The Development of Students Worksheet (SW) based on Inquiry to Improve Activity and Learning Outcomes in Civic Lesson of Students Grade VII

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Abstract—This study was conducted based on the problem of low learning outcomes in the subjects of PPKn and low student activity on the learning process. This is caused by several factors, such as the lack of variety of teaching materials used by teachers and learning process that only uses conventional methods or lectures that cause the low interest of students in learning. Therefore, researchers intend to develop teaching materials in the form of LKS based inquiry on the subject of PPKn in class VII which aims to improve student learning outcomes and activities. LKS based inquiry is a teaching material that is designed by using the stages of inquiry learning, which is orientation, formulate problems, propose hypothesis, collect data, test hypothesis and conclude. LKS based inquiry in addition to improving student learning outcomes can also increase student activity, this is because in the stages of inquiry itself requires students to play an active and critical thinking in the learning process. In this research, LKS based on inquiry is developed in accordance with BSNP standard, ie readability aspect, aspect of kegrafikan, and content feasibility aspect, and also fulfill valid, practical and effective criteria. The research applies model of ADDIE development with stages: analysis, design, development, implementation, evaluation. Data analysis techniques used in this research is: (1) validity analysis of worksheet based on inquiry, (2) improved analysis of learning outcomes and student activities. The result of this research indicates that worksheet based on inquiry which developed is valid and feasible, it is based on the validation result stated by the expert team that is 91.7% with the criterion "very good", the validation result from the linguist is 87.5% with the criterion "Good", and the validation results of the design expert learning is 88.5% with the criteria of "good". Furthermore, worksheet based inquiry itself can improve learning outcomes where students who use worksheet based inquiry on civic education learning process get the average g factor of 0.83 with the category of "high", besides the students also get the average g factor of 0.88 with category "High" on student learning activities.

Keywords-Worksheet, inquiry, learning outcomes, and learning activities.

I. INTRODUCTION

The subjects of Pancasila and Citizenship Education (Civic lesson) in the 2013 curriculum are subjects that are the perfecting of the subjects of Kewarganegaraan Education (PKn) in the curriculum of KTSP 2006. In general the objective of Civic lesson subjects in the 2013 curriculum in primary and secondary education is to develop the potential learners in all dimensions of citizenship, namely: (1) civic attitudes including civic convidence and civic responsibility; (2) civic knowledge; (3) citizenship skills including civic competence and civic responsibility.

Based on students’ cognitive level, a lesson is said to be successful if 80% of students have been able to achieve the Minimum Criterion score. But in reality ideal condition expected from learning goal of Civic lesson not yet reached with maximal. This can be seen from the results of study of Vocational School students VII SMPN 2 Bilah Hilir in semester I of the year 2016/2017, if the accumulated students who are able to reach the KKM only as much as 52.2%, it proves there are still many students who learn below KKM.

Based on the observations in class VII of SMPN 2 Bilah Hilir, there are several factors that affect the low learning outcomes among students, in the classroom teaching teachers rely more on textbooks, teaching materials that are textbook center (centered on textbooks) are always applied in the teacher conventional learning as in the subjects of Civic Education. This statement is supported by teacher activity in teaching still apply conventional learning model and lecture method. The learning process that is only conventional not only causes the low learning outcomes of students on the subject of Civic lesson, but also causes low student activity. Based on the results of interviews I conducted with teachers in the field of study Vocational grade VII SMPN 2 Bilah Hilir obtained information that, in the learning process lasted only about 30% of students who good activity, 70% of students only focused on listening and receiving activities just knowledge or information obtained from the teacher.

Activity is a principle or principle that is very important in the interaction of learning because in principle learning is doing to change behavior. In learning activities, students or students should be active to do. In other words, that in learning is necessary activity [1]. In accordance with the theory of constructivism learning through Piaget, Trianto considers that cognitive development as a process in which learners actively build a system of meaning and understanding of reality through the experiences and
interactions between them [2]. Teachers are expected to be able to create learning programs by utilizing the media and learning resources so that learners can move using the media provided by teachers such as student activity sheets. Utilization of the media aims to improve learning activities, so that the quality of learning results is increasing [3].

SW is a stimulus or teacher guidance in learning that will be presented in writing so that the writing need to consider the criteria of graphic media as a visual media to attract the attention of learners [4]. Hamalik put forward several principles that must be considered in developing the preparation of teaching, namely: 1) The formulation of competence in the preparation of teaching should be clear. 2) Preparation of teaching should be done to establish the competence. 3) Activities that are developed and developed in the preparation of teaching should be supportive and in accordance with the established competencies. 4) The developed teaching preparation should be complete and comprehensive, and clearly achievable.5) There should be coordination between the implementing components of the school program [5].

The inquiry approach is a way of conveying the lesson by examining something that is critical, analytical, and argumentative by using certain steps toward conclusion [6]. Sagala's opinion states that in guided inquiry-based learning the teacher can better familiarize the students to prove something about the learned subject matter [7]. Based on the above explanation it is clear that the use of teaching materials that are systematically designed to improve the activities and learning outcomes of students, the main focus of this research is the researcher produces / make instruction materials Student Sheet (SW) based on the material systematically designed on the subject of Civic lesson.

II. METHOD

This research method is research and development (R & D) by using ADDIE model. This model is used to develop the self-employed Student Sheet (SW) based on the material of norm and justice based on Curriculum 2013 on VII students of SMPN 2 Bilah Hilir. The study population is all students of class VII in SMPN 2 Downstream Blade of the School Year 2017 / 2018. The sampling technique in this study is cluster random sampling. Class VII-4 learning without using an inquiry self-based Student Sheet. Class VII-3 is provided with the use of Student Instruction (SW) based on inquiry on the subject of Civic lesson.

III. RESULT

This research is a research and development (R & D) and the product resulting from this research is a product that meets the criteria valid and feasible to use. The main purpose of this study is to describe the feasibility or validity of inquiry-based SW on norms and justice materials based on the Curriculum 2013 in the seventh grade students of SMPN 2 Bilah Hilir. This study also aims to describe the improvement of learning outcomes and learning activities of students using ordinary SW and students using SW developed in this study. The development model used is the ADDIE model with five stages of research: analyze, design, development, implementation, and evaluation.

Student needs analysis is obtained based on learning outcomes of students in which VII-4 class VII-3 and VII-4 only get percentage of mastery as much as 40% in other words do not meet the minimum criterion criteria that is 80%, in addition to low learning outcomes based on observations obtained that the level of student activity in learning activities is very low. Based on the above data is analyzed student needs is a concrete learning materials for understanding the concept of students and teaching materials that can provide direct experience to students.

After the product is determined based on the results of the analysis stage, then in the next stage is the stage of product design, namely:

a. The product developed is SW based inquiry.
b. The topics of instruction or units to be discussed on the lesson using the inquiry-based SW are Norma and Justice materials.
c. Refined the units of instruction, identify the goals to be achieved within each unit.
d. Develop specifications for assessments that have been studied students, namely by doing activities and post tests, where the questions given on the activities have been adapted to the learning that has been studied students.

At this stage, two steps are carried out, namely: product development based on the design at the previous stage and product feasibility testing through the results of the expert validation analysis. Product development is prepared based on the framework of the preparation of S W based on Inquiry consistent with the material taught, as for the inquiry learning stages, namely: (1) Orientation; (2) formulate the problem; (3) propose a hypothesis; (4) collecting data; (5) test the hypothesis; (6) conclusions. Core competencies, basic competencies and learning indicators are a reference in making SW based inquiry.

The product feasibility test is validated by several experts, namely: (1) Mr / Ms as material expert validator; (2) Mr / Ms as validator of Indonesian language expert; and (3) Mr / Ms as a validator of the design of learning. For the SW's validity and conformity developed under the BSNP standard are obtained from each component of the material expert, Indonesian expert, and the design of the lesson.

After the product in the form of SW based inquiry developed on the concept of norms and equity is declared valid by the expert validator and feasible to be used, then the product used by the student to be tested its effectiveness in raising the learning result of Civic lesson. In this research, the students were studied by two classes, namely the students of class VII-4 as control class where in this class did not use inquiry-based SW on learning process and class VII-3 as experimental class where using SW based inquiry on learning process.
Description of learning outcomes data

Learning Outcomes of Civic Students Who Do Not Use SW

The learning outcomes of class VII-4 as a control class, which in this class does not use SW on the basis of mercury on Civic lesson subjects on material norms and fairness, is presented in Table 1.

| Score | F | f rel (%) | Score | F | f rel (%) |
|-------|---|-----------|-------|---|-----------|
| 30-40 | 9 | 28,13     | 30-40 | 0 | 0,00      |
| 45-55 | 23| 71,88     | 45-55 | 0 | 0,00      |
| 60-70 | 0 | 0,00      | 60-70 | 27| 84,38     |
| 75-85 | 0 | 0,00      | 75-85 | 5 | 15,63     |
| 90-100| 0 | 0,00      | 90-100| 0 | 0,00      |
| Total | 32| 100,00    | Total | 32| 100,00    |

Table 1 shows that the students in grade VII-4 get the average value of learning outcomes of Civic lesson at the time of pretest is 45.63 and at the time of postes is 66.72. It shows that there is an increase of pretest value and postes value of 21.09 to learning result of Civic lesson. However, the learning result can not be finished yet, because the determined KKM value limit is ≥75.

Learning Outcomes using SW

The learning outcomes of class VII-3 as an experimental class, which in this class uses SW-based mercury on Civic lesson subjects on material norms and fairness, is presented in Table 2.

| Score | F | f rel (%) | Score | F | f rel (%) |
|-------|---|-----------|-------|---|-----------|
| 30-40 | 13| 40,63     | 30-40 | 0 | 0,00      |
| 45-55 | 18| 56,25     | 45-55 | 0 | 0,00      |
| 60-70 | 1 | 3,13      | 60-70 | 0 | 0,00      |
| 75-85 | 0 | 0,00      | 75-85 | 10| 31,25     |
| 90-100| 0 | 0,00      | 90-100| 22| 68,75     |
| Total | 32| 100,00    | Total | 32| 100,00    |

Table 2 shows that the students in grade VII-3 get the average learning outcomes of civic lesson at the time of pretest is 45.31 and at postes is 90.78. It shows that there is an increase of pretest value and postes value of 45.47 to result of learning of Civic lesson, thus the result of student learning of VII-3 class on material of norm and justice is said to be complete.

Product effectiveness test results

Gain score or improvement of learning outcomes Civic lesson students class VII obtained from the reduction of postes and pretes. The result of the control score gain test and the experimental class using the inquiry-based SW on the norm and justice material is presented in Table 3.

| Score       | Control | Experiment |
|-------------|---------|------------|
| F | f rel (%) | F | f rel (%) |
| < 0,3 | 9 | 28,13 | 0 | 0,00 |
| 0,3 < g ≤ 0,7 | 23 | 71,88 | 3 | 9,38 |
| > 0,7 | 0 | 0,00 | 29 | 90,63 |
| Total | 32 | 100,00 | 32 | 100,00 |
| Mean | 0,388 | - | 0,831 | - |

Table 3 shows that the average gain score or average increase in learning outcomes of Civic lesson students in grade VII-4 who did not use inquiry-based SW were 0.39 with medium category, mean gain gain or mean increase in learning outcomes Civic lesson students of class VII-3 using SW based inquiry are 0.83 with high category. Thus, based on the five stages of research development (ADDIE) in this study obtained that the product developed, namely: SW based inquiry on the material norms and justice has fulfilled the element of the use of products for students VII middle school class, and elements of product effectiveness in improving the results learn Civic lesson with high effectiveness category.

Description of student learning activity data

This inquiry-based SW product is also developed to improve students' learning outcomes and is expected to increase student learning activities. The criteria aspects penilian student learning activities are as follows: Finding; Building Understanding; Communicating; and Reflective Thinking.

Student learning activity in control class

The activity data of class VII-4 students as a control class for each meeting, which in this class does not use SW-based mercury in the Civic lesson learning process, is presented in Table 4.
Table 4. The average percentage of students' learning scores for grade VII-4 for each meeting, where meeting I (P1) was 49.52, meeting II (P2) was 58.17, the third meeting (P3) was 67.79 and the meeting (P4) is 80.05. Based on the data obtained seen increased student activity at each meeting.

Student Learning Activity in Experiment Class

Activity data of class VII-3 students as experimental class for each meeting, which in this class uses SW-based inkuri on Civic lesson learning process, presented in Table 5.

Table 5 shows the percentage of average score of class VII-3 learning activity for each meeting, where meeting I (P1) is 42.79, meeting II (P2) is 66.59, meeting III (P3) is 78.61 and the meeting (P4) is 93.27.

Based on the data obtained that is the average percentage of the score of learning activities of students of class VII-3 and VII-4, the value of activity in both classes seen increased. However, it can be seen that the average percentage of the score of student activity activity of class VII-3 has a higher increase that is reaching 93.27 compared with the average percentage of student learning activity score class VII-4 is 80.05.

Results of product effectiveness test on student learning activities

Gain score or increase of learning activity of Civic lesson of Grade VII student is obtained from observation result to aspect of student activity learning activity for every meeting that is 4 meeting. The results of the control-grade gain test and experimental class using inquiry-based SW on norm and fairness materials are presented in Table 6.

Table 6 shows the percentage of average score of class VII-3 learning activity for each meeting, where meeting I (P1) is 42.79, meeting II (P2) is 66.59, meeting III (P3) is 78.61 and the meeting (P4) is 93.27.
of construction include requirements relating to the use of language, sentence arrangement, vocabulary, level of difficulty and clarity which in essence must be appropriate in the sense that it can be understood by the SW user that is the learner while the activated condition means that the SW must meet the principles, effective principles. The steps of writing SW according to Prastowo are as follows: 1) Formulation of basic competencies (BC) in SW directly derived from BSNP documents; 2) Determine assessment tools; 3) Preparation of Material depends on the BC to be achieved; 4) SW Structure that includes title, instruction manual, competence to be achieved, supporting information, tasks and work steps, assessment [9].

Inquiry is a learning model that guides students to acquire and obtain information and seek answers or solve problems to formulated questions. Inquiry emphasizes the searching and finding process. Lesson material is not given directly. The role of students in this learning is to find and find their own subject matter, while the teacher acts as a facilitator and supervisor to learn. The study of inkuiri is a series of learning activities that emphasize the critical and analytical thinking process to seek and find out for themselves the answer to a questionable problem. The thought process itself is usually done through question and answer between teachers and students. Hamruni points out some of the main characteristics of inquiry learning strategies, including: First, inquiry learning emphasizes maximum student activity to search and discover. That is, in inquiry learning puts the student as the subject of learning. The steps in inquiry learning are (1) orientation, (2) formulating the problem, (3) proposing the hypothesis, (4) collecting data, (5) testing the hypothesis, (6) formulating the conclusion. Thus it can be concluded that the SW-based inquiry is one of the most effective learning media in the learning process, where the SW-based inquiry itself will provide knowledge to the students based on the process of solving that will be done directly by according to the students' knowledge and skills possessed by the students. So it is not just the knowledge that students gain in the learning process but some other skills, because in the series of self-directed learning emphasizes the critical and analytical thinking process to find and find the answer to a question in question.

Suyitno argues that "according to Bruner's cognitive theory, the learning process will work well and creatively if the teacher gives students the opportunity to find a rule (including concepts, theories, definitions and so on) through examples that illustrate the rules that are the source" [10]. According to Vygotsky in Choir "students in constructing a concept need to pay attention to the social environment". Both learning theories have an influence on the stage of student development, be it Bruner with his opinion about the good learning process based on the discovery of information and Vygotsky with his opinion on the importance of the social environment in the learning process. If the student learns only with Vygotsky's opinion of the social environment without any rules or examples that should be a source like his opinion Bruner then the student will learn anything without him understanding the material learned and the purpose.

Based on the above description, the validation result of the inquiry student worksheet (SW) based on norms and fairness materials designed in accordance with the standard of BSNP is declared valid and appropriate for the students of class VII because it is suitable with the subject matter and learning objectives.

Products that have been declared valid and eligible for subsequent use of the product will be applied to grade VII students to determine their effectiveness in increasing the activity and learning outcomes of Civic lesson students. Product effectiveness to increase activity and learning outcomes Civic lesson students obtained and analyzed based on gain score test that is test improvement and adjustment with classification of product effectiveness. In this case the researcher uses two classes of classes VII-3 and VII-4, where class VII-4 does not use inquiry-based SW on learning process with material of norm and justice and class VII-3 using SW based inquiry of norm and justice material at learning process.

Based on the results of the research, it is found that the average gain score or the average increase in the learning activity of grade VII-4 students who do not use SW based inquiry is 0.69 with the criterion "medium", while the average gain score or the average increase in activity studying grade VII-3 students using SW based inquiry is 0.88 with "high" criteria. The average gain score or average increase in student learning activity indicates that student learning activity in the class that uses inquiry-based SW on subjects Civic lesson material norms and equity is higher than the student learning activity in the class that does not use SW based inquiry as teaching materials.

Average gain score or average increase in learning outcomes Civic lesson grade VII-4 students who do not use inquiry-based SW is 0.39 with medium category, while the average gain score or average increase in learning outcomes Civic lesson students class VII-3 using inquiry-based SW is 0.83 with high category. The average gain score or average increase in learning outcomes of Civic lesson indicates that learning outcomes of students using inquiry-based SW on subjects Civic lesson material norms and equity are higher than those of Civic lesson students who do not use inquiry-based SW as ingredients teach.

Based on the above description, it can be concluded that inquiry-based SW in the material norms and fairness is effective in improving the activity and learning outcomes of students of class VII because the class VII-3 using SW based inquiry in the learning process obtained gain score with high category in increasing activity and result learn.

V. CONCLUSION

Based on the formulation of the problem, the purpose of research and research results, then obtained the following conclusions:
1. The inquiry-based SW developed on the norm and valid material is valid and feasible to be used because it has been adapted to BSNP standard based on the product feasibility test conducted by the validation team, the material expert is 91.7% with the criteria of "very good", the result validation from the linguist that is 87.5% with the criterion "good", and result of validation from design expert of learning that is 88.5% with "good" criterion.

2. Inquiry-based SW developed on Norma and Justice materials can improve the learning outcomes of students of grade VII SMPN 2 Bilah Hilir this is obtained based on product effectiveness test to the learning outcomes Civic lesson students where class VII-3 which is an experimental class in this case using The inquiry-based SW in the learning process earned an average gain score of 0.83 with the "high" category. This compares to class VII-4 which is a control class that does not use inquiry-based SW in the learning process that only gets the average gain score of 0.39 with the category "medium".

3. Inquiry-based SW developed on Norma and Justice materials can improve the learning activity of grade VII students of SMPN 2 Bilah Hilir this is obtained based on product effectiveness test to Civic lesson student learning activity where class VII-3 which is experiment class in this case using The inquiry-based SW in the learning process earned an average gain score of 0.88 with the "high" category. This compares to class VII-4 which is a control class that does not use inquiry-based SW in the learning process that only gets the average gain score of 0.69 with the category "medium".

SUGGESTION

Based on the conclusions that have been presented, in accordance with the results obtained research, then the researchers give suggestion:

1. SW-based inquiry of Civic lesson lessons that have been developed can be used as an alternative in improving student learning outcomes on norms and justice materials so that it can be used as input for schools to be used in learning. In addition, this textbook is interesting, in accordance with the characteristics of students and enthusiastic and creative students.

2. The mercury-based SW on the Civic lesson lessons that have been generated have not been widely implemented in other schools, the spreading is limited in that it is only on the subject in the research school. To determine the effectiveness of CR-based SW on Civic lesson lessons on various Civic lesson lesson subjects and other appropriate subjects, it is recommended that teachers and researchers implement the SW-based mercury in these Civic lesson lessons on a wider scope in schools.

3. Student's enthusiasm for SW-based inquiry of Civic lesson lessons developed very high. Therefore it is expected that Civic lesson for teachers can create an active and fun learning atmosphere for students. Thus, students will not assume that Civic lesson is a lesson that only listens to lectures only and is boring.

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