

# Student's Perspective on the Use of Mathematics Learning Vlogs in Pandemic Times

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## ABSTRACT

This is a qualitative study that aims to describes how the students of UIN Raden Fatah Palembang responded after learning to use Vlogs during the pandemic. The main subjects in this study were 60 students of the Mathematics Education study program who took the subject of Field and Space Analytical Geometry. Furthermore, for additional data, researchers took 30 respondents from several students outside UIN Raden Fatah Palembang to find out their responses regarding the implementation of mathematics learning when using Vlogs. Data collection using questionnaires collected via google form. Based on the results obtained, it is stated that most of the students of UIN Raden Fatah find it helpful to use vlogs in learning mathematics as an alternative when students' internet networks are not good, can be accessed and studied at any time. Meanwhile, based on additional subjects, most of them expressed their interest in doing online learning using vlogs.

**Keywords:** Vlogs, Mathematics Learning

## 1. INTRODUCTION

The Covid-19 case was officially announced by President Joko Widodo in early March 2020. Since then the Covid-19 pandemic has been taking place in Indonesia. As is well known, almost all sectors of life are paralyzed, including the education sector. Where in this case the Ministry of Education and Culture [1], responds to this condition by making a number of policies. One of these policies is online learning which began in mid-April by broadcasting the Learning from Home (BDR) program on TV. Other policies include providing flexibility to learning institutions to organize learning in accordance with the Circular Letter of the Minister of Education and Culture Number 4, 2020 and Circular of the Secretary General of the Ministry of Education and Culture Number 15, 2020 [2] which contains the implementation of education policies and guidelines for organizing learning from home in the emergency period of the spread of Covid-19. Based on the Ministry of Education and Culture, Ministry of Religion, Ministry of Health, & Ministry of Home Affairs, 2019 [3], provisions for learning at the higher education level in all zones are carried out by online.

In organizing online learning, it is hoped that

educators can carry out learning with students using groups on social media such as WhatsApp (WA), Telegram, Instagram, zoom applications or other media. However, in reality, Atsani revealed several cases that often occur when the application of this online learning system includes uneven distribution of students and their parents who are good at operating online media, not all parents of students can afford internet quotas, inadequate signals, and so on [4]. Several other obstacles faced during online learning include the limitations of online learning application features [5], the ability of educators to operate digital devices and the difficulty of educators in observing the development of their students [6]. The number of assignments with limited deadlines without any interaction makes students increasingly dislike online learning [7] and find it difficult to understand the material provided [8].

These constraints certainly greatly affect learning and student learning outcomes, including learning mathematics. Where in mathematics learning, there are five components that need to be considered, namely the questioning process, student activity, collaboration, performance and varied sources [9]. These components will certainly be difficult to do during the pandemic. As stated by Yulia & Putra [10] that during online learning

students are impressed only as listeners as informed by educators so that students are less active and reluctant to participate in learning. Although Yulia & Putra [10] stated that student scores were improving, in reality this was only limited to grades. Meanwhile, the results of the Kusumaningrum & Wijayanto [11] questionnaire stated that 75% of 100 students stated that they were unable to understand the learning material. This is because students are still not used to self-study, unstable internet connections cause the educator's voice to be unclear during video conferences so that students miss material, and many digital platforms used have not facilitated the use of mathematical symbols, causing online explanations to be impossible. as detailed as during face-to-face learning [11].

As an educator, researchers certainly experience the same obstacles as experienced by other educators. Based on the learning that has been done previously, researchers have used various suggested digital platforms. However, it turns out that the obstacles experienced by educators and students are internet network problems. Where not all students have an adequate internet network. In fact, researchers and some students who live in urban areas can experience network problems. One of the most annoying things in online learning is when the educator has explained the material, but it turns out that there are students who miss information due to inadequate networks so that researchers have to repeat the material explained. In addition, to making it difficult for educators, this also consumes limited learning time. In other words, there will be a lot of material that is not conveyed in learning.

The many obstacles and difficulties experienced during this pandemic certainly require educators to be more able to choose the right mathematics learning. Based on the research results of Kusumaningrum & Wijayanto stated that students need learning videos that contain detailed explanations of the material so that they can be played back if students do not understand the material and carry out discussions via WhatsApp or Google Classroom [11]. Wulandari, Salsabila, & Kurniati also stated that students still need teacher explanations in the form of videos/recordings [12]. In

addition, Suci & Siskawati [13] and Maharani [14] also suggest that an effective alternative media used to overcome several obstacles in learning mathematics during the pandemic is learning videos.

Based on the explanation above, the researcher made several video blogs (Vlogs) which contained the explanations of educators about learning materials. Why vlogs? According to David, Sondakh, & Harilama [15] the majority of students admit that vlogs are a type of video that is currently popular and a place to express themselves. Vlogs themselves have the advantage that people who make videos can communicate with online viewers and can be watched repeatedly [16]. In addition, based on the suggestion from Suci & Ekawati [13], it is better to make videos that contain more interesting content. In this case, the Vlog certainly fulfills these criteria. In addition, based on several research results, the use of Vlogs is considered effective in improving material understanding [17], mathematical communication [18] and more motivating students in learning [19]. Considering that not many math learning vlogs have been developed and the need for empirical evidence regarding the use of these vlogs [20], the researcher decided to create a Vlog as an online mathematics learning. Of course, this was done suddenly, so there were still many shortcomings from the Vlogs made by researchers. Furthermore, the use of this vlog is intended to find out how to apply vlogs based on students' perspectives so that a needs analysis of mathematics learning vlogs is obtained which can later be used to develop better learning vlogs.

**2. METHODS**

This study is a qualitative study to describe how 60 students of UIN Raden Fatah Palembang responded after learning using Vlog during the pandemic in the Field and Space Analytical Geometry course. Furthermore, for additional data, researchers took 30 respondents from several students outside UIN Raden Fatah Palembang to find out their responses regarding the implementation of mathematics learning when using Vlogs.

**Table 1.** The grid of questions given to the subject

Subject	Questions Topic
Mathematics Education Student at UIN Raden Fatah Palembang	<ol style="list-style-type: none"> <li>1. problems and difficulties experienced during online learning in the Field and Space Analytical Geometry course</li> <li>2. opinions about using the Vlog in online learning</li> <li>3. opinions about the use of Vlogs in online learning to overcome some of the problems experienced or not</li> <li>4. opinions about using vlogs in learning</li> <li>5. hope for future learning vlogs.</li> </ol>

Subject	Questions Topic
Students outside UIN Raden Fatah Palembang.	<ol style="list-style-type: none"> <li>1. gender</li> <li>2. where to stay while doing online</li> <li>3. major / Study Program taken</li> <li>4. media or methods that are often used by educators during teaching</li> <li>5. difficulties/challenges experienced during online learning</li> <li>6. expected learning while online</li> <li>7. interest in doing online using Vlog</li> <li>8. Learning vlogs are expected to be given in online learning.</li> </ol>

This study uses a qualitative procedure which consists of reviewing theory, determining data collection techniques, and analysis [21]. This research data was collected using a questionnaire via google form. Table 1 shows the grid of questions given to the subject.

### 3. RESULTS AND DISSCUSSION

Learning using Vlog is carried out in the Field and Space Analytical Geometry course. There are several learning vlogs that can be accessed by students via the google drive link. Before giving a learning Vlog, the researcher gave a problem that students had to discuss in the WhatsApp chat group. After students discuss the problems given by the researcher, then the researcher sends a link to the learning vlog drive as feedback on the results of student discussions. The following is a PowerPoint display before and after being used as a learning Vlog.

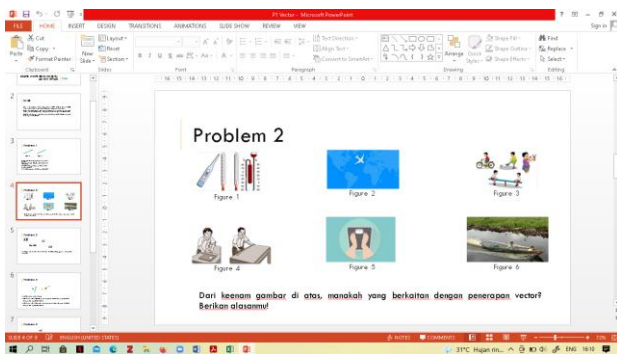


Figure 1 Problems given by researchers in the form of powerpoint

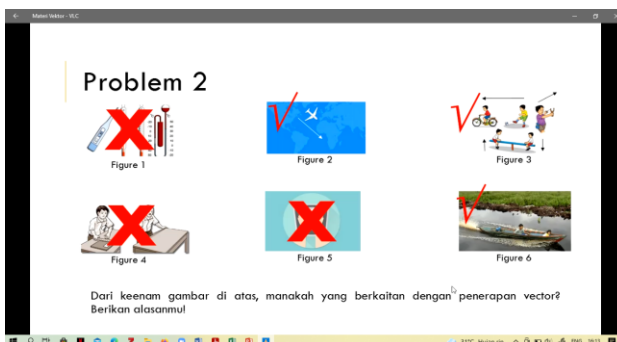


Figure 2 Problems that have been discussed by

researchers in the form of vlog

In Figure 1, the researcher begins the lesson by giving problems in the form of questions that are quite light for students, such as the learning provisions described by Muhammad, H [6], where as much as possible learning does not burden students while online. After students feel active in discussing solving the problems given, then the researcher sends a link to the vlog drive to discuss the material. In this case, so that students actively discuss, the researcher gives each point for students who answer questions, respond to their friends' answers, and ask about their friends' answers will get points. Points collected will be added value at the end of the assessment.

Based on the thoughts of researchers in carrying out learning, researchers need clarification from students regarding the learning that has been given. From the results of a questionnaire conducted on students of UIN Raden Fatah Palembang, several student perspectives were obtained regarding the learning carried out by researchers in the Field and Space Analytical Geometry course. The following is the view of students in terms of the questions given.

#### 3.1. What are the problems and difficulties experienced during online learning in the Field and Space Analytical Geometry course?

Based on the results of the questionnaire, most of the problems experienced by students during online learning in the Field and Space Analytical Geometry course are difficulties in imagining three-dimensional space and inadequate signals. This is in line with Atsani's research regarding an inadequate internet network, causing problems in the delivery of material by educators [4] and also according to Tasdik & Amelia where students find it difficult to understand the material [8].

In addition, there are several opinions that have attracted the attention of researchers, such as the following.

Response 1: *"I think the difficulty I experienced was that I could not understand the material given, even though sometimes I was given a question and answer session, I just felt limited, not as free as offline. And also when*

*there are things that I don't or don't understand, I find it difficult to ask friends, sometimes friends don't answer my messages."*

Response 2: *"The problem is with myself, namely I am a little embarrassed to ask, if I don't understand the material I just ask my close friends, and I don't stand out too much in the class discussion group, just listening."*

From the two responses above, the problems experienced by the two students were related to personality characteristics in socializing. Of course, this should receive special attention in the implementation of learning as described by Rahman [9] so that learning runs optimally, an educator needs to consider the characteristics of his students in choosing the right learning.

In addition, there are problems from students that become input for researchers in making improvements to learning as follows.

Response 3: *"The problems and difficulties I experience are sometimes the learning videos that are shared on wa are accidentally deleted so it would be better if the videos are distributed via a link drive so that if they are deleted they are still there and if possible each exercise shows the correct answer during the discussion because sometimes they are still confused about the system discussion when giving answers to practice questions."*

At first the researchers shared videos through WhatsApp chat groups, where students needed to download the Vlog first so that it affected the memory capacity of their devices, which were mostly mobile phones. So, one of the students suggested that videos be uploaded on YouTube. The researcher also uploaded a video on youtube, but it turned out that uploading a vlog with a large capacity requires a strong internet network so that the researcher uploads the vlog on google drive and succeeds. From the answers given by students, it turns out that they can provide solutions and improvements for the learning carried out by researchers.

Based on the data obtained, the problems experienced by students in learning Field and Space Analytical Geometry during the pandemic are in accordance with the results of previous studies that they have difficulty understanding the material plus the lack of adequate networks.

### **3. 2. What do students think about using the Vlog in online learning?**

In general, students think that the use of Vlog is very helpful for students to understand the teaching material and provides many conveniences for students during online learning. Here are some student responses after learning using Vlog.

Response 4: *"I think the vlog provided by the lecturer really helps us in learning, so we are not only looking for our own references but we can also understand the material by watching the video explaining the material given by the lecturer."*

Response 5: *"In my opinion, after I watched the video that you gave, I became more understanding, and the video can also be played repeatedly, so it is good for students who often forget to play the video again."*

Response 6: *"I think the use of vlogs in online learning is very effective because students can watch it repeatedly, and if there is no signal during the course schedule, the material given is also not missed because the vlog can be watched when there is a signal."*

Response 4 was the answer that most students gave, where in this case the students stated that the use of vlogs in learning really helped them in understanding the material. This is in accordance with the results of research by Harahap, Khairani, & Masitoh [17] that the use of learning vlogs can help students understand teaching materials. Meanwhile, Response 5 and Response 6 show that Vlogs have advantages such as the description of Schmittauer [16] and Kusumaningrum & Wijayanto [11] that vlogs can be watched repeatedly. In addition, response 6 also stated that the vlog used made students who missed the lesson to continue to study the material in its entirety. In other words, vlogs can be used as a solution for students who have signal problems to conduct online meetings.

### **3.3. What is the use of vlogs in overcoming problems during online learning?**

For this question, the use of Vlogs in learning received positive responses from almost all students. Here are some student responses that represent other positive responses.

Response 7: *"Of course, because vlogs are indirectly the same as face-to-face explanations, but you can't directly ask questions. We can also repeat "the material, if you don't understand it, we can also look for more references from YouTube."*

Response 8: *"yes, it solves the problem but if possible, it's not just video vlogs because sometimes we are still confused about video vlogs so we can also use the meet and WhatsApp discussion system to understand more about the material."*

Both responses represent the positive responses of other students. From Response 7, this Vlog is indirectly considered the same as in a face-to-face meeting. It's just that according to Response 8, the use of vlogs still needs to be supported by online discussions or using

WhatsApp.

Of the overall responses, there are two responses below that feel offline learning is still irreplaceable.

Response 9: *“Face-to-face classes have a different feel, direct interaction tends to support the learning process.”*

Response 10: *“The problem is not being able to communicate directly (direct questions and answers such as using google meet/zoom). If there is something you want to ask or something that is not understood, students cannot ask the lecturer directly, students can only ask questions via the WA group. I think it's a little difficult to convey in the WA group delivery, because when reading sometimes there are misunderstandings (ambiguous) different from speaking directly which can be more easily understood. Coupled with videos that may have a longer duration which sometimes makes students lazy to watch the learning videos.”*

The responses of the two students explained that offline learning for them is still irreplaceable. In addition to a conducive classroom atmosphere, of course, being able to meet and interact with peers directly is a distinct advantage of meeting online. Especially if you use vlogs, you still need other media as a place for discussion. In fact, supporting media such as Google platforms and social media have not been able to replace the classroom atmosphere during offline meetings. And of course, these supporting media have some shortcomings as stated in Response 8.

Although the use of vlogs is very helpful for students in understanding learning, in fact they still need other applications that can be used to conduct discussions with educators. This is in line with what Kusumaningrum & Wijayanto [11] stated that students need learning videos that contain detailed material explanations that can be played back if students do not understand the material and carry out discussions via WhatsApp or Google Classroom. Based on this, the position of discussion in learning is indeed difficult to forget.

### **3.4. Are learning vlogs appropriate if used in learning mathematics?**

Even though in the previous question, there were two responses stating that offline meetings were much better, all students stated that the use of this vlog was very suitable if used in learning mathematics. Here are some reasons why vlogs are very suitable if used in learning mathematics. Is learning appropriate if used in learning mathematics?

Response 11: *“For learning mathematics, a very real delivery medium such as this vlog is needed because lecturers can also convey material even until the calculations can be*

*seen directly by the students themselves so that the mathematical path and process are clear.”*

Response 12: *“I think it is suitable even though it will be more effective if mathematics learning is carried out face-to-face, but due to conditions that do not allow it, the Vlog is very suitable for use in learning mathematics.”*

From Response 12, it was again emphasized that offline meetings are still considered more effective. However, in a pandemic like this, vlogs are an appropriate choice to use in learning because learning mathematics, the concepts taught need to be visualized so that they can be more easily understood by students [14].

### **3.5. What are the learning Vlogs expected by students to be applied in future learning?**

Most of the students gave the same response to this question, namely to make learning vlogs more interesting and not monotonous so that they are not boring to watch. This is illustrated in the two responses below.

Response 13: *“I think the vlogs should be more interesting so that students don't get bored easily.”*

Response 14: *“It's not too monotonous, I mean here I expect the vlog to contain an explanatory video that seems to invite us to have a discussion instead of talking to ourselves. So that we who are watching feel as if we are being asked to answer (as if there is an interaction). Like the video for this Field and Space Analytical Geometry course.”*

Based on 13 responses, students expect vlogs to be packaged more attractively. To find out how students are interested in learning vlogs, of course, more research is needed to develop more interesting vlogs. As for Response 14, it was slightly different from Response 13, where students felt it would be better if other learning videos were made such as the videos used in this Field and Space Analytical Geometry lesson. So in this case, the characteristics of students actually affect the way of learning. Meanwhile, Responses 15 and 16 below clearly describe students' expectations for the learning vlogs they want.

Response 15: *“I personally agree with learning to use vlogs but sometimes if the vlog duration is too long in one video, it is difficult to access because of the signal.”*

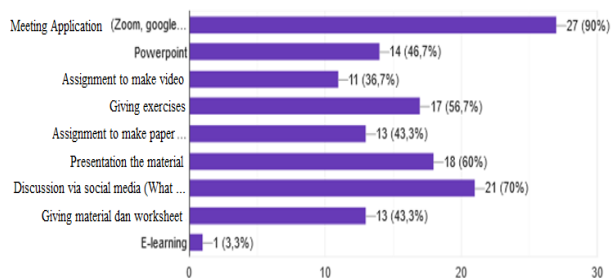
Response 16: *“The vlog that was given was very good, but it could be added an explanation about the discussion of the exercise material added to the vlog because sometimes I forget to discuss the discussion, especially*

*if it is shared on wa like it is deleted, so it would be nice if the discussion of math exercises was also made in the form of a vlog.”*

The researcher also feels that the learning vlogs made have a very long duration. This will be the focus in the future in developing a much better learning vlog. In addition to discussing learning materials, it is indeed a good idea if the discussion of the questions is made into a vlog as well as students' expectations in Response 16. Based on this, to overcome the boredom of students in learning to use vlogs, of course the learning vlogs made must be interesting and there is also feedback so that students do not like learning on their own. This seems to be a good suggestion for educators, such as the statement by Harahap, Khairani, & Masitoh [17] that it is necessary to innovate learning mathematics that is fun and contextual for students.

From the explanation above, it can be concluded that with all its shortcomings, the vlogs that have been designed by researchers actually help students learn during the pandemic. Based on this, researchers are also interested in knowing the responses of other students outside UIN Raden Fatah Palembang if for online learning using Vlogs. The respondents were students from several universities such as Sriwijaya University, STKIP Muhammadiyah OKU Timur, Sjakhyakirti University, Tadaluko University and others.

Based on the results of the questionnaire, it was found that it was rare for educators to do learning using vlogs. The most widely practiced learning is using the online meeting application. As an illustration, it can be seen in the graph below.



**Figure 3** Graph of the use of methods or media used in online learning

From Figure 3, it can be seen that the use of meeting applications occupies the most place as a medium used in online learning. Meanwhile, the provision of vlogs has not been seen from the existing respondents. In the graph it can only be seen that some students get assignments to make videos. Social media such as WhatsApp also occupies the most place as a medium for discussion. When viewed from the graph, it can be seen that online learning is very diverse.

Furthermore, researchers are also interested in knowing the problems they are experiencing, it turns out that most students do experience problems with the

internet network during online learning. There are also students who feel that online learning is not very effective, especially for courses that have practical classes.

After the students were shown several learning vlogs, it turned out that all of the respondents were very interested in learning using vlogs. Meanwhile, their response to the vlog that was expected was the same as what was expected by the students of UIN Raden Fatah Palembang. Based on this, of course, the development of learning vlogs should receive more attention.

#### 4. CONCLUSIONS

Based on the results obtained, it is stated that most UIN Raden Fatah students find it helpful to use vlogs in learning mathematics as an alternative when students' internet networks are not good and can be accessed and studied at any time. Meanwhile, based on additional subjects, most of them expressed their interest in doing online learning using vlogs. Some suggestions that need to be done to develop math learning vlogs are to make interesting vlogs by providing the context of everyday life and also minimizing the duration that is too long in one video so that students don't get bored watching it.

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