

THE EFFECT OF USING THE TELEGRAM APPLICATION ON MATHEMATICS LEARNING ACHIEVEMENT

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Abstract

This research was conducted to improve students' learning achievement of 11th grade SMK Brantas Karangates. This research identified the effect of using telegram in the learning process. Students' learning results in 11th grade have not met the Minimum Completion Criteria, because only 20 students from 36 students have met the Minimum Completion Criteria (75). In other words, only 55.56% of students score 75. The study is action research with quantitative approach. The data analysis used is the T-test. The results showed a significant improvement in learning achievement after using the telegram application.

Keyword: learning achievement, telegram, T-test, quantitative

Low student learning achievement is an indication of the lack of student learning motivation. In addition to the ability to understand the mathematical concepts of students, learning motivation is also important to be grown in learners. Lestari (2014) argues that learning motivation is a force, drive or strength, both from yourself and from outside that encourages students to learn. Learning motivation that needs to be instilled during learning includes fostering strong encouragement and learning needs, fostering attention and interest in mathematics, practicing perseverance and tenacity in facing difficulties and fostering desire and desire to succeed. (Abdurrohman, 1999) argues a learning disability is a disorder in one or more of the basic psychological processes that include understanding and use of spoken or written language.

Seeing the facts in the field most students prefer to play gadgets, mobile phones, and so on rather than learning mathematics. In this day and age the impact of social media is very felt in the lives of students. Researchers took advantage of the situation by using one of the social media, the telegram application used in math learning. So that with the effect of this telegram application is able to increase significant learning achievement.

Based on the results of observations at SMK Brantas Karangates, especially in students of 11th grade RPL, the learning model commonly used by teachers still shows that students have low levels of learning motivation, especially in Matrix. Based on the learning results of students in 11th grade RPL has not met the Minimum Completion Criteria, because only 20 students from 36 students who have met the Minimum Completion Criteria (75). This means only 55.56% of students score 75. The results of these observations showed that in 11th grade students of SMK Brantas Karangates in the 2021/2022 school year had problems in learning. If this problem is not immediately given positive action, then the learning achievement of students of 11th grade RPL SMK Brantas Karangates in the 2021/2022 school year can always be low.

According to E. Mulyasa (2008: 121), learning is the success of students in forming competencies and achieving goals, as well as the success of teachers in guiding students in learning. In line with the development of technology emerged telegram application as one of the applications that can be explored to support the quality of learning. It is hoped that the telegram application can improve students' learning achievement.

Method

Judging from how this research is conducted, this type of research is *Classroom Action Research*, because this research aims to analyze or solve problems that are in fact objectively paradigmatic and planned using cycle stages. In this study using the Problem-Based Learning (PBL) model with the following work steps: 1) Student orientation on the problem; 2) Organize learners to learn; 3) Guide the investigation of individuals and groups; 4) Develop and present the work; and 5) Analyze and evaluate the problem-solving process.

The sample in this study was students of 11th grade RPL SMK Brantas Karangates Year of Study 2021/2022 as many as 36 learners. According to Arikunto (2006: 136) research instruments are tools / devices that researchers use in collecting data so that their work is easier and the results are better in a more careful, complete, and systematic sense so that it is easier to process. Instruments used include: learning design, formative test questions (quizzes), attitude assessment observation sheets, and skill assessment sheets. Research procedures are steps used to collect data to answer research participants. proposed in this study. The methods of data collection in this study are from tests, observation sheets, and documentation.

In this study, the data that has been collected is analyzed to get answers to research problems that have been formulated. Data analysis takes place as long as the researcher is at the research site until the end of data collection. Sumber data in this study is obtained from quantitative data. The formulas used to determine the average value of quantitative data are:

$$\bar{X} = \frac{\sum X}{N} \quad (\text{Sudjana, 2005:109})$$

With:

$\bar{X}$ = Average; $\sum X$ = The total number of all scores; N = Entire subject

The results of the analysis of the experimental class using the t test with the level of significance $\alpha = 0,05$. According to Fatade, Mogari, and Arigbabu (2013) one research instrument manipulated at two levels namely: Teacher-Made Test (TMT) and Researcher-Designed Test (RDT), was developed and used for the study and data collected were analysed using the descriptive statistics of mean and standard deviation which served as precursor to testing the two hypotheses for the study using an independent samples T-test.

Findings and Discussion

Learning may be defined as any relatively permanent change in behavior which occurs as a result of experience or practice (Morgan, 1971:63). The results of using the telegram application to improve mathematics learning achievement can be stated in the explanation below. Evaluation means collecting facts systematically to determine whether in reality there is a change in the student and to determine the extent of the change in the student's personality (Daryanto, 2007).

According to Dimiyati and Mudjiono (2013: 3-4) states "Learning outcomes are the result of an interaction of act of learning and act of teaching. With these results, the authors hopes that in the future the use of the telegram application will be able to bring better research results. The following presented the results of the analysis using the T-test to find out the influence of the use of the telegram application on improving student learning achievement. Table 1 Results of Analysis Eksperimen Class Using T-Test with a level of significance: ($\alpha = 0,05$) obtained:

Nama Kelas	Mean Selisih Pasangan (d)	Standar Deviasi Selisih Pasangan (sd)	Df	t Hitung	t Tabel	Keterangan Perbedaan
XI RPL	-5,79412	18,03492	33	-1,873	2,042	Signifikan

Based on the data above shows, from 11th grade RPL learners produce the mean difference between pairs. (d) = -5.79412, and the standard deviation of the difference between the pair (sd) 18.03492 with Df = 33 which yields t count = -1,873 and t table = 2.042. Because t calculate < t table with a level of significance then the $\alpha = 0,05$ use of telegram application has a significant influence on the achievement of learning mathematics learners 11th grade RPL SMK Brantas Karangates.

Conclusions and Suggestions

Based on the results of research conducted at SMK Brantas Karangates obtained to the conclusion that there is a significant difference in the achievement of learning mathematics in students who are taught using the use of telegram applications. It can be interpreted that the cognitive scores of 32 students are above the Minimum Completion Criteria, while 4 students have scores still below the Minimum Completion Criteria. For 4 students who have scores below the KKM, they must follow the remedial program, with a maximum score of 75 (provided that they have passed the test). With the number of students whose scores are above the Minimum Completion Criteria (as many as 32 children) this has shown a significant increase in learning achievement.

From the results of the conclusion above, the researchers gave some suggestions as follows: 1) for the telegram application. as a surefire alternative in math learning, because this application has many advantages that can be exploited; 2) teacher or readers are expected to be able to benefit from technological developments (TPACK), thus supporting the improvement and improvement of the quality of learning; 3) As a teacher in this day and age must be able to have dazzling skills in any way. Teachers are able to apply 4 C 21st Century Learning (critical thinking, creativity, collaboration, and communication).

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