

## EFFORTS TO IMPROVE STUDENTS' COLLABORATION AND COMMUNICATION SKILLS ON DAT PRESENTATION MATERIALS

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**Abstract:** Improving the quality of education, teaching and learning must be better. In the process of teaching there are several components that support them, such as, materials, teachers, students, methods, media and evaluations. These components are essential as teaching tools and thus makes it the teaching process and learning results. Currently, because of the pandemic, learning process moved it into Virtual-Learning. That makes the collaboration and communication of the between students and teachers lack understanding. Then learning process using zoom as media-learning with an additional feature, the breakout rooms aims through collaborative students can present accurate and informative data. This method used is the group discussions through small groups. Using this method, the students are more likely to collaborate and communicate because the features of breakout rooms can create small groups so that students can interact with their groups undisturbed with students from other groups. It makes the students are enthusiastic and keenness about following the material because learning is quite differently than previously that is make students more focused on learning. Analysis indicates the number of words presented by the teacher by 2615 words while the student 4115 words, thus concluding that the student is the center of learning. With these results it can conclude that virtual learning through breakout rooms is particularly effective as well.

**Keywords-** *Breakout rooms, Virtual learning, data concluding.*

### INTRODUCTION

Learning Mathematics is a learning that many students find difficult. This is because the general public's assumptions regarding mathematics are very minimal. Learning in schools can be used as the right solution to carry out learning, so that students return to getting better knowledge in academic and non-academic fields.

Learning mathematics is learning that can be said to be more serious when compared to learning other subjects. This is because mathematics is a subject that focuses more on calculating tools and accuracy.

With the covid outbreak, indirectly and unprepared, schools immediately closed all activities in schools, including the provision of learning in schools. Learning done online or in a network makes all students have to adapt to a new environment, where students must accept all the weaknesses and strengths of online learning. Therefore, online learning carried out during the study from home program during the COVID-19 pandemic requires teachers to be more creative and innovative. Realizing meaningful, fun, student-centered learning in accordance with the demands of the 2013 curriculum in very limited situations and conditions is a challenge in itself in the implementation of learning during this COVID-19 pandemic. Mathematics learning is more dominant in counting so that it is rare or it can be said that mathematics learning is never done practicum.

By going through the Open Mathematics Class learning which was held on April 2, 2021 at the SMPN 1 Situraja Campus which at that time was attended by various observers from every school throughout Indonesia, of course at that time, learning became more colorful.

Learning is usually done face-to-face in class, now learning is done virtually or face-to-face in a zoom cloud meeting.

The concept of learning that was presented at that time through zoom by using a new feature called a small group or breakout room.

By utilizing the breakout room, students in the zoom group are heterogeneous and can maximize discussion because the features in it contain students in groups so that they can freely express their opinions to each other.

With this feature, of course, learning becomes more lively because it is usually difficult for students to express opinions, but with this feature students are more focused, both in terms of discussion and in terms of learning more focused.

## **METHOD**

### **Research Subject**

Were students of class VII A from SMPN 1 Situraja which is one of the schools in Sumedang Regency. The subjects chosen by this researcher were students who the researchers were able to teach or teach. The subjects chosen by the researchers were selected as the selected students to take part in the open class activities at that time. In this activity, various new experiences were gained, because of how to make all students actively involved through this breakout room. Most of my students do not have the facilities to participate in virtual learning because the economic background of the parents cannot afford to facilitate their children with laptops or smart phones and internet connections. The ability to participate in online virtual learning is seen from the students' ability to participate in virtual online learning. Because the economic conditions of students' parents are different, and teachers cannot force their will to require all students to take part in face-to-face virtual learning.

### **B. Research Activity Flow**

April 2, 2021

- a. Distribute worksheets for discussion
- b. Teacher distributes filling instructions
- c. The teacher and students make an agreement regarding the length of time needed

This virtual learning consists of several sessions, including:

#### a) Opening session

Assessing students' understanding of the concepts of physical and chemical change that they have acquired in elementary school. And check the students' hypotheses before carrying out the experiment. This activity lasts for 20 minutes. Followed by group division.

#### b) Group Discussion Session

Students share and exchange ideas in order to create a consensus discussion result that will later be used in the presentation session.

#### c) Closing Session

This session is used for the teacher together to conclude the results of the discussions presented by all representatives of each group. If so, it is confirmed by the model teacher. After conducting class discussion, students returned to the main room. In the closing activity, the teacher confirms students' understanding, provides opportunities for students to ask questions, and informs the learning assignments for the next meeting. This activity lasts for 5 minutes.

The research was conducted by applying qualitative methods, namely in-depth research to get a complete picture of what was observed. The purpose of this study is to obtain an overview of students' critical thinking skills in learning activities of physics and chemistry changes that apply hybrid learning using online combination methods. Student conversations were recorded on video during the learning activities. In this study, transcripts of the analysis of student conversations during learning activities were analyzed and matched to be carried out using indicators.

## **RESULTS AND DISCUSSION**

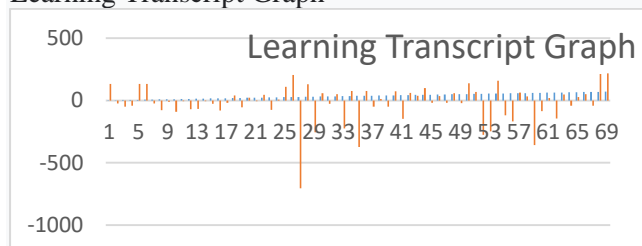
In this study, researchers conducted research using TBLA or Analytical Learning-Based Transcript. The results showed that in learning mathematics at the time of opening the class, students were the center of learning. This is evidenced by the number of words uttered by students as many as 4115 words while the number of words uttered by the teacher was only 2615 words.

Of course this is sometimes very difficult when learning is done virtually, because the learning style must be pursued the same as when face to face but with different conditions. Therefore, the researcher

wants a new breakthrough in learning, namely the breakout room feature that is raised in order to create a collaboration in learning mathematics with data presentation material.

During the discussion, one group answered incorrectly or conveyed the results of their discussion incorrectly. This is known because the group miscalculated the number of frequencies, giving rise to different answers or data presentation images. By using TBLA, of course, it is easier for researchers to convey the results of their analysis and find out who is the center of their learning.

Learning Transcript Graph



The graph above shows that the students are the center of learning. The model teacher or researcher does not talk much, only provokes and stimulates students to be more active and dominant in their opinion. At the end of the new model teacher confirms the answers or opinions of students.

<b>Teacher</b>	<b>2615</b>
<b>Student</b>	<b>4115</b>
<b>Amount</b>	<b>6730</b>

The number of words conveyed by students is more dominant when compared to the teacher. So it can be said that learning is focused on students.



## CONCLUSION

From the results of the research that has been done, it can be concluded that learning carried out through the inner breakout room feature can be an alternative to get around the implementation of online learning mathematics during learning at home. Through this learning, students' critical thinking skills are built. In order for learning to take place, there are things that must be considered, namely: determining concepts that are possible to be taught using this feature where students can group together in order to improve good collaboration between fellow group members. Time management during virtual face-to-face learning must be considered. Do not spend too long virtual learning because it can cause boredom and physical complaints for students and this will greatly affect the achievement of learning objectives.

This study also illustrates that research on students' critical thinking skills still needs to be done.

Analysis of student dialogue transcripts through TBLA was able to reveal students' critical thinking skills. More than that, this analysis is also able to provide an overview of the trajectory of students' understanding during the learning process. Therefore, TBLA transcript analysis can be recommended as a technique to reveal students' abilities and/or skills through their conversations during the learning process.

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