THE IMPROVING EFORT OF TECHNICAL DRAWING WITH GIVING AN ASSIGNMENT METHODE (RECITATION) STUDENTS GRADE X TKR 1 SMK STATE 2 PAINAN

Danyl Mallisza, Junil Adri, Harry Ismanto
Jurusan Teknik Mesin, Fakultas Teknik, Universitas Negeri Padang
E-mail : danylmallisza2483@gmail.com, juniladri@ft.unp.ac.id
harryismanto59@gmail.com

ABSTRACT

The low of the result of study students grade X TKR 1 SMK State 2 Painan is a serious problem for SMK State 2 Painan graduated to continue their education or to work. This research aims to improve students motivation in study process through the implementation of study model that is Recitation. This education is hope to improve motivation of students and to enhance the result of study students grade X TKR 1 SMK State 2 Painan. The research objects are students grade X TKR 1 SMK State 2 Painan on April,7-30,2016. There are two cycles where every cycle do in two meetings. Every end of cycle, students are given written test in fold choice which is in cycle 1 are 37 questions and in cycle 2 are 35 questions. Based on the result of the observation which is get while research with recitation methode in cycle 1, the motivation of students are 67,0% in average, and in cycle 2 are 84,0 . The motivation of students are increase for 17%. Beside it, the result of study students are also getting raise for every cycle. In cycle 1 the completeness classical percentage of students are 61,1 % and cycle 2 are 88,9 %. For the result of study students are raising for 27%. In conclusion, the using of recitation methode in technical drawing study can raising the motivation and the result study of students grade X TKR 1 SMK State 2 Painan.

Keywords *: The motivation of study, the result of study, technical drawing, recitation*

INTRODUCTION

The rapid development of the industrial world today presents many demands on various sectors of life. Technological advances have an impact on human life in the world, which is a supporter in the development of human resources. Some of these sectors of life are science and technology, economy, environment, and education.

Vocational High School (SMK) is one of the institutions responsible for producing graduates who have skills, experience, mentality, attitudes, and values based on national and global standards. This is in accordance with the vision of national education in Law no. 20/2003 concerning SISDIKNAS (National Education System), one of the missions carried out is to increase professionalism and accountability of educational institutions as centers of civilizing knowledge, skills, experience, attitudes and values based on national and global standards.

Preliminary observations at school show that limited learning time in schools greatly affects the achievement of learning objectives, for technical drawing training subjects students spend a maximum of only 4 hours of lessons (4x45 minutes) at school. To learn theory as well as practice, it is clear that the 4 hours of lessons are very few for students. The material provided by educators cannot be directly completed by students at school and requires students to continue at home, so that students do more of their assignments at home.

Based on the author's observations at SMK Negeri 2 Painan, there are still low student learning outcomes, presumably because students are not right in choosing the majors they take, which results in low learning outcomes. And there are also students who have high scores when they graduate from junior high school but after entering SMK Negeri 2 Painan with the Light Vehicle Engineering expertise program, their learning outcomes are low. When viewed from the graduation, it turns out that there are still many students who have not been able to develop

themselves either for work or for continuing to college. This is presumably due to the lack of student motivation to enter the Light Vehicle Engineering department at SMK Negeri 2 Painan.

Table 1. Learning Outcomes of Technical Drawing Subjects for Class X TKR 1 Semester 1 Academic Year 2015/2016

No	value range	the number of students	description	percentage
1	95 - 100	-	-	-
2	90 - 94	-	-	-
3	85 - 89	-	-	-
4	80 - 84	-	-	-
5	75 - 79	6	finished	35,29
6	70 - 74	11	Not finished	64,71
7	65 - 69	-	-	-

From the table above, it can be seen that the grade X TKR 1 students at SMK Negeri 2 Painan are mostly still below the average. Of the total 17 students, only 6 students (35.3%) scored above the KKM, while 11 (64.7%) students scored below the KKM. In addition, the average grade X TKR at SMK N 2 Paianan is also still below the KKM.

RESEARCH METHODS

In general, this study aims to improve the reading and drawing skills of class X TKR I students in the Engineering Drawing subject at SMK Negeri 2 Painan. Thus, this research belongs to the type of research that uses the Classroom Action Research (CAR) method.

The problem in question in this study is the low ability to read and draw techniques in Drawing subjects

Engineering students of class X TKR 1 SMK Negeri 2 Painan. Data collection was carried out based on the results of observations, observations were used to see students' ability to read and draw in Engineering Drawing subjects by comparing the results of the evaluation. This research was conducted to improve the motivation and learning outcomes of students in class X TKR 1 in the Technical Drawing training subject through the application of the Assignment Method (Recitation).

The research was carried out by observing and evaluating with collaborators on student motivation in learning at the learning stage to see an increase in motivation and to see student learning outcomes after the application of this Recitation Method, a learning outcome test was carried out at the end of each cycle in the form of an objective test first on the questions. The item analysis was carried out to determine the level of difficulty and distinguishing power of the questions and to find the value of item validity and reliability of the questions.

Validity is one of the characteristics that mark a good learning outcome test. To determine whether a learning outcome test has validity or measuring accuracy, it can be done from two aspects, namely: in terms of the test itself as a totality, and in terms of the items as part of the test. an integral part of the test. This study uses validity in terms of items, where the items are an integral part of the test. An item can be declared valid, if the score of the item in question is proven to have a significant positive correlation with the total score, then the correct correlation score to find correlation is the biserial point correlation technique, where the correlation index number marked with the symbol rpbi can be obtained using the formula:

$$r\ pbi = \frac{Mp - Mt}{SDt}\sqrt{\frac{P}{q}}$$ (Anas Sudijono, 1995: 185)

The quality or not of the items of learning outcomes can first be known from the degree of difficulty or level of difficulty possessed by each of these items. The items of the learning outcomes test items can be stated as good items, if the items are not too difficult and not too easy, in other words the degree of difficulty of the item is moderate or sufficient. Starting from the statement above, the items of learning outcomes test items where all respondents cannot answer correctly (because it is too difficult) cannot be called good items, and vice versa. The item difficulty index number can be obtained by using the formula:

$$P = \frac{Np}{N}$$ (Anas Sudijono, 1995: 372)

The formula to find reliability in this study uses the KR 20 formula, namely:

$$r11 = \left(\frac{n}{n-1}\right)\left(\frac{St^2 - \sum Pi\ qi}{st^2}\right)$$ (Anas Sudijono, 1995: 254)

Item discriminatory power is the ability of a learning outcome test item to be able to discriminate (discriminate) between respondents with high abilities (clever), and respondents with low abilities (stupid) in such a way that most of the respondents who have high abilities can answer the items correctly. , while respondents who have low ability to answer the items are mostly unable to answer the items correctly. To find out the size of the item discrimination index number, the following formula can be used:$D = PH - PL$ (Anas Sudijono, 1995: 389)
For the motivation sheet in this classroom action research, the researcher uses the motivation checklist table as below:

Tabel 2. Student motivation instrument table

No	Indicator	Code	Score
1	Desire to succeed	1	
	a. The desire of students to ask questions in class	1A	
	b. students' desire to express ideas	1B	
	c. the desire of students in doing school exercises	1C	
	d. students' desire to improve themselves at school	1D	
2	motivation to learn	2	
	a. Student attendance during Engineering Drawing lesson	2A	
	b. The arrival of students according to the time of admission	2B	
	c. Students' attention when the teacher explains in class	2C	
	d. Come home on time	2D	
	e. Students' understanding of Engineering Drawing lessons	2E	
3	Assignment (Recitation)	3	
	a. Students do all assignments	3A	
	b. Accuracy in collecting assignments on time	3B	
	c. Doing tasks according to orders	3C	
Average			

Student motivation assessment sheets will be analyzed quantitatively in the form of percentages. To see the results of student motivation, the following formula can be used:P= $\frac{\sum X}{\sum Y} x100\%$
Assessment of student learning outcomes is obtained from assignment scores and test scores held at the end of each cycle with a KKM of 75. To see student learning outcomes, the following formula can be used:Nilai $= \frac{\text{Skor Mentah}}{\text{Skor Maksimum Ideal}}$ x 100%

Tabel 3. Perbandingan hasil belajar

No	student's name	cycle learning outcomesI	cycle learning outcomesII	improving learning outcomes
1				
2				
3				

RESULTS AND DISCUSSION

This research was conducted in 2 cycles, where each cycle consisted of two meetings. Based on observations made in cycle 1, it was found that students' motivation and learning outcomes had reached the indicators of success in cycle 1, where after observing students' learning motivation through the student motivation observation sheet with a percentage value of 67.0% and the completeness value of student learning outcomes taken from 60% of the test scores and 40% of the written test scores at the end of cycle 1 were 61.1%. After completing the research in cycle I, the researchers and collaborators made reflections based on the problems obtained, including the following:

1) Student motivation during the learning process is still in the sufficient category. The ability of students to relate the material to real life and problem solving skills is still in the poor category. Because most students still discuss problems with their classmates, not with researchers so that problems cannot be solved optimally. Meanwhile, the activeness of students in doing assignments and the enthusiasm of students in learning were in the sufficient category.
2) Student achievement can be seen from the results of written tests and assignment scores. Written results are still very low because it can be seen from the percentage of completeness learning written test results in the first cycle that is equal to 55.6%, which does not meet classical completeness, namely 70% of students who get a score of 75. As for the results of the assessment of drawing assignments in the cycle I only reached 16.6%, where students who got a score of 75 out of 18 students. This is considered very bad because the classical mastery of students is far from what is set.

Based on these problems, researchers and collaborators reflect, among others:

1) Students are given motivation so that students' willingness to learn increases. So that students are more ready to accept lessons, dare to present their findings and are not afraid of getting the wrong answer. Researchers also help students so that students are active not only to their classmates but to researchers as well, this aims so that students can solve the problems they face.
2) In terms of improving learning outcomes, researchers remind students to always study and be serious when participating in learning and outside of class hours. Researchers always give assignments to be done outside school hours. In addition, researchers should try to memorize the names of respondents in one class so that researchers are closer to respondents. The implementation of the learning process in cycle I was generally good, although there were still some things that were still in the poor category. Based on data from observations and tests, the indicators of success in this study have not been fully achieved so that research needs to be increased in cycle II.

Conclude that using the Recitation Method can increase students' learning motivation. The increase in student learning motivation can be proven by an increase from cycle 1 to cycle 2 which has reached the predetermined success indicators.

Improving Student Learning Outcomes in Technical Drawing Training Subjects by using the Recitation Method.

Based on the data obtained from the research, it is known that there was an increase in the number of students who scored above the KKM, which was 75. In cycle 1 the number of

students who scored above the KKM was 61.1% of the 18 students. This amount has met the criteria for classical completeness of students in cycle 1, which is 60%. Meanwhile, for cycle 2, the number of students who scored above the KKM was 88.9% of the 18 students. This amount has also met the criteria for classical completeness cycle 2, which is 70%. These results can be seen from the table below:

Table 5. Improving student learning outcomes from cycle 1 to cycle 2

No	cycle	action success indicators (%)	research result (%)	description of the success of the action
1	I	50	61,1	succeed
2	II	70	88,9	succeed

Based on table 5, it is known that the indicators of success for each cycle have been achieved which indicates that the Recitation Method can improve learning outcomes for engineering drawing students of class X TKR 1 SMK Negeri 2 Painan.

CONCLUSION

Based on the results of the analysis of this study, it was obtained that:

1. The application of the Assignment (Recitation) method to the Engineering Drawing subject can increase the motivation and learning outcomes of class X TKR 1 SMK Negeri 2 Painan students.
2. There is an increase in student motivation by using the Recitation method in Engineering Drawing subjects. It can be seen that the percentage of students' motivation in the first cycle was 67.0% (enough) increased by 17% in the second cycle to 84.0% (very good). Of the 12 indicators observed in the first cycle, 2 aspects were above the KKM, namely the presence of students during the Engineering Drawing lesson and students doing all assignments. In cycle II all indicators have reached KKM.
3. The results of the study showed that there was an increase in learning outcomes as seen from the average value of assignments and written tests. The percentage of learning outcomes in the first cycle was 61.1 (enough) an increase of 27.8% in the second cycle to 88.9%.

REFERENCES

[1] Anas Sudijono. 1995. *Pengantar Evaluasi Pendidikan*. Jakarta; PT Rajagrafindo Persada
[2] Kunandar. (2010). *Langkah Mudah Penelitian Tindakan Kelas.* Jakarta: PT. Rajawali Pers
[3] Ohan Juhana dan M. Supratman. 2000. *Menggambar Teknik Mesin Sesuai Standar ISO*. Bandung: Pustaka Grafika.
[4] Sudirman, A.M. (1996). *Psikologi Pengajaran*. Jakarta: PT. Gramedia.