

The Development of Inquiry-Based Student Worksheets to Improve Activities and Civics Learning Outcomes of Students 2 Bilah Hilir

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Abstract

This research is carried out based on problems where the low learning outcomes in civics lesson and the activity of students in the learning process. This is caused by several factors, including the lack of variations in teaching materials used by the teacher and the learning process that only uses conventional methods. It causes the lowness of students' interest in learning. Therefore, the researchers intend to develop teaching materials in the form of inquiry-based student work sheet in civics subjects in class seven which aims to improve student learning outcomes and activities. Inquiry-based worksheets is teaching materials designed using stages of inquiry learning, namely orientation, formulation of problems, submission of hypotheses, collecting data, test hypotheses and conclusions. Inquiry based worksheets is not only able to improve student learning outcomes but also it increases student activity. It is due to the stages of inquiry requires students to be active and think critically in the learning process. In this study, inquiry based worksheets is developed in accordance with BSNP standards, namely aspect of readability, graphics, content feasibility, and also fulfilled valid, practical and effective criteria. This study applies the ADDIE development model with stages: analysis, design, development, implementation, evaluation. The data analysis that used in this research are 1) the analysis of the validity of inquiry based student worksheets, 2) the analysis of the increasing of students' activity and learning outcome. The result of this research shows that. The worksheets developed are declared valid and feasible, this is based on the results of the validation stated by the expert team namely material experts 91.7% with the criteria of "very good", the result of validation from linguists is 87.5% with the criteria "good", And the result of validation from learning design experts is 88.5% with the criteria of "good". Furthermore, inquiry-based students worksheet is able to improve students' civics learning outcomes. It obtains the average of g factor 0.83 in the "high" category, in addition students also get the average g factor of 0.88 with the category "high" for student learning activities.

Keywords: Worksheets, inquiry, learning outcomes, and learning activities.

I. Introduction

Civics lesson in curriculum 2013 is a subject which is a refinement of civics subject in the 2006 KTSP curriculum. The Improvements are made on the basis of considerations: (1) Pancasila as the basis of the State and the national outlook and interpreted as a core entity as a reference source and criteria for the success of achieving the level of competence and organization of the entire scope of Pancasila and Citizenship Education subjects; (2) the substance and soul of the 1945 Constitution of the Republic of Indonesia, the value and nature of Unity in Diversity and the commitment of the Unitary of the Republic of Indonesia are placed as an integral of Pancasila and Citizenship Education, which becomes a psychological-pedagogical vehicle for the development of Indonesian citizens with Pancasila characteristics.

The aim of civics subjects in the 2013 curriculum is in accordance with Government Regulation No. 32 of 2013 chapter 77 J verse 1 emphasizes that Civics is intended to form students into human beings who have a sense of nationality and love for the country in the context of Pancasila values and morals, awareness of constitutional 1945 Constitution of the Republic of Indonesia, the value and spirit of Unity in Diversity and the commitment of the Unity of the Republic of Indonesia. In general, the aim of the civics subjects in the 2013 curriculum at the elementary and secondary education level is to develop the potential of students in all dimensions of citizenship, namely: (1) citizenship attitudes including firmness, commitment and civic responsibility; (2) citizenship knowledge; (3) citizenship skills including civic competence and responsibility.

Thus, the civics in the 2013 curriculum has the following positions and functions: (1) civics is an education of values, morals / character and citizenship typical of Indonesia; (2) civics is as a vehicle for Pancasila values, moral / character education and the development of psychosocial capacity of Indonesian citizenship. It is very coherent with the commitment to develop national character and civilization that has dignity and the realization of democratic and responsible citizens as contained in the Republic Law Indonesia No. 20 of 2003. This can be seen from the development of cognitive, affective and psychomotor students. Based on the cognitive level of students, it is said to succeed if 80% of students have been able to achieve the Minimum Completion Criteria (MCC) value of 70 classically. As a matter of fact, the ideal conditions expected from the civics learning objectives as it is mentioned above have not been reached to the maximum. This can be seen from the learning

outcomes of the civics grade seven students of State Junior High School 2 Bilah Hilir in the first semester of the 2016/2017 academic year, namely:

Table 1.1 Students' Civics Learning Outcomes class seven at State Junior High School 2 Bilah Hilir

No.	Class	Completed	Uncompleted	Percentage of Completeness
1	VII – 1	26	10	72,2%
2	VII – 2	21	15	58,3%
3	VII – 3	16	20	44,4%
4	VII – 4	15	21	41,7%
5	VII – 5	16	20	44,4%
	amount	87	91	52,2%

Source: Administration of State Junior High School 2 Bilah Hilir

Based on table 1.1 above, the completeness requirement is 80% of students must reach 75. However, it appears that in class VII-1, 26 (72.2%) students complete, 21 (58.3%) students complete in VII-2, 16 (44.4%) students complete in class VII -3, 15 (41.7%) students complete in class VII-4, and 16 (44.4%) students complete in class VII - 5. Thus, if accumulated students who are able to reach MCC is 52.2%, this proves that there are still many students who study under the MCC

Based on observations in class seven, there are several factors that influence the low student learning outcomes, namely in the learning process teachers rely more on textbooks, and textbook center teaching materials are always applied by teachers in learning conventional nature as in Civics subjects. This statement is supported by the teacher's activities in teaching still applying conventional learning models and lecture methods, so that the source of knowledge is only teacher-centered which causes students passively listen to material descriptions, accept and swallow knowledge or information from the teacher.

The learning process uses conventional method in the class which causes not only low student learning outcomes in civics subjects, but also low student activity. Based on the results of interviews that researchers conduct with civics teacher at the school, it is obtained that in the learning process; only about 30% of students have good activities, 70% of students focuses on listening and receiving knowledge or information from the teacher.

Student Worksheet is one type of learning aid. In general, it is a learning tool as a complement or a means of supporting the Learning Implementation Plan. Student worksheets is in the form of sheets of paper in the form of information or questions that must be answered by students. It is very well used to encourage the involvement of students in learning both used in the application of guided methods and to provide development training. In the learning process of civics, student worksheet aims to find the application of concepts or principles.

Student worksheet is a teacher's stimulus or guidance in learning that will be presented in writing so that the writing needs to pay attention to the criteria of graphic media as a visual medium to attract the attention of students. At least it is as a media card. The contents of the student worksheet message must pay attention to the elements of graphic media writing, material hierarchy and the selection of questions as an efficient and effective stimulus. (Hidayah, 2007: 8).

To make a good learning plan and organize the ideal learning process, each teacher must know the elements of good learning planning. The elements of learning planning identify student needs, goals to be achieved, various strategies and relevant scenarios used to achieve goals, and evaluation criteria. Regarding of this, the inquiry approach is a way of conveying lessons by examining something that is critically seeking, analytical, and argumentative (scientific) by using certain steps towards conclusions (Usman, 2008: 124). Inquiry is giving attention to encouraging students to develop problems. By having Efforts to develop intellectual discipline and skills needed by students. It helps to solve problems by providing questions that get answers to curiosity are part of the inquiry process, mentally active involvement in actual learning activities. Inquiry cooperatively enriches students' thinking processes and encourages them to form tentative knowledge and try to appreciate explanation.

It is expected that using inquiry-based Student Worksheets can improve student learning outcomes and activities. Inquiry based student worksheet is a learning tool that will guide students to carry out problem-formulation activities, make hypotheses, analyze data, test hypotheses and describe conclusions. Thus, students are required to think critically based on their knowledge and experience, in this process student can develop their activities. In the learning process, students can carry out learning activities such as visual activities, oral activities, listening, writing, drawing, mental and emotional activities. The above activities are the scope of physical and spiritual activities. Civics learning is learning that requires an understanding of the knowledge and phenomena that occur in the environment, so that students are expected to be able to apply the civics learning objectives in everyday life.

2. Research Methods

This research method is research and development by using the ADDIE model. This model is used to develop inquiry-based Student Worksheets on norms and justice material based on the 2013 Curriculum on students of

class seven, Junior High School 2 Bilah Hilir. The population of this study is all seventh grade students of that School, academic year 2017/2019. 160 students are distributed into 5 classes, namely class VII-1 consists of 32 students, VII-2 consists of 32 students, VII-3 consists of 32 students, VII-4 consists of 32 students, VII-5 consists of 32 students. The sampling technique in this study is cluster random sampling, the number of samples in this study is 64 students distributed into two classes namely class VII-4 who would be given learning treatment without using inquiry and class-based Student Worksheets, class VII-3 is given the treatment of learning by using inquiry-based Student Worksheets on the subjects of the norm and justice material civics in Class. The object of this research is Student Worksheets. The research is conducted in the odd semester of 2017/2018 Academic Year for two months. This study is divided into two stages, namely the first stage of inquiry-based student worksheet teaching material development and the second stage is the implementation of materials teach inquiry-based students worksheets that has been validated.

The development model applied in this study is the ADDIE research and development model. The stages in developing the ADDIE model are attached to the picture below:

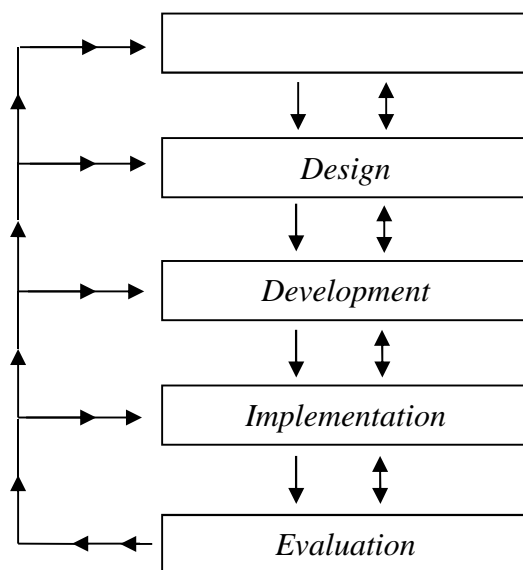


Figure 3.1. ADDIE Research and Development Model (Januszewski, 2008: 108)

Figure 3.1. explains that the type of ADDIE model development research has five stages. Gagne Dkk (Januszewski, 2008: 108) provides an extension of the basics of ADDIE stages into a more detailed procedural guide, namely: analysis, design, development, implementation, evaluation.

At the analysis stage, researchers find out what students need to learn in learning, so that what students want to achieve can be fulfilled, for example, student worksheets teaching materials. At the design stage the researchers design or make student worksheets teaching materials. After designing a student worksheet teaching material product, it will be examined by experts until the product level can already be used. After being examined the results by experts ,the student worksheet teaching material product can already be used for the junior high school level, so the researcher can develop the results of the design of student worksheet teaching materials in accordance with what students and teachers will need. Then, at the implementation stage, researchers go into the field to find out how to improve learning outcomes and effectiveness after the use of student worksheet teaching materials. After the use of student worksheets teaching materials, the evaluation is conducted which aims to see the achievement of the goals of improving student learning outcomes and the effectiveness of student worksheet teaching materials.

3. Research Results and Discussion

3.1. Research result

This research is research and development / R & D and the products of this research are products that meet valid criteria and feasible to be used. The main objective of this study is to describe the feasibility or validity of inquiry-based Student worksheet development on norms and justice material based on the 2013 Curriculum for class VII students of Sate Junior High School 2 Bilah Hilir. This study also aims to describe improvement in learning outcomes and learning activities of students who use ordinary student worksheets and students who use developed student worksheet in this study.

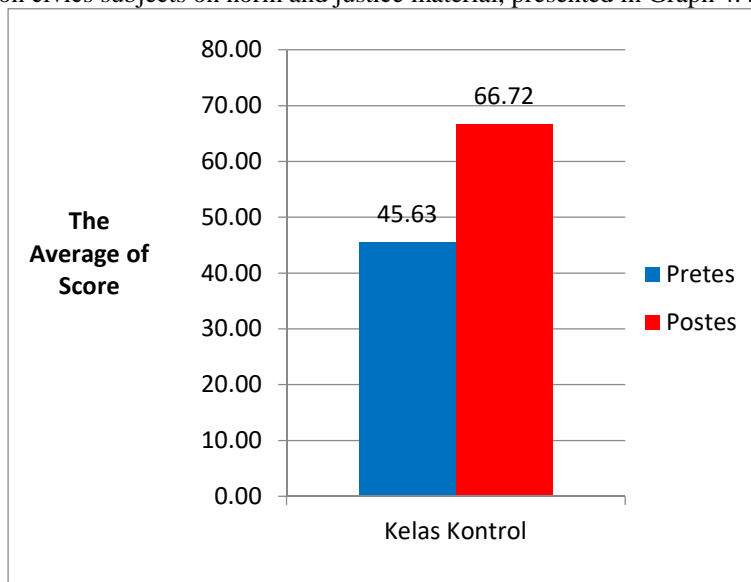
The development model used is the ADDIE model with five stages of research, namely: analyze, design, development, implementation, and evaluation. The main objective is obtained at the development stage, namely product development based on suggestions from expert validation so that the product is valid, according to the

BSPN, and it is feasible to be used for VII grade students of junior high school. The other research objectives are obtained at the evaluation stage, namely evaluating the application of the product or in other words the results of the study are evaluated after the implementation stages are carried out.

3.1.1. Description of Learning Outcomes Data

3.1.1.1. Students civics Learning Outcome who do not use Student Worksheet

The results of class VII-4 in civics learning as a control class, where in this class do not use inquiry-based student worksheets on civics subjects on norm and justice material, presented in Graph 4.4.

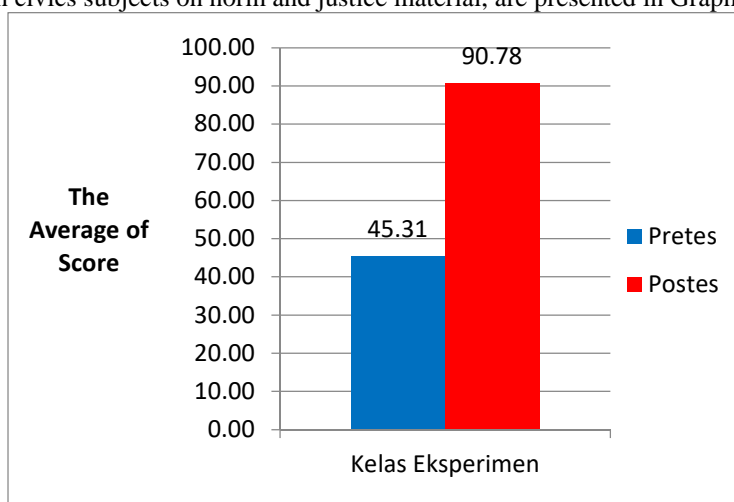


Graph 4.4. Civics Learning Results in the Control Class

Graph 4.4. shows that students in class VII-4 obtained an average score of civics learning outcomes at the time of the pretest is 45.63 and the posttest is 66.72. This shows that there is an increase in the pretest value and posttest value of 21.09 for the civics learning outcomes. However, the learning outcomes cannot be completed, because the specified MCC value is 75.

3.1.1.2. Students Civics Learning Outcomes who use Student Worksheets

The results of class VII-3 in civics learning as an experimental class, where in this class uses inquiry-based student worksheets on civics subjects on norm and justice material, are presented in Graph 4.5



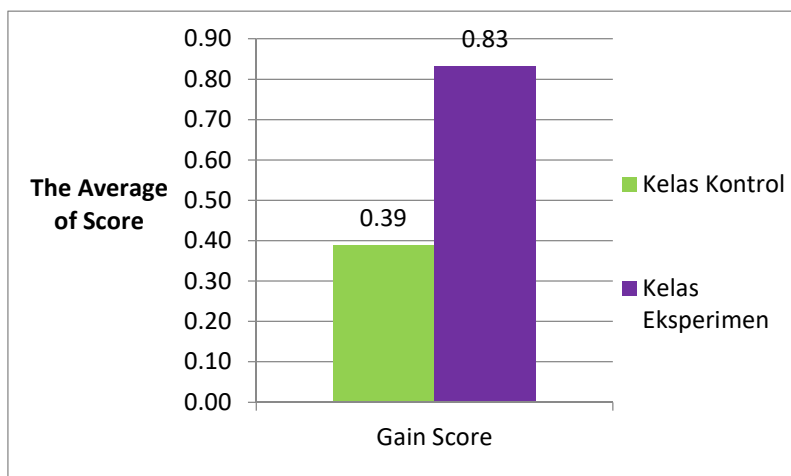
Graph 4.5. Civics Learning Results in the Control Class

Table 4.5. and Graph 4.5. show that students in class VII-3 obtained an average score of civics learning outcomes at the time of the pretest is 45.31 and the posttest is 90.78. This shows that there is an increase in the pretest value and posttest value of 45.47 towards civics learning outcomes. It shows that the average value obtained by students reaches the specified MCC value limit, namely: ≥ 75 , thus the students learning outcomes of class VII-3 on norm and justice material are said to be complete.

3.1.1.3. Product Effectiveness Test Results

The g factor score (normalized gain score) or the score for increasing the PPKn learning outcomes of class VII

students is obtained from the reduction in posttest and pretest scores. The results of the g-factor test of the control class and the experimental class using inquiry-based LKS on norm and justice material are presented in Graph 4.6.



Graph 4.6. G Test Results for Student Learning Outcomes

Graph 4.6. shows that the average g factor or the average increase in Students civics learning outcomes of class VII-4 who do not use inquiry-based student worksheets is 0.39 with the moderate category, while the average g factor or the average increase in students civics learning outcomes of class VII-3 which uses inquiry-based student worksheets. It is 0.83 with a high category. The average g factor shows that the learning outcomes of students using inquiry-based student worksheets on civics subjects. The norm and justice material are higher than the civics learning outcomes of students who do not use inquiry-based student worksheet as teaching material.

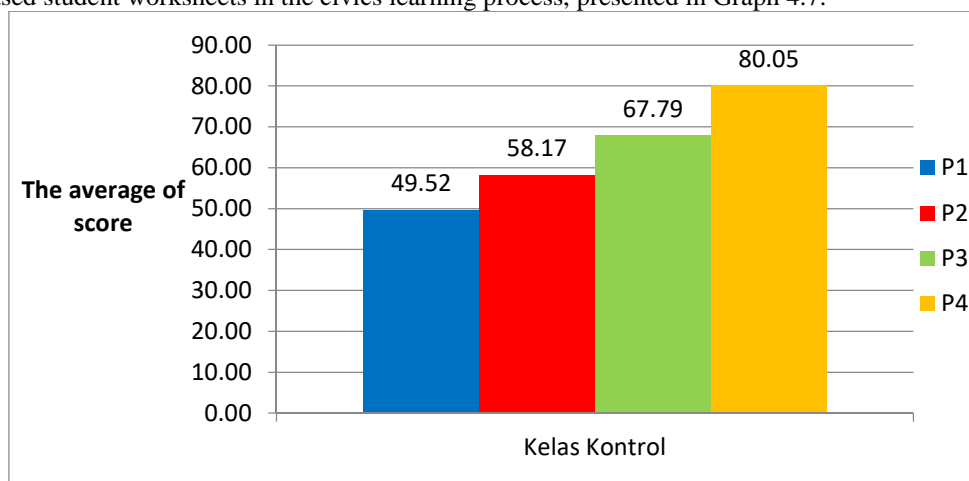
Thus, based on the five stages of research development (ADDIE) in this study, it is found that the products developed, namely: inquiry-based worksheets on norms and justice material have met the element of product use feasibility for junior high school students in grade VII, and product effectiveness elements in improving civics lesson with a high effectiveness category.

3.1.1.2. Data Description of Student Learning Activities

This inquiry-based student worksheet product besides being developed to improve student learning outcomes is also expected to improve student learning activities. The criteria for the assessment aspects of student learning activities are as follows: Finding, Building Understanding, Communicating, and Reflective Thinking.

3.1.1.2.1. Students Learning Activities in the Control Class

Data on the activities of students of class VII-4 as a control class for each meeting, where this class does not use inquiry-based student worksheets in the civics learning process, presented in Graph 4.7.

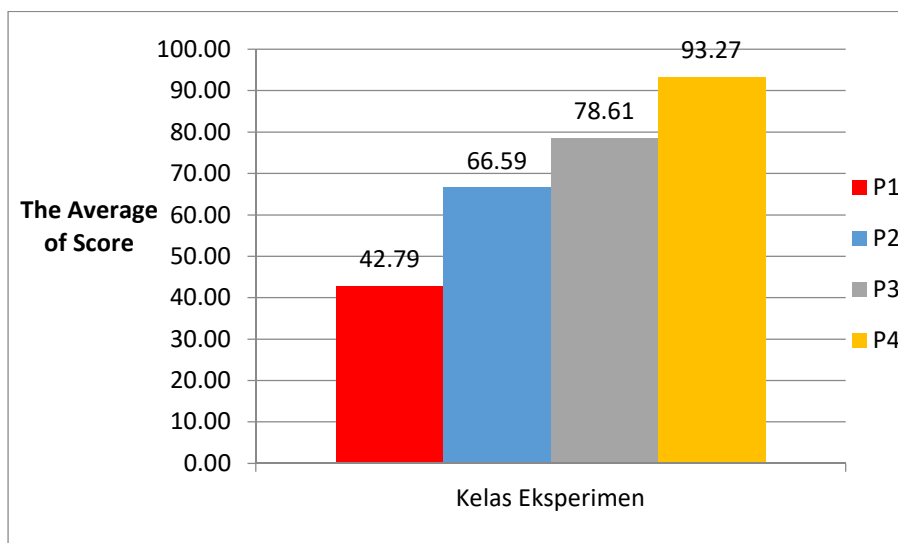


Graph 4.7. shows that the percentage average score of learning activities of students of class VII-4 for each meeting, where meeting 1 (P1) is 49.52, meeting II (P2) is 58.17, meeting III (P3) is 67.79 and meeting (P4) is 80.05. Based on the data obtained, it is seen that there is an increase in student activity at each meeting.

3.1.1.2.2. Student Learning Activities in Experimental Classes

Data on the activities of class VII-3 students as an experimental class for each meeting, where this class uses

inquiry-based student worksheet in the civics learning process , it is presented in Graph 4.8.



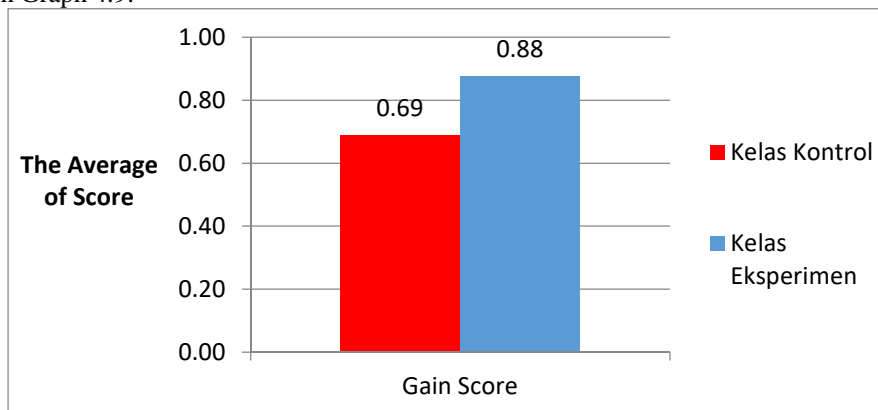
Graphic 4.8. Students Learning Activities in Experimental Class

Graph 4.8. shows the percentage of the average score of learning activities of students of class VII-3 for each meeting, where meeting 1 (P1) is 42.79, meeting II (P2) is 66.59, meeting III (P3) is 78.61 and meeting (P4) is 93.27.

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

3.1.1.2.3. Product Effectiveness Test Results on Student Learning Activities

G factor score (normalized gain score) or score increase in civics learning activities of class VII students is obtained from the observation of the assessment of student learning activities for each meeting, namely 4 meetings. The results of the g test of the control class and the experimental class using inquiry-based worksheets are presented in Graph 4.9.



Graphic 4.9. G Factor Test Results for Student Learning

Graphic 4.9. shows that the average g factor increases in learning activities of class VII-4 students who does not use inquiry-based student worksheets is 0.69 with moderate criteria, while the average g factor in learning activities of class VII- students 3 which uses inquiry based student worksheets which is 0.88 with high criteria. The average g factor in student learning activities shows that the learning activities of students in the class that use inquiry-based student worksheets on civics subjects with sub topic about the norm and justice material are higher than the learning activities of students in the class who do not use inquiry-based student worksheets as material teach. Thus it can be concluded that the use of inquiry-based worksheets can improve learning activities in junior high school students.

3.2. Discussion

The discussion is conducted to discuss in detail the results of the study by relating it to the formulation of the

problem in this study.

3.2.1. The Feasibility of Inquiry Based Student Worksheets Products that are developed in accordance with BSNP Standards on Norm and Justice Material

Based on the results of the validation of inquiry-based student worksheets on subtopic norms and justice, it is designed in accordance with BSNP standards. It is declared valid and feasible to be used in grade seven because it is in accordance with the material and learning objectives.

3.2.2. The Inquiry Based Student Worksheets developed on Norma and Justice Material Can Improve Learning Outcomes of Grade seven Students of Junior High School

Based on the description, it is concluded that inquiry based worksheets on norms and justice material could improve the learning outcomes of class seven students because class VII-3 using inquiry-based student worksheets in the learning process gained a higher factor even higher levels of civics learning outcomes than students who do not use inquiry based student worksheets in the learning process.

3.2.3. The Inquiry Based Student Worksheet which is Developed on Norma and Justice Material Can Increase the Activity of Grade Seven Students of Junior High School

Based on the description, it is concluded that inquiry based worksheets on norms and justice material can improve the learning activities of class seven students because class VII-3 using inquiry-based LKS in the learning process gained a factor of higher learning activities even higher than students who do not use inquiry-based student worksheet in the learning process.

4. Conclusions, Implications and Suggestions

4.1. Conclusions

Based on the formulation of the problem, the purpose of the research and the results of the research as stated in the previous chapter, the following conclusions are obtained:

1. The Inquiry based worksheets developed on norms and justice material are valid and appropriate to use because. It has been adjusted to BSNP standards based on the results of product feasibility tests conducted by the validation team, namely material experts 91.7% with the criteria of "very good", results validation from linguists is 87.5% with the criteria of "good", and the results of validation from learning design experts are 88.5% with the criteria of "good".
2. The Inquiry based worksheets developed on norms and justice material can improve learning outcomes of class VII students of Sate Junior High School 2 Bilah Hilir. This is obtained based on product effectiveness test on student learning outcomes of students where class VII-3 is an experimental class in this case using inquiry-based student worksheets learning process gets an average g factor of 0.83 in the "high" category. This is compared to class VII-4 as control class that does not use inquiry-based student worksheet in the learning process, which only obtains an average g factor of 0.39 in the "moderate" category.
3. The Inquiry based worksheets developed on norms and justice material can improve the learning activities of class VII students at State Junior High School 2 Bilah Hilir. It is obtained based on product effectiveness tests on student learning activities, Class VII 3 (experimental class), using inquiry-based student worksheets in learning process gets an average g factor of 0.88 in the "high" category. This is compared to class VII-4 which is as a control class that does not use inquiry-based student worksheets in the learning process, which only obtains an average g factor of 0.69 in the "moderate" category.

4.2. Implications

The implications of the results of research on the development of inquiry-based worksheets in class VII are positive consequences in the world of education. This implication is divided into two categories, namely the theoretical implications and empirical implications. The theoretical implications in this study are:

1. Inquiry based worksheets developed in accordance with BSNP standards are appropriate for use in the learning process. This can be seen from the results of testing the effectiveness and validity of this product itself. Where, this inquiry-based student worksheets has been tested for its feasibility by several experts who are competent in their fields, including civics material, linguists and learning media experts. Based on the results of the product, the feasibility test conducted by the examiner team, data are obtained, namely the material expert gives a score of 91.7% with the criteria "very good", the linguist gives a score of 87.5% with the criteria "good", and the design expert gives 88, 5% with the criteria of "good", while the average percentage of the overall score is 88.54% with the criteria "Good".
2. Inquiry based worksheets can improve student learning activities. In the inquiry learning model there are several stages of learning, namely orientation, formulating problems, submitting hypotheses, collecting data, testing hypotheses and drawing conclusions. Inquiry based worksheets guide students to carry out learning activities in formulating problems and finding answers to the problem formulation. The activities obtained by students in the learning process using inquiry-based student worksheets include observation, reading, listening, practice, creative thinking, critical thinking, expressing opinions, explaining, discussing, presenting reports,

commenting and concluding, correcting errors in the learning process and draw conclusions about the learning that has been carried out.

3. Inquiry based worksheets developed enhance students' knowledge and skills. It is required to answer the problem formulation based on scientific data or findings. The stages of learning contained in the student worksheets build children's understanding of concrete thinking.

The practical implication of this study is the Inquiry based worksheets that are developed participate in enriching efforts to improve student learning outcomes in civics subjects. The inquiry-based student worksheets have implications that make it easier for teachers to carry out learning processes to achieve expected learning goals.

4.3. Suggestions

Based on the results of this study, the researchers present several suggestions as follows.

1. The inquiry- based student worksheets in civics lesson that developed can be used as an alternative in increasing the activity of student learning outcomes in norm and justice material 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 creates enthusiasm and creativity for students.

2. The inquiry based student worksheets in the civics lesson that produced has not been widely implemented in other school. To find out the effectiveness of inquiry-based worksheets on civics subjects in various topics for civics lesson and other appropriate subjects, it is recommended that teachers and researchers implement inquiry-based student worksheets in civics lesson in a wider scope in schools.

3. The enthusiasm of students towards the inquiry-based worksheets in the civics lesson developed is very high. Therefore, it is expected that civics teachers can create an active and enjoyable learning environment for students. Thus, students will not assume that civics is a lesson that only listens to teacher.

REFERENCES

- A. Sihotang. 2007. *Human Resource Management*. Jakarta: Pradnya Paramita.
- Aditama, R. 2016. *Implementation of Inquiry Learning Methods to Improve Student Learning Achievement and Activity in Citizenship Education Learning Activities in Bandar Lampung 1 Public High School*. Thesis, Bandar Lampung: Postgraduate University of Lampung.
- Arifin, Z. 2011. *Educational Research: New Methods and Paradigms*. Bandung: Teenager Rosdakarya.
- Asyhar, Rayanda. 2011. *Creative Developing Learning Media*. Jakarta: Gaung Persada (GP) Press Jakarta.
- Clark, R., Richard, E. M. 2008. *E-Learning - second edition*. New York: Pfeiffer.
- Damayanti, D.S. *Development of Student Worksheets with a Guided Inquiry Approach to Optimize Critical Thinking Abilities of Students in Dynamic Electrical Material in SMA Negeri 3 Purworejo Class X Academic Year 2012/2013*, Radiation Journal, Vol 3 (1) 2013.
- Jimly, A. 2015. *Judicial Ethics and Constitutional Ethics*. East Jakarta: Sinar Grafika.