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The Effect of *The Power Of Two* Model Towards Learning Outcomes on Student Academic Ability-Based Online Learning at SMP Negeri 18 Padang

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Abstract – The learning process is still teacher-centered. Then, the student academic ability is less of a concern and the students are less active in the learning process. One of the efforts to overcome these problems is by applying *The Power of Two* learning model by paying attention to student academic ability. This study aims to determine the effect of *The Power of Two* learning model by paying attention to student academic ability towards their learning outcomes. This research design with a 2x2 factorial design. The population of this research was the students grade VIII SMPN 18 Padang in the 2019/2020 academic year. The sample was taken by using the purposive sampling technique obtaining class VIII.6 as the experimental class and class VIII.5 as the control class. The instrument used was a written test with objective questions. The data analysis was carried out by testing the two-way ANOVA hypothesis using SPSS software. The research findings showed that: (1) there is an effect of *The Power of Two* learning model towards the student learning outcomes. (2) There is an effect of *The Power of Two* learning model towards the student learning outcomes with high academic ability. (3) There is an effect of *The Power of Two* learning model towards the student learning outcomes with low academic ability. (4) There is an interaction of *The Power of Two* learning model with academic ability towards the student learning outcomes grade VIII of SMPN 18 Padang.

Keywords – The Power of Two, learning outcomes, academic ability, SMPN 18 Padang.

I. INTRODUCTION

SMP Negeri 18 Padang is one of the schools applying the 2013 curriculum in the teaching and learning process. Previously, this teaching and learning process was carried out face-to-face with teachers and other students, but this has changed since the Coronavirus Diseases 2019 (COVID-19) began to enter Indonesia in early March 2020. Coronavirus Diseases 2019 (COVID-19) is a new type of disease that has never been identified before attacking humans. The existence of this virus has an impact on various

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sectors of people's lives, ranging from the social, economic, tourism, and even education sectors to experience a significant impact because of this virus (Wiryanto, 2020: 2).

The learning process is carried out at home via online or remotely without directly meeting students to provide a more meaningful learning experience. This change in the learning process was carried out with the aim of preventing the spread of the COVID-19 virus. In the current COVID-19 pandemic, learning that is carried out online utilizes information technology as a medium for the implementation of learning. This change requires educators to respond with attitudes and actions to be willing to learn new things. Learning that is carried out using online / distance learning through parental guidance. Students can interact with the teacher using several applications such as *whatsapp* group, *google classroom*, *geschool, telephone* or *live chat*, *zoom* or via *video conference*.

However, online learning that has been implemented is still teacher-centered. The impact of these problems is the low learning outcomes of students. The difference in academic ability between students with high and low academic ability will worsen if the teaching pattern carried out by the teacher does not consider and pay attention to this aspect. During online learning students learn independently through online-based learning media (Nakayama & Santiago, 2007: 196). This has an impact on the low learning outcomes of students. Based on the conditions, the researcher is interested in trying to find alternatives to solve online learning problems by applying a learning model integrated into student worksheets (LKPD).

The implementation of the LKPD will be instructed and shared through the *whatsApp* group of each group which previously students have been divided into several groups through the *whatsApp* group. Then students will discuss learning materials using LKPD in which there is a learning model, by applying a learning model that is integrated into the LKPD which is expected to be able to influence student learning outcomes better.

Through several literature reviews on learning models, it was found that a suitable learning model could be applied in grade VIII of SMP Negeri 18 Padang during the online learning process by using online-based media. This learning model is expected to increase the active role of students in learning activities during this online learning, as well as to better understand learning activities and improve student learning outcomes (Ihwanah, 2016: 106). This learning model is *The Power of Two* learning model. *The Power of Two* learning model has advantages in its application, namely that it can help students to work together with their group partners, respect opinions and construct various kinds of ideas into one idea as an answer to a problem given by the teacher. (Danaryanti and Julianti, 2014: 196). The advantages of *The Power of Two* model according to (Wibowo and Rodliyah, 2012: 89) can stimulate students' creativity in finding answers, expand student knowledge, and strengthen social feelings between students.

The Power of Two learning model in its implementation has the following syntax. *First*, the teacher asks one or more questions that demand reflection and thought. *Second*, students are asked to answer these questions individually. *Third,* students answer all questions completely and in pairs exchange answers with each other and discuss it. *Fourth*, students in pairs make new answers to each question while improving the individual answers of each student. *Fifth*, all pairs have written new answers, then compare each pair's answers (Silberman, 2009: 161).

The Power of Two learning model that can be used in online learning supported by teaching materials is LKPD. Based on this description, the researcher is interested in conducting a research on the effect of *The Power of Two* learning model towards learning outcomes on student academic ability-based online learning at SMP Negeri 18 Padang.

II. Research Methodology

This type of research was a quasi-experimental research design with a 2x2 factorial design. In this research, the students were divided into two classes: the experimental class and the control class. The population in this study was all VIII classes at SMP Negeri 18 Padang registered in the 2019/2020 academic year, totaling eleven classes. The sampling was taken by using purposive sampling technique so that class VIII.5 was chosen as as the control class and class VIII.6 as the experimental class.

III. Results And Discussion

A. Results

The results of research on the effect of *The Power of Two* model on learning outcomes on student academic ability-based online learning grade VIII. The normality test for the experimental class has significance *0.200* and the control class has significance 0.088.

It can be concluded that the significance value obtained is greater than α 0.05. Then, the student learning outcomes in the experimental class and control class were normally distributed. The homogeneity test of student learning outcomes in both classes of the study sample has significance 0.07 which the significance value is greater than α 0.05. This shows that the learning outcomes of the students being the sample have homogeneous variances.

Hypothesis testing was done by two-way ANOVA test using SPSS software. Two-way ANOVA test results on the parameters of the learning model showed the significance 0.018 <0.05. It can be concluded that "There is a significant difference on student learning outcomes between the experimental class and the control class". The academic ability parameter showed the Sig. 0,000 <0.05. It can be concluded that "There is a significant difference on student learning outcomes between students with high academic ability and students with low academic ability". The interaction parameter between the learning model and academic ability showed the Sig. 0.039 <0.05. It can be concluded that "There is an interaction between learning models and academic ability in improving student learning outcomes". It can be concluded that there is an effect of *The Power of Two* learning model based on academic ability on the student learning outcomes.

Because the two-way ANOVA test results on class parameters and academic ability showed significant results, a further test was carried out to determine which groups were significantly different. The results of the *Bonferroni* follow-up test showed that all groups had significant differences except in the *Bonferroni* advanced test the learning outcomes of the control class with high academic ability and the experimental class with high academic ability.

B. Discussion

The results obtained from this posttest are that the average score of the experimental class is higher than the control class. The learning process in the experimental class applies *The Power of Two* learning model assisted by using student worksheets (LKPD) which is a form of group training given through *whatsapp* group, and also in its implementation through this group, which LKPD can be used to attract attention students to be more active and understand the concept. The LKPD was given to each student in pairs, adjusted to the steps of *The Power of Two* learning model.

In the first stage, the teacher gives questions to the students who need reflection and thought. This stage was carried out through the *whatsapp* group where previously the teacher had distributed students in several groups through the *whatsapp* group. In the *whatsapp* group, each group consists of 2 students and is added with the teacher as a guide in the group. The teacher takes an active role in the group discussions that are carried out. At this stage the students are given questions and understand the problems that exist in the student worksheets or questions given by the teacher through the *whatsapp* group. The questions given to students were aimed at generating curiosity and an active attitude in the online learning process.

In the *second* stage, the students are asked to answer these questions individually. They answer individually the questions in the student worksheet or the questions given by the teacher and after that the students send their individual answers via the whatsapp group. In the third stage, the students answer all questions completely and they in pairs exchange answers with each other and discuss them via *whatsapp* group. The teacher gives time for each group of pairs to analyze and evaluate the answers to the questions. If the group pairs do not find the answer, the teacher will direct the students to answer the questions.

Furthermore, in the *fourth* stage, after analyzing and evaluating the results of the answers to the questions, the students in pairs make new answers to each question while improving the individual answers of each student and sending the results of the discussion via *whatsapp group*. The *fifth* stage, in which all pairs of groups have written new answers then compare the answers of each pair through the students' class *whatsapp* group. At this stage, after the group pair presented the results of their discussion through the class *whatsapp* group, then the presenter of the group asked for a response from the other groups. The presenters together find the answers from the responses that have been given by other group pairs. Then, the teacher evaluates the results of the discussion, the responses of other group pairs, and together concludes the learning material that has been studied through the class *whatsapp* group.

In the experimental class and the control class, the students are equally divided into students with high academic ability and low academic ability. Academic ability is the ability that students have in solving problems or tasks they face based on their knowledge (Woolfook, 2010). Based on the results of the research obtained, the students in the high academic ability group had a higher average score than the students with low academic ability, both in the experimental class and in the control class.

Students who have high academic ability will achieve better thinking skills than students with low academic ability (Bahri, 2016: 54). This is in line with Noviyanti's research (2019), that there is an effect of the academic ability towards argumentation skills and learning outcomes of students. The ANOVA test results showed that there is an interaction between learning models and academic ability in influencing student learning outcomes. There is an interaction between the learning model and academic ability towards learning outcomes. It means that there is a joint contribution that can be contributed between the learning model and the academic ability of the student learning outcomes.

Thus, *The Power of Two* learning model can be applied both to the students with high academic ability and the students with low academic ability in improving the student learning outcomes.

IV. CONCLUSION

The application of *The power of Two* learning model towards learning outcomes on online learning based on the student academic ability was obtained: (1) there is an effect of *The Power of Two* learning model towards the student learning outcomes. (2) There is an effect of The *Power of Two* learning model towards the learning outcomes of the students with high academic ability. (3) There is an effect of *The Power of Two* learning model towards the learning outcomes of the students with low academic ability. (4) There is an interaction of *The Power of Two* learning model with academic ability on the student learning outcomes of grade VIII of SMPN 18 Padang.

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