

The Effectiveness of Gallery Walk Cooperative Learning to Enhance Students' Intellectual Skill

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Abstract-The objective condition of semester final exam result of Civic Education explained that 96 percent of students of class X TEI-B SMK Teknologi Industri Pembangunan Cimahi obtain score under standard of learning completeness. This is the problem as result of students' intellectual skill which is low. Therefore, this study is aimed to enhance students' intellectual skill. Population in this quasi experimental study is class X SMK Teknologi Industri Pembangunan (TEI) Cimahi (Cimahi Vocational School of Technology of Developmental Industry). Sample of this study is students of class X TEI B (experiment class) and X TEI C (control class). The study result showed that mean score of posttest for experiment class is 80.0000 which is higher than pretest score which is 60.8000. 92 percent of students in experiment class obtain posttest score which is higher compared to pretest score. Based on result of Wilcoxon Signed Rank Test, then p value (Asymp. Sig. 2 tailed) of 0.000 where the value is less than critical limit of study of 0.05 so it is decided to accept hypothesis H_1 or it means that there is significant difference between pretest and posttest in experiment class. Hence, it can be concluded that cooperative learning of gallery walk type capable to enhance students' intellectual skill.

Keywords: cooperative learning, gallery walk, intellectual skill

I. INTRODUCTION

Critical thinking toward surrounding situation and condition, solving the problem by solution, effectively and efficiently, and taking decision quickly and appropriately is intellectual skill which need to be possessed by each human. Intellectual skill will help humans to determine the choice in living their life in the midst of society. Basically, intellectual skill or scientific thinking is general ability thinking development and skill, but direct to scholarly activity and more directed to critical, creative thinking, and responsible for various civic problems [1] [2]. Without intellectual skill, human as part of community will find difficulty to mingle or even compete with another community to fulfill their life needs. Therefore, education as tool to train intellectual skill should be able to do duty, function and role as good as possible. Education emphasize the formation of qualified human resource, that is individual who is able to fulfill or solve the problem and challenge of his/her own life, has willingness and also ability to realize Indonesian nation ideal namely just and prosperous. Education also function to build creative, independent and critical human without releasing responsibility to defend another humans.

The objective condition of SMK Teknologi Industri Pembangunan Cimahi is that students are lack in intellectual skill. It is known from the result of Final Exam in Odd Semester in Pancasila and Civic Education Subject from total of 26 students that is only one student who get score above learning completeness. Students who get score above 61 are about 0.15 percent, score 41-60 are about 0.65 percent, score under 40 are about 0.19 percent. Thus, in average students get score between 40 until 60. The lowest score which can be known in semester final exam is 26.70. Intellectual skill which is still low make students less responsive to surrounding situation, less able to understand the problem they face, and less able to make right decision.

Those problems can be occurred because learning process which had not followed learning goal in this century, after there is change in learning concept. Learning which is teacher-centered, learning process only deliver information (lecture method), students are not active and students learn individually. There should be renewal in education implementation particularly in learning process in order to be relevant with human need now. Learning in 21st century emphasize the change in learning process which is initially teacher-centered become student-centered, one way communication become interactive communication, passive become active, and personal become cooperation.

The renewal in learning process including: the change on teacher function from educator to become facilitator for their students, teacher try to make class as interesting as possible through various interaction approach which is prepared and managed, students should be active by giving various questions whose the answer want to be known. If initially learning process is more personal or based on each individual, then the thing which should be developed now is learning model that emphasize cooperation among individuals, and if initially the example given by teachers to their students mostly are artificial, then now teacher should be able to give examples in accord with the context of daily life and relevant with the material taught [3].

One way which can be done to overcome the problem above is by applying cooperative learning model with gallery walk type in civic education learning. Civic education form "a citizen who has some skill including thinking skill, communication skill, participative skill even skill in researching to solve the problems he/she face" [4].

Cooperative learning is a learning strategy in which students learn and cooperate in small groups collaboratively. The group consist of 2 until 5 students, with the structure of group is homogenous. Help each other in learning and ensure that everybody in group achieve the goal or the task which had been set before make them learn equally good. Cooperative learning more emphasize students participation and students experience learning so they more understand the material. [5] [6] [7] [8].

Gallery walk is a strategy which can be used by teacher by asking student to stand up and walk around the class. Students cooperate in small group to organize and share the idea, and respond to meaningful question, and solve the problem in a situation [9] [10] [11] [12] [13]. There are some procedures which is involved in gallery walk strategy as follow: start from teacher explain about the component of gallery walk, and teacher give the brainstorm about possible roles that related to what they discuss, after that students are divided into some groups to show what they know on poster or images they make. The students work together to show what they know about their posters, after that teacher call each group to go in front of the class and present the result of discussion on their poster while walking around the room, and show what they know about it [14]. Civic education learning by using cooperative model is expected to be able to train thinking ability and to solve the problem and it can be categorized as intellectual skill.

II. THEORETICAL REVIEW

Civic Education is a means to equip students with basic knowledge and abilities with regard to relations between citizens and the state carried out through a process by educational institutions where a person learns political orientation, attitudes and behavior so that the person concerned has political knowledge, awareness, attitude, political efficacy, politica participation and decision making ability [15] [16]. Civic Education Subjects always concern the dimensions of knowledge, skills and values. In line with the main idea of forming ideal citizens, smart citizens have civic knowledge, civic skills, and civic disposition. Three civics functions, namely developing civic intelligence, fostering civic responsibility and encouraging civic participation [17] [18].

Branson [19] states "If citizens are to exercise their rights and discharge their responsibilities as members of self-governing communities, they do not only need to acquire a body of knowledge such as embodied in the five organizing questions just described; they also need to acquire relevant intellectual and participatory skills. " Civic skills include intellectual skills and participatory skills in the life of the nation and state. Examples of intellectual skills are skills in responding to various political problems, for example designing dialogue with the government. Examples of participating skills are the skills to use their rights and obligations in the legal field, for example to immediately report to the police for a known crime [20] [21].

The gallery walk is an activity that allows the students to actively generate and display their ideas around

the classroom in an interactive way. These shared responses are group project in the learning community. This discussion technique gets students out of their seats and into a mode of active engagement. It allows for formative assessment, as teachers can see students' levels of understanding about topics of study. It means that, the students make a discussion that allows them to gets out from their chairs in order to get a point of the topics. This activity helps students to understand the topic by discussing the material together among the participants in the classroom. It helps teacher to brainstorm the students to increasing their knowledge [22]. There are some procedures that involve in gallery walk strategy as follow: start from teacher explain about the component of Gallery walk, and teacher give the brainstorm about possible roles that related with they discuss, after that the students divide to be some group give the time to show what they know on their poster or images. The students work together to show what they know about their posters, after that the teacher call each group to front of the class and express the result of discussion their posters around the room, and show what they know about it [14]. "Gallery walk is a strategy which can make the students identify the concepts or issues about significant learning from the topic under consideration" [23].

III. RESEARCH METHODS

The method of study used in this study is quasi experimental design with Nonequivalent Control Group Design type. The Nonequivalent Control Group Design divide subjects into two groups which can be given pretest, then given treatment, and finally given posttest [24]. This quasi experimental study is done by involving subject into group. There is control group which function to control external variable which will influence the implementation of experiment. Besides, there is also experiment group which is given special treatment in study. The measurement of result study is done through test administration in the initial of study, and in the final of study after given certain treatment. The result of this experiment can be known from test result difference which can be found in two groups of subject in this study. The method used is by comparing and finding out the difference between test result of experiment class and control class. Quasi experimental is chosen as research method because if using experimental method, the researcher will find difficulty to looking for homogenous study sample of study in big amount and the site which support as location of study.

Population in this study are students of class X (ten) in SMK Teknologi Industri (TI) Pembangunan Cimahi. Sample of this study is determined by using random sampling technique. Simple random sampling used in this study is aimed to give equal change to population members to be selected as sample. Sample in this study is two classes in civic education learning in SMK TI Pembangunan Cimahi who are divided into control class and experiment class.

Table 1: Sample of Class X SMK TI Pembangunan Cimahi

| Class | Female | Male | Total | Annotation |
|---------|--------|------|-------|------------------|
| X TEI-C | 20 | 5 | 25 | Control Class |
| X TEI-B | 21 | 4 | 25 | Experiment Class |

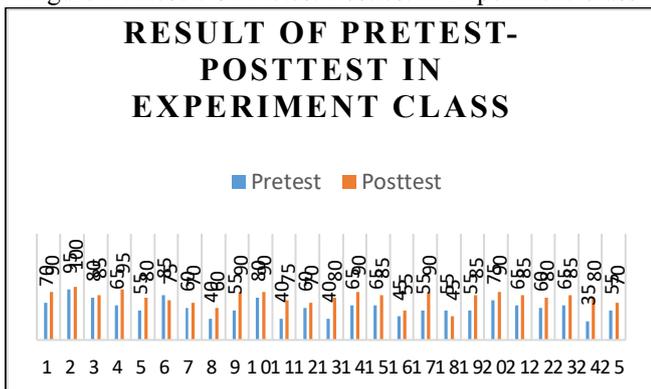
The measurement tool used in this study is test and questionnaire. Test is in the form of multiple choice item which is adapted from Muttaqin [25] for Pancasila and Civic Education item about right and duty in democracy. Initially, the test consist of 50 multiple choice items, but after passing through field test and statistic analysis, the test items which can be used become 20 items. The questionnaire in this study is arranged by researcher based on questionnaire adaptation which was made before by Sulianti [26] and Yulistian [27] about the questionnaire to measure “participatory skill”. The form of questionnaire instrument or questionnaire of Likert model with SSHA (Survey of Study Habits and Attitudes) type from Brown and Holzman which had been adapted.

IV. RESULTS AND DISCUSSION

1. Students’ Intellectual Skill of Class Which Use Cooperative Learning with Walk Gallery Type

Class X Teknik Elektronika Industri B (TEI-B) with total of 25 students is experiment class in this study. Civic education learning which is applied in experiment class is cooperative learning model with walk gallery. The achievement test consist of pretest and posttest, and questionnaire used to measure civic skill. The following is analysis result of pretest and posttest data in experiment class:

Figure 1 : Result Of Pretest-Posttest In Experiment Class



Based on figure 1 above, there is difference between two data of value found in this study namely pretest score and posttest score. To determine appropriate statistic test in order to generate reliable study result, then normality test should be done first in these two data. Below is normality test result of pretest score and posttest score in experiment class.

The requisite to do statistic test is started by knowing first whether or not data is normal distributed. Therefore, normality test is done to know whether or not data is normal distributed. Significance level used is 0,05 (or confidence level 95%). The following is the result of normality test for pretest score and posttest score data in experiment class:
Pretest Score of Experiment Class

Table 2: Normality Test of Pretest in Experiment Class

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| PRE_EK S | .149 | 25 | .160 | .960 | 25 | .424 |

a. Lilliefors Significance Correction

Table 2 above shows the result of normality test of pretest data in experiment class based on SPSS 16 calculation. By seeing that value of Sig. = 0.424 in Shapiro Wilk column is bigger than 0.05 then it can be concluded that data of pretest score in experiment class is distributed normal.
Posttest Score of Experiment Class

Table 3: Normality Test of Posttest in Experiment Class

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-----------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| POST_EK S | .180 | 25 | .036 | .909 | 25 | .029 |

a. Lilliefors Significance Correction

After viewing table 3 it is known that the value of Sig. = 0.029 is smaller than 0.05 then the posttest value data of the experimental class is not normally distributed. Because there is one of abnormal distributed data then to know the difference of student's civic skill on pretest and final test test (posttest) experimental class is used wilconxon test.

Table 4 :Descriptive Statistic Wilconxon Test Experiment Class

| | N | Mean | Std. Deviation | Minimum | Maximum |
|----------|----|---------|----------------|---------|---------|
| Pretest | 25 | 60.8000 | 14.83801 | 35.00 | 95.00 |
| Posttest | 25 | 80.0000 | 12.82900 | 45.00 | 100.00 |

The descriptive statistics 4 table above shows the mean, standard deviation, minimum and maximum values of each data (pretest and posttest). It appears that the mean or posttest mean value is 80.0000 which is greater than the pretest value of 60.8000. The data shows that there is an increase in student citizenship skills in the experimental class from before being given treatment and after being given treatment when viewed from the grade point average.

Table 5: Wilcoxon Signed Ranks Test Kelas Eksperimen

| Ranks | | N | Mean Rank | Sum of Ranks |
|------------------|----------------|-----------------|-----------|--------------|
| Posttest-Pretest | Negative Ranks | 2 ^a | 5.50 | 11.00 |
| | Positive Ranks | 23 ^b | 13.65 | 314.00 |
| | Ties | 0 ^c | | |
| | Total | 25 | | |

a. Posttest<Pretest

b. Posttest>Pretest

c. Posttest=Pretest

Based on calculation method which is done in wilcoxon signed rank test formulation, the scores which can be obtained is mean rank and sum of rank from negative rank, positive rank and ties. Negative rank means that sample with posttest score is lower than pretest score, Positive rank is sample with posttest score which is higher than pretest score. Whereas ties is posttest score which is equal with pretest score. The symbol N show the sum, mean rank is mean average and sum of rank is the sum of its rank. That table shows that there are 2 students who have posttest score lower than pretest score, and 23 students who have posttest score higher than pretest score and there is none student who has equal pretest and posttest score (ties). If it turned to percentage, then 92 percent of students in experiment class which use cooperative learning model with walk gallery type is enhanced in civic skill.

Table 6: Test Statistic of Wilcoxon Test in Experiment Class

| Mean Rank | Sum of Ranks |
|------------------------|---------------------|
| Z | -4.091 ^a |
| Asymp. Sig. (2-tailed) | .000 |

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Based on result of Wilcoxon Signed Rank Test calculation, then Z score which is obtained is -4.001 with p value (Asymp. Sig.2 tailed) of 0.000 which is less than critical limit of study, that is, 0.05 so the hypothesis decision is accept H₁ or it means that there is significant difference between pretest and posttest group.

So it can be concluded that there is difference in students' civic skill in pretest and posttest in class who use cooperative learning model with walk gallery type in Civic Education type. From the result of statistic test, it is found that there is enhancement of students' civic skill in pretest and posttest. With percentage 92% of students in experiment class who have posttest score higher than pretest score.

2. *Effectiveness of Cooperative Learning Model with Gallery Walk to Enhance Students' Intellectual Skill in Civic Education Learning*

Learning is effective if achieve desired target, both from learning goal or students' maximum achievement. Some indicators of learning effectiveness are: the achievement of learning completeness, the achievement of students activity effectiveness, that is, the constant of teaching material content and student ability, the achievement of teacher ability effectiveness in managing learning, that is, high percentage of learning time devoted to teaching learning activity, and students' positive response to learning [28] [29].

Based on the result of finding, analysis, and statistic test, cooperative learning model with gallery walk is effective to enhance students' intellectual skill in civic education learning. It is evidenced by achievement of learning completeness in which 80 percent of students get posttest score above learning completeness, that is, 75. The achievement of students'

activity effectiveness is the constant of material teaching content and student ability. It is seen when students can give checklist sign to their friend work as agreement and equality of their understanding of the material delivered. The achievement of teacher ability effectiveness in managing learning is high percentage of learning time devoted to teaching learning activity, and students positive response to learning. It is evidenced by students enthusiasm in writing and drawing concept material in carton paper by using color marker accompanied by creativity by adding another drawing and symbol as supporting material.

Another indicators which can be used to determine effectiveness in learning process are good material organization, effective communication, mastery and enthusiasm to learning material, positive attitude toward students, fair grading, flexibility in learning approach, and students' learning outcome which is good [30]. This indicator is implemented when teacher in the beginning of learning give material studied, then students understand the material which had been explained by discussion, reading another supporting books then written in carton paper. In addition, students show positive attitude in doing task in accord with the instruction asked by teacher as in learning steps, and good learning outcome with mean of posttest score is 80 and the highest score is 100. After discussing the finding in study and relate it to relevant literature study, we can conclude that cooperative learning model with gallery walk is effective to enhance students' intellectual skill in civic education learning.

V. CONCLUSION

The result of statistic test explain that posttest mean score of class which use cooperative learning model with gallery walk (experiment class) in civic education learning is bigger than pretest score. Then, there is significant difference between pretest score and posttest score in experiment class. It shows that cooperative learning model with gallery walk type can enhance students' intellectual skill. Cooperative model with gallery walk type can develop students ability in understanding learning material concept through giving meaning by identifying, showing understanding by describing, and differentiating fact and opinion by analyzing.

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