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IPAS ELEMENTARY SCHOOL: DEVELOPMENT OF STUDENT WORKSHEET BASED ON CONSERVATION EDUCATION WITH TOPIC FLORA OF TAMAN NASIONAL UJUNG KULON (TNUK)

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ABSTRAK

This research and development aims to determine the development process, feasibility, student response and effectiveness of the Conservation Education LKPD. This research uses research and development (R&D) methods by Borg & Gall. The data collection technique in this study uses interviews for needs analysis, feasibility validation questionnaires for a team of material, language and design experts, and student response questionnaires. The subjects in this study are 23 students of grade IV of SD Negeri Kota Baru for the 2023/2024 school year. The result of this research is the product of the development of the Conservation Education LKPD with the topic of flora of Ujung Kulon National Park for grade IV of elementary school. Based on the results of product validation from material experts, media and language obtained a "Very Feasible" interpretation. Then the students' responses obtained a "Very Good" interpretation and the effectiveness of the Conservation Education LKPD obtained an "Effective" interpretation. Thus, the Conservation Education LKPD with the topic of the flora of Ujung Kulon National Park (TNUK) in the science subject of grade IV elementary school is Very Feasible, Very Good, and Effective to be used in the learning process for students in grade IV of elementary school.

Keywords: LKPD; Conservation Education; Flora; IPAS

INTRODUCTION

One of the most basic learning goals is to create changes in behavior and attitudes for the better. Education is one of the paths that can be taken. Because education is a right owned by every individual, this is in line with the 1945 Constitution article 31 paragraph 1 which states that every citizen has the right to education. Therefore, education is the main goal when wanting to make the nation's successors have good behavior and attitudes in accordance with the purpose of learning and learning, this is also in line with the National Education Law No. 20 of 2003 in Chapter II Article 3 which reads that National Education functions to develop abilities and shape the character and civilization of a dignified nation in order to educate the life of the nation. Aims to develop the potential of students to become human beings who believe in and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (SISDIKNAS, 2003).

In carrying out education, it is not only limited to science, but also to a good and comfortable environment. Therefore, to create a good education, a good environment is needed to create the results of good education, because the environment is the place where education itself occurs. This is in line with what was conveyed by Bramasti *et al* (2023:2) that the environment has a great contribution to the occurrence of the education process, because the environment is the place where education occurs. Therefore, to protect the environment, there needs to be awareness for every individual, this is in line with the Law on Environmental Protection and Management No. 32 of 2009, article 65 paragraph 4 states that everyone has rights and roles in environmental management (ESDM, 2009). In this case, education is one of the options that can be said to be effective in its cultivation. Planting this can be instilled through Conservation Education.

Conservation Education is one of the learning processes to build concern for the surrounding environment, this is in line with what has been quoted by the web directorate general of natural resources and ecosystem conservation (KSDAE) revealing that Conservation Education is a learning

process to build a spirit of concern for the surrounding environment. In learning Conservation Education, it also involves teachers, students and the school community, so that the implementation of Conservation Education can be carried out optimally. This is in line with Jacobson's opinion (Afandi *et al.*, 2023:29) that conservation education expects a change in behavior, attitudes, and ways of thinking related to the management of natural resources and ecosystems through various project-based activities involving students, teachers, and the community. Conservation education also has values that are important and fundamental to be applied, namely Knowledge, Awareness, Behavior, Skills, and Participation. So this Conservation Education is an education that expects a change in behavior, attitude, and way of thinking, especially which will later be directly related to the management of natural resources and their ecosystems that adhere to the values in it.

In the Independent Curriculum implemented by the government, there is a science and social science subject that also applies the concept of Conservation Education, which is to study or discuss the environment as the foundation of students' understanding. Natural and Social Sciences (IPAS) is a science that studies living things and inanimate objects in the universe and their interactions, and studies human life as individuals as well as social creatures that interact with their environment (Kamus Besar Indonesian Language, 2016). With one of the discussions raised being flora, this learning is considered appropriate to be applied in the integration of Conservation Education. In accordance with the function of the flora itself is as a support for life, flora as a supplier of oxygen, and a provider of food for living things around it. So in the learning that will be applied, it is necessary to have learning tools used to facilitate the learning process that will take place.

Good learning requires good learning tools, one of these tools is the Student Worksheet (LKPD). This LKPD is one of the learning tools to simplify the learning process and can also help teachers to measure students' understanding of what the teacher explains. As conveyed by Khasanah and Fadila (2018:60), the Student Worksheet (LKPD) for teachers is so that students can learn according to their respective learning speed and the subject matter can be designed in such a way that it is able to meet the needs of students. So with the existence of the Conservation Education LKPD with the topic of flora of Ujung Kulon National Park (TNUK), the content will be adjusted to the competence of Conservation Education and the ability of students to meet their needs. Therefore, the LKPD of Conservation Education with the topic of flora of Ujung Kulon National Park (TNUK) is necessary to instill the values of Conservation Education.

According to the results of observations that have been made by researchers at SD Negeri Kota Baru, students do not know what Conservation Education is, besides that teachers have also never given teaching related to Conservation Education for several reasons such as time, lack of technology utilization and only using facilities provided by the government. Therefore, the LKPD of Conservation Education with the topic of flora of Ujung Kulon National Park (TNUK) is considered to be able to support learning activities based on Conservation Education.

Based on this background, the Conservation Education LKPD was developed, bearing in mind the importance of instilling the character of caring for the environment to students by adding an introduction to the flora of Ujung Kulon National Park (TNUK) as an example of Conservation itself.

RESEARCH METHODS

This study uses a descriptive method that aims to determine the development process, feasibility of LKPD, student response and the effectiveness of the LKPD of Conservation Education developed. The research was conducted in grade IV of elementary school with 23 students. The development process is carried out with 6 stages of research and development of Borg & Gall (sugiyono, 2013:298) which have been modified according to research needs. The stages include problem analysis, data collection, product design development, design validation, design improvement, and product testing.

To find out the feasibility of the Conservation Education LKPD that will be used, an expert test questionnaire will be given to a team of media experts, linguists and material experts. In this expert test data examination technique, a Likert scale (Sugiyono, 2023:94) with a score of 1 to 5 with details as follows table.

Table 1. Expert Test Scoring Guidelines Based on the Likert Scale

Value	Score
Strongly Agree	5
Agree	4
Nervous	3
Disagree	2
Strongly disagree	1

The score obtained will then be calculated using the data validity technique according to Aji and Widodo (2017:48) as follows:

$$p = \frac{f}{n} \times 100\%$$

P = Percentage
f = Score obtained
n = Maximum score

Furthermore, the expert validation score will be categorized in the presentation by Pradana and Mawardi (2021:21) as follows:

Table 2. Validity Index Range

It	Interval	Score
1.	81-100%	Highly Worthy
2.	61-81%	Proper
3.	41-60%	Quite Decent
4.	21-40%	Less Worthy
5.	0-20%	Not Eligible

Then to find out the students' response to the LKPD used the student response questionnaire to the LKPD. In the data examination technique, the Guttman Scale from Widiastika *et al* is used with data that has been arranged in a table containing statements of agreement or disagreement. The questionnaire developed by the researcher contains positive and negative statements. In a positive statement, it indicates "agree" and will get a value (1), then for "disagree" will get a value (0), while for a negative statement, it gets the opposite, namely "disagree" gets a value (1) and "Agrees" gets a value (0). For score guidelines use the Guttman Scale as listed below.

Table 3. Guidelines for ***Guttman*** **Scale Scores for Students**

Statement Answer		
	Positive Statement	Negative Statements
Agree	1	0
Disagree	0	1

The score obtained will then be calculated using the data validity technique according to Widiastika *et al* (2021:55) as follows:

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

NP = Percentage of student responses for each indicator
n = The number of scores obtained by students for each indicator
N = Total number of scores for each indicator

Furthermore, the value obtained will be interpreted in accordance with the criteria of Pradana and Mawardi (2021:21) as follows.

Table 4. Criteria for the Interprestabby Category of Student Response Questionnaire

It	Interval	Category
1.	81-100%	Excellent
2.	61-81%	Good
3.	41-60%	Pretty Good
4.	21-40%	Not Good
5.	0-20%	Bad

Furthermore, to determine the effectiveness of the Conservation Education LKPD that will be used, a test is used to test it, in this study using a written test in the form of *a Pretest* and *Posttest* which will be declared effective if it gets an average score of ≥ 75 and an average N-Gain of >70 which is obtained through the following calculations:

$$\boldsymbol{N-Gain} = \frac{Spost - Spre}{100 - Spre}$$

N-Gain = Gain Value
Spre = Pretest Score
Spost = Posttest Score
100 = Maximum Score

With the Gain criteria according to Hake (1990) as follows:

Table 5. Criteria for Interpretation of Completeness of Indicators

Score	Interpretation Criteria
0.70 < g 100	Tall
0.30 < g 0.70	Keep
0.00 < g 0.30	Low

Furthermore, it is interpreted by percentages with the following criteria:

Table 6. Criteria for Determining the Level of Effectiveness

Percentage%	Interpretation
< 40	Low
40-55	Keep
> 76	Tall

RESULTS AND DISCUSSION

Result

Results and discussion are presented in one section consisting of several paragraphs. This section is the most dominant part of the entire article, around 60%. To facilitate understanding and reading, the research results are presented first, then followed by a discussion section. Results and discussion subtitles are presented separately.

Research results are presented by writing processed data (not raw data) in the form of narratives, tables/graphs/images/verbal descriptions/a combination of the three, and providing information that is easy to understand. Writers must use variations in presenting tables, graphs, or verbal descriptions. The tables and graphs presented must be referenced in the text. The font size of table and image contents is reduced to 10 pt. Table captions are written above the table, while figure and graph captions are written below the numbers/graphs. Captions from tables or graphs or images must be left aligned. Table 1. Table titles are written with capital letters at the beginning of each word, except conjunctions

Table 1. Example of table writing

No	Title/Content	Note
1	Introduction	
2	Method	
3	Discussion	
etc	Etc	

Discussion

The stage in this first process is problem analysis. Problem analysis is by conducting needs analysis, curriculum analysis, material analysis and pre-research data collection. After the analysis stage is completed, what the researcher does is to start developing the Conservation Education LKPD. At this stage of designing teaching materials, the researcher formulates what will be included in the product to be developed. At this stage, the researcher formulated to include five basic competencies of Conservation Education, then the LKPD of Conservation Education was integrated with the science material in class IV in Chapter 1; Plants, the source of life on Earth.

After the product is completed, the next step is to carry out expert validation to measure the level of feasibility of the product before it is tested. This validation was carried out by three expert teams, namely material experts, linguists and media experts. From each of these experts, 2 experts are involved in each team. Before validation by a team of linguists, media and materials, the validation of the questionnaire instrument to be used is first carried out. Each of these questionnaire instruments will be examined by an expert instrument validator, on the validation of the expert instrument the researcher gets a score of 88% with a "Very Feasible" interpretation to be used in the research. Then the researcher validated three teams of experts to measure the level of feasibility of the product developed by the researcher.

In the validation of material experts, there are three aspects, namely the aspect of material suitability, feasibility of presentation, and LKPD Conservation Education with the five basics of conservation education. By focusing on these three aspects, the product developed by the researcher received a score of 95% with an interpretation of "Very Feasible". Then the validation of media experts consists of three aspects, namely the size of the LKPD, the design of the LKPD and the design of the content of the LKPD for Conservation Education. So by focusing on these three aspects, the researcher got a score of 83.4% with the interpretation of "Very Feasible". Then in the validation of linguists, there are four aspects, namely readability, clarity of information, diology, and conformity with language rules. So by focusing on these four aspects, the researcher got a score of 92% with the interpretation of "Very Feasible". Therefore, based on the results of the expert tests that have been carried out, the teaching products developed by the researcher both from material experts, media experts and linguists obtained an average score of 90.1% with an interpretation of "Very Feasible" so that the LKPD Conservation Education developed by the researcher can be implemented. The following are the results of the expert team's test.

Table 7. Recapitulation of Expert Validation Results

Validation Results	Percentage	Criterion
Material Expert	95%	Highly Worthy
Media Members	83,2%	Highly Worthy
Linguist	92%	Highly Worthy
Average Score	**90,1%**	**Highly Worthy**

After the implementation of validation by the expert team and with several improvements, the next stage is product testing as the final stage as well as to see the response and effectiveness of the Conservation Education LKPD developed by the researcher. In the learning process before and after being distributed, written tests in the form of *Pretest* and *Posttest* were distributed to determine the effectiveness of the product developed. Based on the results of this written test, it got an average of 0.78 with an interpretation of "High" and 78% with an interpretation of "Effective". The following are the results of *the Pretest* and *Posttest* of students:

Table 8. *Pretest* and *Posttest* Results

Value	Average Score
Pretest	51,739130
Posttest	88,69565
N-Gain Score	0,78
N-Gain Score (%)	78%
Category	**Effective**

Furthermore, after the trial stage was carried out, the distribution of student response questionnaires was distributed to see the responses of students blessed with the LKPD of Conservation Education that was developed. This student response questionnaire was distributed to grade IV students of SD Negeri Kota Baru with a total of 23 students. The student response questionnaire has negative and positive statements, which also contain 4 aspects, namely attractiveness, material, language, and benefits. The following are the results of the student response questionnaire.

Table 9. Results of Student Response Questionnaire

It	Aspects	Number of Percentages	Average
1.	Highlights	95%	97%
2.	Material	98%	
3.	Linguistics	96%	
4.	Benefit	96%	
Criterion			**"Very good"**

Based on the table above which is the result of the analysis of students' responses to the LKPD of Conservation Education with the topic of flora of Ujung Kulon National Park (TNUK) in the Science and Technology Subject of Grade IV Elementary School, an average of 97% was obtained with an interpretation of "Very Good".

The advantage of the Conservation Education LKPD developed by this researcher is that the researcher presents a display of the content of the Conservation Education LKPD that looks attractive while still applying the five basic competencies of Conservation Education in it, this is done so that the delivery of material can be received more fun and useful for students. Learning using the LKPD for Conservation Education developed is also not boring with interesting and clear pictures of the rare flora of Ujung Kulon National Park. Thus, the Conservation Education LKPD with the topic of flora in the science and science subject of grade IV elementary school is Very Feasible, Very Good and Effective to be used in the learning process of grade IV elementary school students.

CONCLUSIONS

Based on the conclusion of the product that has been developed, the Conservation Education LKPD with the topic of flora of Ujung Kulon National Park (TNUK) in the science subject of grade IV elementary school obtained an average score of 90.1% with an interpretation of "Very Feasible" for the feasibility of the expert test, then an average score of 97% with an interpretation of "Very Good" for the response of students, and an average score of 0.78 with an interpretation of "High" and 78% with an interpretation of "Effective" for the effectiveness of the Education LKPD Conservation.

Furthermore, there are several suggestions related to future improvements, including that schools can support learning facilities and resources that are appropriate in learning, schools can also instill Conservation Education into learning and make it a school habit. This is done to make the learning process run as it should, namely running both materially and in the student's environment later.

Teachers can develop LKPD that is in accordance with the characteristics of DKIK participants. Such as developing LKPD and other learning tools. So that students can add insight related to Conservation Education by using a supportive LKPD. It is also to increase understanding of the importance of maintaining biodiversity and can also add books related to biodiversity, especially in Banten.

For the next research, it is hoped that it will be better in developing LKPD which will be developed with relevance and informative in learning to motivate students in learning activities in the future.

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