

THE PROBLEM OF TEACHERS DEVELOPING SHEET WORK OF STUDENTS (LKPD) HIGH SCHOOL BIOLOGY BASED SCIENTIFIC APPROACH

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Abstract

The problem that often occurs is a lack of understanding of teachers to develop LKPD learning tools to create creative and innovative learning so that solutions are needed to solve the problems that occur, the purpose of this study is to find out what problems are faced by teachers when developing LKPD in SMA Negeri at Muara Badak which is based on a scientific approach in improving students' critical thinking skills. The research method used is a percentage and is described in accordance with the findings. Result Research shows that 80% of teachers do not understand how to develop LKPD learning tools for each component. The teacher's lack of understanding regarding how to develop LKPD learning tools that are adapted to learning materials to create creative and innovative learning. Based on the results of this study, it can be concluded that it is necessary to develop LKPD that is in accordance with the objectives of learning and is able to improve students' critical thinking skills.

Keywords : Teacher Problem, student worksheets, scientific approach.

The Indonesian government always strives to improve the quality of education, which is one of the main factors to create a smart and quality Indonesian society. Education is a conscious and planned effort to create an atmosphere of learning and the learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves and society, nation and state (Law Law No. 20 of 2003). To realize quality education, one of the factors that must be considered is the level of knowledge and skills of teachers in managing learning in the classroom.

One of the problems faced by the world of education in Indonesia is the problem of the weak learning process. In the learning process, students are less encouraged to develop thinking skills. The learning process in the classroom is directed at the ability of students to memorize information, the brain is forced to remember and accumulate various information without being required to understand the information it remembers to relate it to everyday life (Sanjaya 2007).

The quality of education is determined by the ability of a teacher and the skills to evaluate the results of his teaching by improving the learning tools that have been made and implemented, for example improving models, methods or strategies so that learning objectives are met. The learning device is a teacher's guide in carrying out the learning process so that the material presented is more systematic and directed. In addition, learning tools provide guidance in developing teaching techniques and provide guidance for designing better devices (Trianto, 2010).

Problems in general in every school are almost the same, namely related to the weak understanding of teachers in developing learning tools that can provide positive responses from students in the classroom. Each level of education experiences more or less the same problems so it is very necessary to carry out an innovation that can provide color in every learning process.

Kutai Kartanegara Regency, precisely in Muara Badak District, consists of several schools, both junior high and high school, where teachers have not optimally understood how to create interesting learning and have a positive impact on students. The results of observations that have been made in several high schools in Muara Badak District show that the teacher's lack of ability to develop learning tools with the *scientific* approach. This is due to the lack of references regarding the steps and ways of developing learning tools by implementing cooperative learning models.

In this regard, the learning tools used by the teacher only rely on those provided by printed books and via the internet, so that the syllabus, lesson plans, *handouts*, media, LKPD and evaluation used do not bring up things that can improve students' thinking skills. The results of further observations show that the lack of ability of teachers in several high schools in Muara Badak Regency in developing Student Sheet (LKPD) with a *scientific approach* -based *approach*, so that every learning takes place students do not understand the concept of material optimally this has an impact on the low ability of students to think critically.

The learning process in school teachers want knowledge to be well received by students and can improve students' critical thinking skills so that learning outcomes and students' critical thinking skills increase. To achieve this, the teacher needs to improve the ability to develop LKPD based on a *scientific approach* to improve students' critical thinking skills.

The background above has been described regarding the problems faced by the teacher when developing the Learning Participant Worksheet (LKPD) learning tool. Based on this, the formulation of the problem of this research is "What problems are faced by teachers when developing LKPD with a *scientific approach* specifically for Biology subjects? "

METHOD

This type of qualitative research is a needs analysis that is used as a reference for further development research. A need analysis which is part of the research and development procedure which refers to the development procedure by Dick and Carey (2001) in Rohman, et al, (2013). The needs analysis is sourced from the results of initial observations in the field. The data collection technique used is the result of interviews with teachers researchers which the researcher as the main instrument, instrument-related study how to develop learning tools LKPD and analyzed using percentages% results of the analysis will be described for analyzing the needs that will be carried out by further research. The sample of this research is SMA Negeri 1 Muara Badak and SMA Negeri 2 Muara Badak where each school has 2 teachers so that the sample size of this research is 4 teachers .

RESULT AND DISCUSSION

The results of the research that have been carried out show that the problem of teachers developing LKPD tools is that the average teacher does not understand how to develop LKPD learning tools to be more clear can be seen in the following table:

Table 1. Assessment of teacher understanding regarding the problems faced by the teacher

No.	Assessment Indicators	Percentage of Assessment			
		Not really understand	Enough Understand	Understand	Very Understand
1	Systematic suitability of LKPD	80%	20%		
2	The suitability of the title of the LKPD with the learning material	80%	20%		
3	LKPD Identity (Education Unit, Class / Semester, Theme, Sub-theme, Learning, Time Allocation)	80%	20%		
4	Student Identity / Student Group (Name and No Absent)	60%	20%	20%	
5	The suitability of LKPD objectives based on a <i>scientific approach</i> with learning materials	80%	20%		
6	Suitability of LKPD objectives which spur on the improvement of critical thinking with learning materials	80%	20%		
7	The suitability of literature review with learning materials	80%	20%		
8	Suitability of Tools and Materials with the learning material	80%	20%		
9	Suitability of LKPD Activity Steps based on a <i>scientific approach</i> with learning materials	80%	20%		
10	Suitability of LKPD Activity Steps that spur increased critical thinking with learning materials	80%	20%		
10	The suitability of the Data Presentation Place with the activities of students	80%	20%		

Research Results, 2019

Based on the results of the research contained in the table above which explains that 80% of teachers do not understand how to develop specific *scientific approach* LKPD learning tools for Biology subject in SMA class XI where the LKPD developed to train students to think at high levels will cause students to learn more deeply, students will understand the concept better. High-level thinking is in accordance with the substantive character of learning activities. Seen when students demonstrate skills and communicate their understanding well and deeply. Students will be able to distinguish ideas or ideas clearly, argue well, be able to solve problems, be able to construct explanations, be able to hypothesize and understand complex matters more clearly.

According to Indriyani (2013), a meaningful learning process will make students have functional knowledge which can be applied at any time to solve problems in everyday life. In addition, the use of LKPD plays a very large role in the learning process. According to Prastowo (2014), LKPD acts as a teaching material that more activates students, makes it easier for students to understand the material provided, as a concise teaching material and is rich in tasks for practicing. Thus, LKPD in general plays a role in facilitating and directing the implementation of the learning process for students.

From the observation of the general fact the field indicate that the use of learning tools such as syllabus, lesson plans, teaching materials, instructional media, LKPD and evaluation turns out the use of the device is still not optimal in high school subdistrict of Muara Badak, especially in the use Activity Sheet Students (LKPD) which based on the Scientific Approach . Where it is known that biology lessons are lessons that are accompanied by practice and experiment which are always related to scientific inquiry and require a deeper understanding . This problem occurs due to the lack of reference and motivation from the teacher to develop LKPD so that the tools used are not adapted to student problems and are not adapted to the circumstances and conditions in the field. This can be seen from the questionnaire given that 95% of teachers have not used the LKPD that was prepared according to the conditions and conditions of the school and still use the LKPD from the publisher which still contains many questions that are still complicated to understand.

The results of observations related to the use of LKPD based on *Scientific Approach* in improving students' critical thinking skills can be seen from the graph in Figure 1 below. In this graph, it can be seen that the level of understanding and use of LKPD that is in accordance with the problems and conditions in the field is in a less category where it is related to the suitability of LKPD with the approach. less scientific category with a presentation of 65%, the use of language that is simple, clear and easy to understand, the category is less than 75%, the completeness of the format components is also in the poor category but the presentation is not too high by 55%, the material displayed is in accordance with the conditions and circumstances of the place or schools are in the very poor category by 87% and the use of added material presented in the form of games or games is also in the very low category of 92%. From the presentation, it was known that the LKPD used was still standard and difficult to understand which was not in accordance with student problems and conditions at school so that it made students bored and not motivated to learn. Materi Biology greater need activities that bring students to play an active role in the learning process as practical so it is good to engage students in problem solving. This is in line with the opinion of Hofstein (2004) in Firdausi (2014) which states that practicum activities are effective for developing logical thinking, problem solving skills, improving psychomotor and student interest in learning and avoiding monotonous learning atmosphere.

Student thinking skills are also supported by learning motivation , the lack of motivation and attention of students in learning certainly affects student learning outcomes itself which results in a lack of student problem solving abilities. This happens because students do not focus on the lessons delivered by the teacher. Salu (2013) states that motivation is a factor that has a lot of influence on student learning processes and outcomes, one of the causes is the lack of teacher mastery of existing learning strategies because mastery of learning strategies is needed to achieve success or success in achieving learning goals. From the results of interviews, students stated that learning that occurs in the classroom feels boring because practicum activities are rarely carried out, even though Biology material is very well supported by activities that directly involve students actively, so that students' attention can be focused on the learning process. Another problem that arises is that learning biology in the classroom is dominated by the use of the lecture method by the teacher. According to the teachers, the use of methods in classroom learning is adjusted to the time, situation and conditions of the class, the type of material being taught so that most of the teachers

use instant methods such as lectures. However, on the other hand, students do not like this method because it is boring and cannot be explored.

From the root of the problem in the field, it is necessary to have the right solution to overcome it by developing learning tools for the Student Activity Sheet (LKPD) to support teachers and students in teaching and learning activities, especially in Biology material which aims to facilitate students in solving problems. and motivate to think critically . One of them is by developing student worksheets . . LKPD based on scientific approach and critical thinking skills are very good in motivating students to learn critically. LKPD based on the scientific approach is used to improve critical thinking skills. This will be one of the learning resources for students to learn independently to build through direct trial activities and train students in critical thinking through the application of scientific attitudes. Ha l can help teachers in the teaching learning process to practice critical thinking skills of learners. Through the provision of LKPD based on a scientific approach and critical thinking skills, students will be trained to think critically so that students' critical thinking skills will increase. According to Ennis in Rozalia (2016), the increase in learning outcomes is influenced by changes in students' critical thinking.

In addition, from the teacher himself, a reference is needed in the form of a module that can be used as a reference for teachers in the preparation of learning tools. Socialization activities through the MGMP (Subject Teacher Deliberation) related to Biology subject matter also need to be carried out in the development of learning tools so that teachers understand more about the preparation of these devices. It is also hoped that the teacher's full guidance to students is related to problem-solving abilities for the smooth running of the learning process in the classroom. Based on the simulation above, it is suggested that the development of LKPD with a *scientific approach* needs to be considered for each component and adjust it to learning materials to improve students' critical thinking skills.

CONCLUSION

Based on the results and findings of research that has been done it can be concluded that the analysis of the needs of teachers issues related to the development of learning tools LKPD average of 80% of teachers do not understand how to develop learning tools for each component LKPD of LKPD *scientific approach* are developed. The LKPD component adjusted to the learning material to be taught is still very minimal and not in accordance with the material, so it needs to be developed to improve students' higher-order thinking.

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