arikunto, Suharsimi. 1993. *Prosedur Penelitian Suatu Pendekatan Praktek.* Jakarta: Rineka Cipta.

Atmojo, Setyo Eko. 2013. Penerapaan Model Pembelajaran Berbasis Masalah Dalam Peningkatan Hasil Belajar Pengelolaan Lingkungan. *Jurnal Kependidikan, 43(2)*.

Desstya, Anatri. 2015. Penguatan Karakter Siswa Sekolah Dasar Melalui Pembelajaran IPA. *Prosiding Seminar Nasional dan Call for Papers Pendidikan Guru Sekolah Dasar UMS*.

Dewi, Narni Lestari; dkk. 2013. Pengaruh Model Pembelajaran Inkuiri Terbimbing Terhadap Sikap Ilmiah dan Hasil Belajar IPA. *Jurusan Pendidikan Dasar Ganesha 3(1).*

Hamzah, M dan Nur Qomariyah Mahmudah. 2012. Pengaruh Aktivitas Belajar Terhadap Pemahaman Konsep Matematika Siswa di MTs.Salafiyah Kota Cirebon. *EduMa: Mathematics Education Learning And Teaching 1(2).*

Hendracipta, N., dkk. 2017. Perbedaan Hasil Belajar Siswa Antara Yang Menggunakan Srategi Inkuiri Dengan Strategi Ekspositori. *JPSD, 3(1)*.

Hendracipta, N; dkk. 2017. Perbedaan Kemampuan Berpikir Kritis Siswa Melalui Penerapan Model Inkuiri Terbimbing Di Sekolah Dasar. *JPSD, 3(2)*.

Laksana, Dek Ngurah Laba dan Fransiska Wawe. 2015. Penggunaan Media Berbasis Budaya Lokal Dalam Pembelajaran IPA Untuk Meningkatkan Aktivitas Belajar dan Pemahaman Konsep IPA Siswa Sekolah Dasar. *Jurnal Ilmiah Pendidikan Citra Bakti 2(1)*.

Laksana, Laksana, Dek Ngurah Laba dan Katarina Rabu. 2015. Pembelajaran Kontekstual Berbantuan LKS Dalam Upaya Meningkatkan Pemahaman Konsep IPA dan Aktvitas Belajar Siswa SD. *Jurnal Ilmiah Pendidikan Citra Bakti, 2(1).*

Martini, Eneng. 2018. Membangun Karakter Generasi Muda Melalui Model Pembelajaran Berbasis Kecakapan Abad 21. *Jurnal Pancasila dan Kewarganegaraan, 3(2)*.

Nurmala, D.A., dkk. 2014. Pengaruh Motivasi Belajar dan Aktivitas Belajar Terhadap Hasil Belajar Akuntansi. *Jurnal Pendidikan Ekonomi UNDHIKSA 4(1)*.

Oktapyanto, Riyan Rosal Yosma. 2016. Penerapan Model Pembelajaran Simulasi Untuk Meningkatkan Keterampilan Sosial Anak Sekolah Dasar. *JPSD, 2(1)*.

Purwanto. 2012. *Evaluasi Hasil Belajar*. Yogyakarta: Pustaka Pelajar.

Ramdani, Emi. 2018. *Model* Pembelajaran Kontekstual Berbasis Kearifan Lokal Sebagai Penguatan Pendidikan Karakter.

Jurnal Pendidikan Ilmu-Ilmu Sosial, 10(1).

Sugiyono. 2013. *Metode Penelitian Kombinasi (Mixed Methods)*. Bandung: Alfabeta.

Trinova, Zulvia. 2012. Hakikat Belajar dan Bermain Menyenangkan Bagi Peserta Didik. *Jurnal Al-Ta'lim, 3(1).*

Ulandari, N; dkk. 2019. Efektivitas Model Pembelajaran Inquiry Terhadap Kemampuan Berpikir Kreatif Siswa Pada Materi Teorema Pythagoras. *Journal Cendekia: Jurnal Pendidikan Matematika, 3(2).*

Wuryandari, Wuri. 2010. Integrasi Nilai-Nilai Kearifan Lokal Dalam Pembelajaran Untuk Menanamkan Nasionalisme di Sekolah Dasar. *Proceding Seminar Nasional Lembaga Penelitian UNY (1-10).*