Effect of Implementation of the Example Non-Example Method on VII Grade Students’ Natural Science Psychomotor Competence in the Living System Organization Subject

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ABSTRACT

Instruction in the 2013 Curriculum emphasizes more in students’ activeness in looking for information and knowledge. However, based on the questionnaire spread in one school which has been implemented the 2013 Curriculum, it is known that students tend to be passive in learning, especially in asking question and giving opinion. Activities of asking questions and giving opinion is included in students’ psychomotor competence. To overcome the problem above, because learning material of Organization of Living System tend to be abstract, it needs an appropriate method to make it more concrete. Therefore, example non-example method can be implemented as an alternative solution to the problems. This method emphasizes on the use of pictures as media to make students more understand about abstract learning materials. Through pictures, students are led actively to analyze the provided pictures. The purpose of the research was to know effect of example non example method on VII grade students’ natural science (IPA) psychomotor competence in Organization of Living System learning materials. It was a quasi-experimental research. It was done in grade VII of junior high school 18 Padang. Instrument used was observation sheet. Technique of data analysis used Mann Whitney U test. The Analysis was done by using SPSS software. The finding shows that there is effect of example non example method on VII grade students’ natural science (IPA) psychomotor competence in organization of living system learning materials.

Keywords: example non example, competence, psychomotor

1. INTRODUCTION

Learning in the 2013 Curriculum emphasizes on active learning. Students are demanded to be active in searching information and finding knowledge. Active learning is very important to be implemented. Through it, students are easier to understand learning materials. It is in line with [6], who say that students can be easier to understand learning materials through active learning. Besides that, the importance of active learning is also explained by [7], who state that active learning should be developed. It is because the active learning is included into student-centered learning model. Based on the demand, researcher spread questionnaire to one school which has implemented the 2013 Curriculum. The results of the questionnaire show that students are still passive in learning process. They are not brave to ask questions and express their opinions. Activities of asking questions and giving opinion is included in students’ psychomotor competence. Considering problems faced in school, the researcher proposed an alternative solution by using example non example method. Based on research done by [3, 4], the example non example method can improve students’ activity in learning process. Selection of learning method in learning process should consider the suitability of materials which would be taught [5]. The example non example method emphasizes on the use of pictures to concrete the learning materials. According to [6], the contrast pictures is very important to support discovery learning. This method is very appropriate to be implemented to abstract learning materials to make them concrete, especially in BC (Basic Competencies) 3.6 Organization of Living Things Materials. Therefore, the researcher did a research, entitled “Effect of Example Non Example Method on VII Grade Students’ Natural Science (IPA) Psychomotor
Competence in Organization of Living Things Learning Materials”.

2. MATERIAL AND METHOD

It was a quasi-experimental research. It was done in grade VII of junior high school 18 Padang in semester II of academic year 2018/2019. Population of research was all VII grade students in junior high school 18 Padang, who are registered in academic year 2018/2019. They are 228 students from 9 classes. Sample was taken by using purposive sampling technique by considering some criteria. The criteria are the sample classes are taught by same teacher and have similar variance scores (in order that the treatment effect can be seen clearly). Research instrument used was psychomotor observation sheet. It is completed with scoring rubrics to facilitate observers in scoring students' affective competence. It was also validated by two experts and one Natural Science (IPA) teacher. The data processing uses SPSS software. It is used to process the data in form of numbers statistically, which are homogeneity test, normality test and hypothesis testing. Technique of data analysis was done through hypothesis testing. Statistical test used was Mann-Whitney U-Test because the data are ordinal. The criteria of hypothesis testing by using Mann-Whitney U-Test are as follow.

a. $H_0$ is accepted if sig. value > 0.05.

b. $H_0$ is rejected if sig. value < 0.05.

3. RESULT AND DISCUSSION

3.1. Result

Data of students’ psychomotor competence are obtained from observation done by teacher and peer as observers by using psychomotor observation sheet. The observation was done while learning process was going on. The data of students' psychomotor competence can be seen in Table 1 below.

Next, hypothesis testing was done by using Mann-Whitney U-Test because it is ordinal data. The result of hypothesis testing can be seen in Table 2 below.

Based on Table 3 above, it is known that the significant value of the hypothesis testing is 0.010. It means that sig. value < 0.05, so $H_0$ is rejected. Therefore, it can be concluded that there is an effect of example non example method in scientific approach and discovery learning model on grade VII students' Natural Science (IPA) psychomotor competence in junior high school 18 Padang.

3.2. Discussion

From the research finding, it is known that students’ psychomotor competence improves because of treatment given in experimental class. The average score in of students’ psychomotor competence in experimental class is higher than in control class. In experimental class, the average score is 85.93; while, in control class, it is 81.98. So, it means that the difference is 3.95. It shows that the effect of provided treatment can improve students’ psychomotor competence. Based on the result of hypothesis testing, it is known that there is a significant different between average score in experimental class and average score in control class, with sig. value is 0.010, which means that $H_0$ is rejected and $H_1$ is accepted (there is a significant difference between experimental class and control class).

The example non example method is a learning method which uses picture as media in delivering learning materials. Pictures as learning media should be flexible, in which it can overcome space, time, and sense limitation. Furthermore, the pictures which are chosen as learning media should be clear and able to explain or represent the learned materials.

The direct observation as the result of observation, is also a form of example non example method implementation because observation result is analyzable data. The example non example method is not only limited on pictures, but also on visualized observation result. It can also be sources in example non example method implementation. The example non example method makes students more critical in analyzing pictures. Students can have chance to give opinion and understand learning materials by giving examples in from of pictures.

According to, through example non example method, students are involved to a) enlarge their understanding to be deeper and more complex, b) through discovery process, it encourages students to build concepts
Students’ activity can encourage participation learning [14].

In learning process, students are more motivated to ask questions related to the provided pictures. Pictures can attract students’ attention. Asking question is an indicator in presentation skills. In other words, improvement of students’ ability in asking question also affects students’ psychomotor competence. It is in line with [3, 4] also assert that example non example method is effective in improving students’ activities in learning.

The optimum concentration of Andaleh root ethanol extract in inhibiting the growth of *S. aureus* and *E. coli* was at 12.5% and 3.125%. The best concentration of ethanol extract of Andaleh stem in inhibiting the growth of *S. aureus* and *E. coli* was at 25%. There was no antimicrobial activity of the ethanol extract of Andaleh roots and stem against the growth of *C. albicans*.


4. CONCLUSION

The conclusion of the research is example non-example method has significant effect on students’ psychomotor competence in organization of living system learning materials. In selecting learning method, it should be considered the suitability of learning materials and learning method. In addition, it should be considered students’ learning styles intelligence so that learning objectives can be achieved well. For Biology teachers, it is suggested to implement example non-example method as an effort to improve students’ psychomotor competence.

REFERENCES


