Implementing Snowball Throwing Model to Improve Learning Motivation and Test Score of Vocational High School Students

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Abstract. The objectives of this research is to improve: (1) students’ learning motivation (2) students’ test score in major of basic work of automotive of students in X-1 of Vehicle Engineering Program in SMK Boedi Oetomo Cilacap using the implementation of Snowball Throwing learning model. This research is Classroom Action Research with two cycles. Each cycle consists of action planning, implementing, observing, and reflecting. Its subjects are students in the X-1 grades of Vehicle Engineering Program in SMK Boedi Oetomo Cilacap. The data were collected through test, observation, questionnaire and documentation. They were analyzed by quantitative descriptive analysis mode. The result of research shows that implementing Snowball Throwing model can improve students’ learning motivation and test score of basic work of automotive subject. In cycle I, percentage of students’ learning motivation was 69.60% and in cycle II it became 77.08%. Furthermore, the percentage of the students completed the cognitive aspect was 62.86% and it became 100% in cycle II. Percentage of the students passed the affective aspect was 70.20% in cycle I and it became 81.14% in cycle II, and percentage of the students completed the psychomotor aspect was 81.14% in cycle I and it became 89.71% in cycle II.

Keywords— Classroom Action Research, Snowball Throwing, Motivation, Test Score

1. Introduction
National education through the national development is one of the government efforts in increasing the nation quality. The citizen is also able to improve their self-competence either in physical or spiritual aspects based on the value of Pancasila and Undang-Undang Dasar 1945. In addition, education has been able to appoint someone’s grade in social life.

Vocational high school is one of educational institution that deserve to create human resource who has ability, skill and professionalism so, they will become a proper worker. The purpose of vocational high school is to improve the students’ ability, skill and professionalism by facilitating them to learn and explore their major. In SMK, they are trained to be a proper worker for the future.
Technology and engineering are automotive expertise fields that consist of mastery package of normative, adaptive and productive. One of the major of basic work of automotive technique is automotive mastery package for vocational high school students in SMK Boedi Oetomo Cilacap, automotive concentraration (automotivetechnique of light vehicle). The students who pass the passing grade are still under the expectation. It is shown in the data of 35 students’ test score and only three students who passed the passing grade (8.57%). There are 32 students (91.43%) still under the passing grade. On the other hand, the result of the X-TKR I students’ motivation test is 78. This score is a low rated. This research should be done to solve the students’ problems in motivation and low test score by using Classroom Action Research (CAR) program.

In fact, teachers dominate the teaching and learning process, thus the students follow the class passively. It is proven by the fact in the site they cannot focus on the lesson. Moreover, there are additional distraction since the classroom is near by automotive guest room and the teachers room. They are distracted by the noise and activities seen from those room. There is also a small canteen in the classroom.

Snowball Throwing model is the most simple form of a cooperative teaching and learning approach which using Liberal Approach. [3] (Hergenhahn, 2009: 118) Liberal approach is a teaching and learning method that give a big chance to the students to explore and improve their learning strategy and skill. [4] (Ma’mur, 2012: 31).

These are the problem identification found in this research:

- Do Snowball Throwing model improve the motivation of X-TKR I students in learning the major of basic work of automotive technique in SMK Boedi Oetomo Cilacap?
- Do Snowball Throwing model increase the test score of X-TKR I students in learning the major of basic work of automotive technique in SMK Boedi Oetomo Cilacap?

2. Methodology

This Classroom Action Research (CAR) takes place in SMK Boedi Oetomo Cilacap and involves the students in the X-TKR I grades as the samples. There are 35 students in the classroom. The data collected in this CAR is the students’ test score and students’ motivation scale. The source of the data is taken from the repondents. Technique of collecting data used in this research is questioner, test, observation, and documentation. Data validity applied for the study is called as construct validity technique and content validity. Besides, construct validity technique is also used for the students’ motivation variable since it can be used to measure phenomenon and symptom happen. [1] (Arikunto, 2010; 239)

On the other hand, the students’ test score variable uses content variable in the form of expert judgement where each instrument is consulted with the expert, a colaboration teacher from automotive technique in SMK Boedi Oetomo Cilacap. Coefficient Alpha Cronbach adopted to assess students’ motivation variable. [6] (McMillan&Schumacher, 2010)Technique of analysis data applied in this research is quantitative descriptive technique.

Job indicator is used to see the improvement of X-TKR I students’ motivation and test score in SMK Boedi Oetomo Cilacap. [2] (Gutierrez&Ruiz LM, 2010: 597-608) This CAR is success if the students’ motivation improve from cycle 1 to cycle 2 and so do the students’ test score if their value keep progressing from the pre-test, cycle 1 and cycle 2. The researcher aims the percentage to the number of 70% for the students’ motivation and 80% for the students’ test score. This research is done step by step. Each cycle consists of four step, they are planning, actioning, observing, and reflecting. The picture below is the research procedure used in this study:
The researcher prepares the study by making action plan such as arranging the teaching-learning scenario with the collaborated teacher, determining the teaching content which appropriates with the annual program and semester, making lesson plan, preparing the teaching content and media, composing assessment sheet for scoring the students’ affection and psychomotor.

The implementation of Snowball Throwing model in the classroom appropriates with the step mentioned, start from grouping the students, giving instruction to discuss the case given with the group member, presenting the result and giving additional task as homework for the group. [8] (Slavin, 2009: 267)

When the cycle is implemented, the researcher pays attention to the teaching and learning process to observe the students’ behavior. The result of the observation is used to fulfill assessment sheet for valuing the students’ affection and psychomotor and it is done by four observer.[5] (Macpherson, 2010)

The cycle reflection is executed after the observation. The data result from the observation is discussed with the collaborated teacher to find the weaknesses of the cycle, so the next cycle will be better.

3. The Result of The Research and The Explanation

One competence in the major of basic work of automotive technique in this second semester is explaining the function of bearing, seal, gasket and how to take care of them. The main focus of the competence is understanding the sort and specification of bearing, seal, gasket and their function. The cycle execution always pays attention to the classroom atmosphere and students’ enthusiasm during the implementation of the cycle. [9] (Widoyoko, 2011) There are several weaknesses in utilizing the cycle 1, therefore the students score still under the researcher’s percentage target. [10] (Woo, 2014: 30) Reflecting on the cycle 1, the researcher make some emendation that will be adopted in the cycle 2. By modifying the cycle 2, the students’ score on motivation and cognitive test have an improvement. The data below shows the improvement:
3.1 The Students’ Motivation

**Table 1.** The X-TKR I students’ value on Cycle 1 and Cycle 2

| The Result       | Cycle 1 | Cycle 2 |
|------------------|---------|---------|
| Mean             | 121.81  | 134.89  |
| Percentage       | 69.60%  | 77.08%  |
| Criteria         | Medium  | high    |

3.2 The Students’ Test Result

3.2.1 Cognitive Aspect

**Table 2.** The Result of The X-TKR I students’ cognitive test on Cycle 1 and Cycle 2

| The Result                     | Cycle 1 | Cycle 2 |
|--------------------------------|---------|---------|
| Under the passing grade (%)   | 37.14   | 0.00    |
| Pass the passing grade (%)    | 62.86   | 100     |

3.2.2 Affective Aspect

**Table 3.** The data result of observing the students’ affective aspect on Cycle 1 and Cycle 2

| No         | Aspects scored                   | The Amount (%) |
|------------|----------------------------------|----------------|
|            |                                  | Cycle 1 | Cycle 2 |
| 1.         | Punctual attendance              | 84.29   | 94.29   |
| 2.         | Creativity during the lesson     | 64.29   | 84.14   |
| 3.         | Teamwork                         | 69.29   | 79.29   |
| 4.         | Activeness during the lesson     | 63.57   | 76.43   |
| 5.         | Courage and politeness in giving opinion | 75   | 81.43   |

**Table 4.** The data result of observing the students’ affective aspect on Cycle 1 and Cycle 2

| No         | Aspects scored                   | The Amount (%) |
|------------|----------------------------------|----------------|
|            |                                  | Cycle 1 | Cycle 2 |
| 1.         | Courage and politeness in asking question | 66.43 | 80   |
| 2.         | Courage and politeness in solving problem in front of the class | 68.57 | 79.29 |
|            | The Average (%)                  | 70.20   | 81.14   |
|            | Achievement Target               | 80      |
|            | Success Level                     | unsuccessful | Successful |

3.2.3 Psychomotor Aspect

**Table 5.** The Data result of observing the students’ psychomotor aspect on Cycle 1 and Cycle 2

| No         | Aspects scored | The Amount (%) |
|------------|----------------|----------------|
|            |                | Cycle 1 | Cycle 2 |
| 1.         |                | 66.43   | 80   |
| 2.         |                | 68.57   | 79.29 |
| The Average (%) | 70.20         | 81.14   |
| Success Level | unsuccessful | Successful |
5.

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