# The Effect of Ms. Teams on Math Learning Motivation and Its Implications for HOTS Skills

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## ABSTRACT

The ability to think in a higher order is one of the essential abilities because every concept in mathematics is interconnected. This study aims to analyze the improvement of students' higher-order thinking skills and motivation to learn mathematics. The type of research is a combination (mixed methods) with a sequential explanatory design. The sampling technique uses cluster random sampling technique. The sample of this study was class XI IPS 4 (experiment) and XI IPS 3 (control) SMAN 3 Cirebon Instrument. This study used tests, questionnaires of motivation to learn mathematics, observation sheets of learning implementation, and data analysis techniques. The results of this study were (1) the acquisition of tests using the experimental and control class N-Gain test was 0.67 and 0.43, (2) student learning motivation in the experimental and control classes was in a suitable category, (3) the results of the student mathematics learning motivation questionnaire obtained an average initial percentage of 67.470% to 76.405% and, (4) for the percentage of observation results of the average learning implementation of 89%. This study concludes that student learning motivation in the Microsoft Teams-assisted blended learning model can positively improve students' higher-order thinking skills.

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## 1. INTRODUCTION

Education is the process of learning knowledge, skills, and habits of a group of humans that are passed from one generation to the next through teaching, training, and research. In line with Izzati (2017), education may be essential for every human being because, with an education, every human being will find it easier to solve the problems he is

facing. Education plays an essential role in the sustainability of human life because humans born on earth are not knowledgeable. Therefore, every human has needed education from the past until now, even in the future, to create changes in a more advanced direction and for the welfare of life. Therefore, education is expected to form quality humans with high intellect, good personalities, intelligence, noble morals and life skills (Zelhendri, 2017). In addition, education has another role: to provide everyone with helpful knowledge. The role is performed by an educator or teacher (Martina, 2017).

The increasing progress of science and technology (IPTEK) is increasingly experiencing rapid progress where the creation of various kinds of technology in various fields that aim to improve the quality of human resources (HR). This has led to the formation of a transformation in various fields, especially in the field of learning where the world of learning requires changes, especially in schools and large academies to better prepare students to improve some new skills in participating in the progress of a rapidly growing world. This advancement in science and technology (IPTEK) is used to prosper mankind. Therefore, a teacher is required to be able to creatively find and collect teaching materials needed in the learning process. However, sometimes teachers have not been able to make teaching materials or learning media that are suitable to be applied to students, there are even teachers who are reluctant to use media in teaching (Jalmur, 2017).

According to Sayyidatunnasyaa et al., (2022) there are 4 categories of skills, including higher-order thinking skills, collaborative thinking skills, and creative thinking abilities. Every mathematical idea is connected to each other, thinking skills are essential. The problems presented rationally and coherently, start from the complexity of the most basic ideas, since learning involves more than just performing quantitative calculations, it requires the application of reasoning, which is why it is so related to mathematics and thinking. There are two categories of thinking skills: low-order thinking capabilities (LOTS) and higher-order thinking capabilities (HOTS), both of which are used to refer to thinking styles (Arifin, 2017).

According Andayani & Lathifah (2019) Higher order thinking ability is the capacity for more complicated thought processes that include exposing existing information, critiquing it, and coming up with solutions to problems. In response to the same, Annuuru et al. (2017) Emphasizing that combining facts and ideas during the stages of analysis, evaluation, and creation in the form of delivering an assessment of the facts learned or being able to create something from something learned is what it means to think at a higher level. Accompanying a similar thing, Budiarta et al., (2018) said that HOTS can be understood as the capacity for complex thought processes, including the analysis of sources and the generation of solutions to problems. According to some of the viewpoints mentioned above, thinking at a higher level is a more complicated and profound cognitive skill than thinking at a lower level. This is outlined in Bloom's taxonomy.

The level of thinking capacity of a person can be classified according to Bloom's taxonomy in a hierarchical framework, from low to high. Lorin Anderson Krathwohl revised Bloom's taxonomy of skills, which is separated into two groups, in 1994 to reflect the times. The most basic thinking abilities, such as remembering, understanding, and applying, are considered low-level skills. The second category is high-level cognitive abilities, such as the capacity for analysis, evaluation, and creation; This updated Bloom taxonomy is known as Bloom's Revised Taxonomy (Anderson et al., 2001)

Previous studies of students' thinking skills, including research findings by Purbaningrum (2017), which means that students' capacity for higher-order thinking is still moderate. In addition, according to research Angraini & Sriyati (2019) Class X students in Solok city are classified as having "less" high-level thinking skills. In Solok City, the average percentage of students who show higher-order thinking skills is only 32.08%. The

percentage score for school A's accreditation is 39.41%, while the percentage score for school B's accreditation is 26.01%. Despite the fact that research by Kurniati et al. (2016) The findings of a study involving 30 students from various junior high schools in Jember Regency revealed that 18 of them showed a high level of thinking skills with a moderate level by doing good analysis, evaluation, and creation when solving various problems. In addition, 12 students were assessed as having high-level thinking skills with a low level as they struggled to apply their analytical, judgmental, creativity, logic, and reasoning skills to all situations. There must be a solution based on the current problem. Researchers have found that motivating students to learn is the best way to problem-solve higher-order thinking skills.

Learning motivation is an attempt to create a state that will make us desire to do something, and if we don't like it, it will try to make us like it (Emda, 2017). Learning motivation plays an important role, especially in learning activities. This is because when students are motivated, their excitement grows naturally, but when they lack drive, learning from them suffers. As a result, every student needs to be given the necessary tools to be motivated to learn. However, through the right learning model, it can help every student become more motivated. Blended learning is one instructional model that teachers can utilize. Blended learning combines traditional classroom instruction with technology-based instruction (Widiara, 2020). The terms mixed learning, melted learning and hybrid learning are some alternative terms that are often used to refer to the concept of unified, blended or mixed learning that refers to the same thing. But blended learning is a word often used today (Ramadhani, 2020). The blended learning model can also instill a strong desire in children to learn maths, which will help them engage in the learning process and develop the kind of problem solvers who can think critically about a subject or problem before moving on to other related issues. The result is that knowledge acquisition will usually take longer than students who have a strong motivation to learn mathematics. On the other hand, students who lack the drive to learn maths will only have teachers as their only source of learning. Media that can facilitate effective learning is also needed in addition to learning models to increase high-level cognitive abilities and student motivation. Microsoft Teams is a learning tool that can be used.

One of the technology products created specifically for the education sector is Microsoft Teams. According to Situmorang (2020) Microsoft Teams is a digital hub that brings conversations, tasks, and apps together in one location. It has a number of features, including Chat, Calls (Video Conferencing), files, Assignments or assignments feature, Classroom feature, Post feature, and Class Notebook feature, which give teachers the opportunity to develop engaging lessons for students.

Based on the above problems, researchers are interested in taking the title "Analysis of Higher Order Thinking Skills (HOTS) and Student Mathematics Learning Motivation through Blended Learning".

## 2. METHOD

### 2.1. Research Design

This study used a combination method (mixed methods) with sequential explanatory design conducted at SMAN 3 Cirebon. The research flow can be seen in Figure 1.
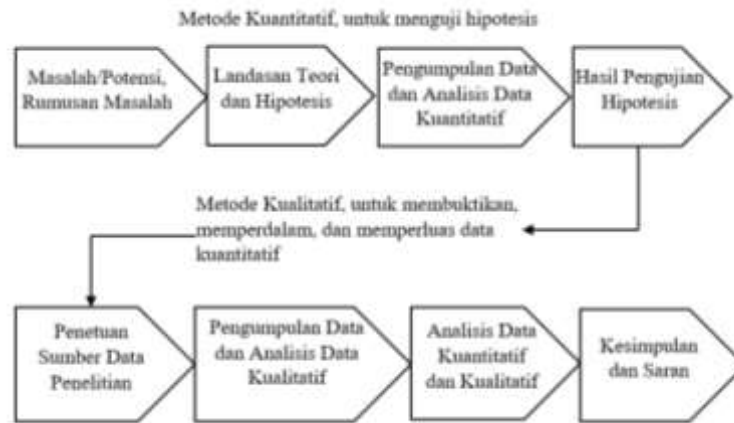
**Figure 1**. Research Steps in Sequential Explanatory Design

The population for this study consisted of all grades XI students at SMAN 3 Cirebon. The sample of this study consisted of 72 class XI social studies students who had taken the Derivative of Algebraic Functions course. Cluster random sampling technique is used for sampling. Class XI IPS 3 (Control class) and class XI IPS 4 (Experimental class) are classes used for research. In this study, the independent variable was students' math learning motivation when using the Microsoft Teams-assisted blended learning paradigm. While the ability to think higher order is the dependent variable in this study. The research instruments used include learning motivation questionnaires, high-level thinking ability test questions, and observation sheets for learning implementation.

This questionnaire is used to measure the motivation of each student. The questionnaire consists of 25 questions. For the need to compile several statements, a questionnaire grid was made as follows:

**Table 1**. Questionnaire Indicators

| Indicator | Statement Number | Statement (+) | Statement (-) | Number of Statements |
|---|---|---|---|---|
| There is a desire and desire to succeed | 1,2,3,4,5,6 | 4 | 2 | 6 |
| There is a push | 7,8,9,10,11 | 2 | 3 | 5 |
| The existence of hopes and aspirations for the future | 12,13,14,15,16 | 2 | 3 | 5 |
| There is an appreciation in learning | 17,18,19,20 | 1 | 3 | 4 |
| Interesting activities | 21,22 | 1 | 1 | 2 |
| The existence of a conducive situation | 23,24,25 | 1 | 2 | 3 |

The next instrument is a test, a test used to determine the improvement of students' higher-order thinking skills. This test is carried out 2 times, namely before learning (pretest) and after learning (posttest). This test consists of 15 questions where the full details are in the following table:

**Table 2**. Test Question Details

| | **Higher Order Thinking Ability Indicators** | **Cognitive Realm** | **Question Number** | **Number of Questions** |
|---|---|---|---|---|
| 3.8 Describes the properties of derivatives of algebraic functions and determines derivatives of algebraic functions using definitions and properties of derivatives of functions. | Analytical Skills | C4 | 1,6, 11 | 3 |
| | Ability to Distinguish | C4 | 4,8,12 | 3 |
| | Organizational Ability | C4 | 2, 13 | 2 |
| 4.8 Resolves problems related to derivatives of algebraic functions. | Connectability | C4 | 3,7,9 | 3 |
| | Ability to Evaluate | C5 | 5,14 | 2 |
| | Ability to Create | C6 | 10,15 | 2 |

Based on the quality category of learning devices, namely instruments to measure the validity of learning devices, instruments to measure the practicality of learning devices and instruments to measure the effectiveness of learning devices.

1.  Test the validity of learning devices

    The validity test of learning devices is obtained from the results of validation of learning devices by a team of experts / practitioners. The learning device validity test is calculated using the following formula (Retnawati, 2016):

    $$\text{Coefficient of Validity} = D(A+B+C+D)$$

    Information:

    A = Cells that show disagreement between the two raters
    B dan C = Cells that show differences in views between raters
    D = Cells that show valid agreement between the two raters

    Based on the calculation of the assessment of learning devices above, the interval for the validity criteria of learning devices is obtained in Table 3 below:

**Table 3**. Expert Test Validity Level Criteria

| **Coefficient of Validity** | **Level of Validity** | **Criteria** |
|---|---|---|
| >0,8 | High | Valid |
| 0,4 - 0,8 | Medium | Quite valid |
| <0,4 | Very low | Less valid |

Learning tools are said to be valid if the validation results of the expert team reach at least a valid level with criteria of 0.4-0.8 In addition, the validators used in this study amounted to 3 people consisting of material experts and media experts.

2.  Test the Practicality of Learning Tools
    The practicality test of learning tools is obtained from observation of the implementation of learning and observation of student activities. Observations were made during the learning process with a total of 3 online meetings through Microsoft Teams. The following is the formula used in calculating the results of student responses, namely (Irsalina & Dwiningsih, 2018):

$$P = \frac{\text{Number of scores obtained}}{\text{Maximum number of scores}} \times 100\%$$

The criteria used in decision making are as follows:

**Table 4.** Implementation Observation Criteria

| Implementation Percentage | Implementation Categories |
|---|---|
| $85,01\% - 100\%$ | Very practical |
| $75,01\% - 85\%$ | Practical |
| $65,01\% - 75\%$ | Quite practical |
| $50,01\% - 65\%$ | Less practical |
| $< 50\%$ | Very impractical |

Based on the practicality percentage formula, the device is said to be practical based on the implementation of learning and student activities if the percentage of learning implementation and student activity reaches at least 75.01% - 85.00%.

3. Test the Effectiveness of Learning Tools

Test the effectiveness of learning devices obtained from the results of student assessments and learning outcomes tests. In this case, several tests are used to determine the effectiveness of learning using blended learning, namely:

1) Normality Test

This test is used to assess whether the distributed value is normal or not (Priyastama, 2017). In this study the test used was the Shapiro Wilk test, because the amount of data involved was small. In this example, there are criteria that are interpreted as follows in tabular form.

**Table 5.** Criteria Normality Test

| Percentage Score (%) | Interpretation |
|---|---|
| /P-value/Sig<0,05 | Abnormal |
| /P-value/Sig≥0,05 | Normal |

2) Homogeneity Test

This test is used to assess whether or not there is the same variance of the data population; if the significant value is greater than 0.05, the variance of two or more groups is equal (Mulianti et al., 2023). In this example, there are criteria that are interpreted as follows in tabular form:

**Table 6.** Criteria Homogeneity Test

| Value Sig | Interpretation |
|---|---|
| Sig.<0,05 | inhomogeneous |
| Sig.≥0,05 | homogeneous |

3) N-Gain Test

The N-Gain test is a link between the value before and the value after learning, the N-Gain test is used to find out how the results of the increase occur in high, medium or low. The N-Gain formula used according to the meltzer is as follows:

$$\text{N-Gain} = \frac{\text{score post test-score pre test}}{\text{score ideal-score pre test}}$$

In this example, there are criteria that are then interpreted as follows in tabular form:

**Table 7**. Criteria N-Gain Test

| Value N – Gain | Categories |
|---|---|
| $g > 0,7$ | High |
| $0,3 \leq g \leq 0,7$ | Medium |
| $g < 0,3$ | Low |

4) Test the Hypothesis

The determination of the hypothesis test depends on the results of the prerequisite test. If the data is normal and homogeneous, you can use a parametric test using the t-test used by researchers, namely the Independent Samples T-Test on SPSS 25 software. While non-parametric tests are carried out when one or all test steps cannot be met, non-parametric test steps are needed. The non-parametric test used is the Mann-Whitney test with the help of SPSS 25 software. The Mann-Whitney test can be used for interval or ratio scales. According to Lestari & Yudhanegara (2015), the mann-whitney test is used for statistical data analysis of two independent samples if the type of data to be analyzed is ordinal, interval, or ratio. So researchers can use this mann-whitney test because the data in this study is data on students' higher-order thinking skills tests obtained from experimental classes and control classes with interval scale data.

The Mann-Whitney test formula used in this study is as follows (Lestari & Yudhanegara, 2015):

$$Z_{hitung} = \frac{\sum R(X_1) - n_1\left(\frac{n+1}{2}\right)}{\sqrt{\frac{n_1 n_2}{N(N-1)}[\sum R(X_1)^2 + \sum R(X_2)^2] - \frac{n_1 n_2 (N+1)^2}{4(N+1)}}}$$

Information :
$R(X_1)$ = Rank untuk $X_1$
$R(X_2)$ = Rank untuk $X_2$
$N$　　= $n_1 + n_2$

## 3. RESULTS AND DISCUSSION

### 3.1. Results

The results of high-level mathematical reasoning ability tests and learning motivation questionnaires which are quantitative research data, as well as observational findings of learning implementation which are qualitative research data, are obtained from research that has been conducted. Three results will be listed below:

**Higher Order Thinking Skills**

Results from examinations of students' higher-order thinking abilities and motivation to study math were used to evaluate the efficacy of blended learning using Microsoft Teams. The following exams are used to gauge higher-order cognitive abilities:

1)  Normality test

**Table 8**. Summary of Normality Test

| Ngain_Score_Persen | Kelas | Kolmogorov-Smimov | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | Df | Sig. | Statistic | df | Sig. |
| | Eksperimen | 0,117 | 36 | 0,200 | 0,966 | 36 | 0,316 |
| | Kontrol | 0,123 | 36 | 0,190 | 0,896 | 36 | 0,003 |
| *. This is a lower bound of the true signifance | | | | | | | |
| Lillefors Significance Correction | | | | | | | |

Table 8 shows that experimental and control class data tested using the Shapiro-Wilk test with a significance level of 5% are data that are not normally distributed because the control class has a sig value of 0.05. Therefore, the higher-order thinking ability test is not yet qualified or not normally distributed.

2)  Homogeneity Test

**Table 9**. Homogeneity Test Results

| Ngain_Score | | Levene Statistics | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| | Based on Means | 11,383 | 1 | 70 | 0.001 |
| | Based on Median | 9,330 | 1 | 70 | 0.003 |
| | Based on Median and with adjusted df | 9,330 | 1 | 49,281 | 0.004 |
| | Based on trimmed mean | 10.002 | 1 | 70 | 0.002 |

As shown in Table 2, the results of the homogeneity test using the Levene test procedure with a significance threshold of 5% obtained sig values of 0.001, 0.003, 0.004 and 0.002. Because the higher order thinking ability test does not meet the standard or is not homogeneous, it can be concluded that the sig value of 0.05 is not significant.

3)  N-Gain Test

**Table 10**. N-Gain Test Results

| N-Gain | Experiment | Control |
|---|---|---|
| Pretest score | 47,78 | 47,36 |
| Posttest score | 82,9 | 70 |
| Ideal Score | 100 | 100 |
| Results n Group Gain | 0,67 | 0,43 |
| Category | Currently | Currently |

The experimental class, which makes use of Microsoft Teams, has an N-gain value of 0.67, which places it in the medium group, while the control class, which does not make use of Microsoft Teams, has an N-gain value of 0.43, which also places it in the medium

group. Therefore, using Microsoft Teams and the blended learning paradigm to enhance higher order thinking abilities (HOTS) in a mathematics course is categorized as being in the moderate group.

4) Mann-Whitney test

**Table 11.** Mann-Whitney Test Results

Test Statistics[a]

| | Ngain_Score_Persen |
|---|---|
| Mann Whitney | 275,000 |
| Wilcoxon W | 941,000 |
| Z | -4,204 |
| Asymp. Sig.(2-tailed) | 0.000 |
| a.Grouping Variable : class | |

As demonstrated by Asymp Table 7. Sig. (2-tailed) is 0.000 < 0.05. Because of this, it may be said that there is a difference in the outcomes for higher order thinking skills between the experimental and control groups. The results show that learning has an effect on the development of higher order thinking skills, whether it is done through a blended learning model utilizing Microsoft Teams or just through traditional learning, according to the substantial differences.

**Results of the Mathematics Learning Motivation Questionnaire**

Respondents in this study were 72 high school students in class XI IPS 3 and 4. Based on the results of the students' mathematics learning motivation questionnaire, it can be concluded that the largest percentage before learning was 72.56%, the lowest percentage was 59.26%, and the highest percentage after learning was 82%, the lowest percentage is 69.07%. The questionnaire was provided by paper leaflets which the recipient filled out in person. The following table shows the calculated questionnaire data, which have been combined into one data set:

**Table 12.** Recapitulation of Student Motivation Questionnaire Before Learning Mathematics

| Indicator | Percentage | Category |
|---|---|---|
| Desire and the desire to succeed are present | 59.26% | Enough |
| There is motivation | 68.33% | Good |
| Future aims and hopes are present | 72.56% | Good |
| There is a value placed on education | 70.69% | Good |
| There are intriguing things to do | 67.50% | Good |
| There is a favorable circumstance | 66.48% | Good |
| Average | 67,470% | Good |

**Table 13**. Recapitulation of Student Motivation Questionnaire After Learning Mathematics

| Indicator | Percentage | Category |
|---|---|---|
| Desire and the desire to succeed are present | 81.94% | Very good |
| There is motivation | 82% | Very good |

| Indicator | Percentage | Category |
|---|---|---|
| Future aims and hopes are present | 78.89% | Good |
| There is a value placed on education | 74.31% | Good |
| There are intriguing things to do | 72.22% | Good |
| There is a favorable circumstance | 69.07% | Good |
| Average | 76.405% | Good |

Tables 5 and 6 provide the findings from the recapitulation of the students' mathematics learning motivation questionnaire, with an initial average of 67.470% and a final average of 76.405% with each good criterion. It may be argued that using Microsoft Teams and the blended learning model in the classroom boosts students' motivation to learn mathematics.

## Observation Results of Learning Implementation

Three online sessions were held for study. Observation of the implementation of learning is carried out at each meeting, with the aim of knowing the feasibility of blended learning applied using Microsoft Teams. The following table shows the results of calculating the implementation observation sheet:

**Table 14**. Recapitulation of Implementation Observation Sheet

| No | Meeting | Percentage | Criteria |
|---|---|---|---|
| 1 | The first meeting | 85% | Practical |
| 2 | Second meeting | 89% | Practical |
| 3 | Third meeting | 94% | Very practical |
| | Average | 89% | Practical |

89% of students utilize Microsoft Teams to enhance their higher-order thinking abilities and their love of learning mathematics, according to practical criteria.

## Validator verification results

In this study, it was stated that there were 3 experts who became validators to check the feasibility of learning devices used before the research took place. The following are the results of the validity of learning tools by 3 experts:

Material expert validation 1 =D(A+B+C+D)=15(0+0+0+15)=1515=1,00
Material expert validation 2 =D(A+B+C+D)=15(0+0+0+15)=1515=1,00
Media expert validation =D(A+B+C+D)=10(0+0+0+10)=1010=1,00

Furthermore, the results of the validity calculation are converted to the table of criteria for the level of validity of expert tests. The results showed that the validity level with a validity coefficient of 1.00 was at the "High" level. This indicates that the learning design on Microsoft Teams media is valid / suitable for use in mathematics learning.

### 3.2. Discussion

Based on research that has been conducted on improving students' higher-order thinking skills and motivation to learn mathematics at SMAN 3 Cirebon through a blended learning model using Microsoft Teams, the method of reviewing data is to pay attention to the results of obtaining numbers from asking students to fill in pretest and posttest questions and the value of obtaining these numbers that have been produced in the research results.

To further analyze the improvement of higher order thinking skills and student learning motivation through Microsoft Teams assisted blended learning at SMAN 3 Cirebon, the results of the calculation of the assessment results have also been started by providing pretest and posttest results, consisting of 15 pretest questions. Then, 15 posttest questions are given to students. Improving higher-order thinking skills and student learning motivation through a blended learning model using Microsoft Teams at SMAN 3 Cirebon can be seen in the results of obtaining mathematics learning so that it can increase or decrease for students with its presence, based on the results of research that has been conducted to be able to explain and understand the Improvement of High Order Thinking Ability and Student Motivation through a blended learning model using Microsoft Teams at SMAN 3 Cirebon.

Before explaining the results of learning effectiveness, first explain the results of the validity of learning tools and the practicality of learning tools. According to the explanation table above, the results of the validity of learning tools obtained from 3 experts, namely 1.00 with high categories. In addition, the results of observations conducted during 3 online meetings through Microsoft Teams found that 89% of students use Microsoft Teams to improve their higher-order thinking skills and their excitement to learn mathematics.

In addition, the use of blended learning models with the help of Microsoft Teams can help improve higher-order thinking skills and student motivation, and problem-solving techniques in the explanation of mathematical concepts can develop learners and improve. In addition, it has been shown that evidence of pre-posttest results in the control class and pre-posttest scores in the experimental class can be used to provide knowledge data on mathematical ideas by class XII social studies students at SMAN 3 Cirebon for the 2022/2023 Learning Year. This can be seen based on existing data such as summing the results of questionnaire scores and tests that have been taken based on assessment scores. The calculation of the researchers' scores was also preceded by the provision of a test with 15 questions to measure students' higher-order thinking skills through blended learning using Microsoft Teams.

According to the results of the study, there was 0.43 significant improvement in higher-order thinking skills for the control class and 0.67 for the experimental class in mathematics, placing both classes in the medium category, through blended learning assisted by Microsoft Teams at SMAN 3 Cirebon In addition, there was an increase in student learning motivation, which had an average before learning occurred of 67.470 percent and an average after learning occurred of 76.40 percent, all of which met the good criteria.

In addition, the results of research that have been carried out are in line with several studies, namely the results of research conducted by Prayitno & Masduki, (2017) Stating that both material and media experts who validate blended learning design products provide average validation scores of 90.5 and 92.5, indicating that these products are suitable for use in mathematics II education courses at open universities. Furthermore, the results of research conducted by Ekawati & Ristia (2019) stated that students' higher-order thinking skills improved as a result of the use of maple software in blended learning. The students' high-order thinking skills score before learning was 52.94, and their high-level thinking score after learning was 87.84, Recent studies supporting research conducted by Wirza & Ofionto (2021) show that all three teachers have successfully implemented learning with Microsoft Teams, as evidenced by 87% of their inclusion in the Excellent category. Teachers give students assignments and conclusions in the final stage, known as learning evaluation, using the Microsoft Teams assessment tool. 79% of the average at the evaluation stage falls into the good category.

Based on the results of research that are in line with research conducted by researchers, it can be described that research conducted by researchers has an increase in higher-order thinking skills and student motivation through blended learning assisted by Microsoft Teams at SMAN 3 Cirebon

## 4. CONCLUSION

The application of a blended learning model using Microsoft Teams to increase students' mathematics learning motivation and higher-order thinking skills can be said to be effective because it sees an increase in higher-order thinking skills and mathematics learning motivation where students find it easier to think at a higher level when mathematics learning is carried out using a blended learning approach with the help of Microsoft Teams.

## ACKNOWLEDGEMENTS

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