Website Development as an Online Classroom for Online Classes in Distance Learning

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ABSTRACT

The spread of COVID-19 outbreaks makes learning activities in Indonesia become online learning. Online learning is followed by new problems, those are limited internet data, bad internet networks, and the use of many applications. Online learning in Indonesia must be immediately optimized because the COVID-19 outbreak is not over yet and there is a discourse that online learning will be applied permanently. The teacher can optimize online learning by building a website as an online classroom. If teachers build their websites, they can adjust the features on the website based on the online learning problems and the subject matter needs. Based on a questionnaire distributed, 83\% of student respondents agreed if the teacher made a website. Besides, most of teacher respondents think the website can optimize online learning. The idea of the website as an online classroom is expected to contribute ideas and alternatives for online learning programs in Indonesia.

INTRODUCTION

Large-scale social restrictions are imposed on several regions in Indonesia to prevent the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which is a virus in COVID-19 disease that causes respiratory distress to death. SARS-CoV-2 was first discovered in the city of Wuhan, China in December 2019. This virus quickly spread to other countries in just a few months, including Indonesia. So that to prevent the spread of the virus more widely, the Indonesian government issued Government Regulation Number 21 of 2020 regarding large-scale social restrictions. This regulation addresses restrictions on certain community activities in an area suspected of being infected with COVID-19.

The implementation of Large-scale social restrictions has disrupted various community activities, including educational activities. Teaching and learning activities in schools cannot be done as usual but instead becomes distance learning. In the Ministry of Education and Culture circular number 15 of 2020 discussed the guidelines for organizing learning from home in the...
emergency period of the spread of COVID-19. In the circular mentioned that the implementation of learning from home or called distance learning is divided into two approaches, one of which is distance learning in the network.

Online class in distance learning (online learning) is a teaching and learning activity using the internet network. In supporting online learning, the Ministry of Education and Culture provides several sites to access learning materials and videos. Besides, this was accepted by the teachers, some of the teacher’s efforts to implement online learning were by conducting teaching and learning activities using applications such as Google Classroom, Zoom, to the utilization of sites provided by the Ministry of Education and Culture. As in research (Yanti, Kunarto, & Kurniawan, 2020), teachers use Kemendikbud ‘s Portal Rumah Belajar for learning in elementary schools.

However, online learning is followed by new problems, based on the results of research (Rachmat, & Krisnadi, 2020) the obstacles faced by students in online learning are limited internet data and bad internet networks. Also, online learning makes students have to download several applications that have limited features so that the provision of material is not focused on one application. Even though the online learning media used should be packaged so that it is easily accessible and understood by students.

Based on the problems that occur, this paper provides ideas on ways teachers can do to optimize distance learning in the network. The way is to build a website as a special online classroom between their selves and their students. According to (Aditya, 2015) making a website on the internet can be done easily, even without knowledge of basic programming. This is supported by the fact that many website building software can be accessed. The idea of an online classroom in the form of a website is expected to contribute ideas and alternatives to distance learning programs in networks in Indonesia. Because by building their websites, teachers can adjust the features provided based on the constraints of students and subject matter needs.

METHODOLOGY

The method used in writing this paper is the study of literature, observation, and questionnaires. The main types of references used in literature studies are relevant journals. Observation is used to collect data about tutorials and website builder platforms. Based on the observations, a website was built into an online mathematics classroom to get responses from students and teachers through a questionnaire. The questionnaire was distributed to 88 students and 5 teachers from the junior and senior high school in the city of Palangkaraya and surrounding areas. The data is used for analyzing and explaining the problem in a discussion. The analysis used is a descriptive argumentative analysis.

RESULT AND DISCUSSION

The outbreak of the Covid-19 disease virus in Indonesia has not ended as of July 2020. The addition of positive cases of COVID-19 in Indonesia was 1,591 people, bringing the total to 78,572 patients as of July 14, 2020 (Aziz, 2020). While the new semester of school has begun on July 13, 2020. Because of this, Indonesia still has to carry out distance learning until the end of 2020. This is based on a statement from Director General of Primary Education, Hamid Muhammad, regarding the implementation of learning from home until the end of 2020 in anticipation if the COVID-19 outbreak in Indonesia has not ended until the end of the year (“Kemendikbud Buat Skenario”, 2020).
Besides, Minister of Education and Culture, Nadiem Makarim revealed that distance learning can be applied permanently after the COVID-19 outbreak is over. Teaching and learning activities using technology will be fundamental. But that does not mean full distance learning, but rather using a hybrid learning model that is a learning model that combines face-to-face methods with online methods. Based on this, schools, especially teachers, cannot remain passive towards technology. Teachers certainly have to find ways to make distance learning in the network work well.

Online learning is one solution to the problem of teaching and learning activities that cannot be done as usual due to the spread of the COVID-19 disease virus. However, online learning in Indonesia has not gone well. Online learning is not effective yet and directly proportional to the student's lack of understanding in learning (Rachmat, & Krisnadi, 2020). The thing that makes online learning not effective is because there are obstacles faced by students in online learning such as limited internet packages and slow internet networks.

Based on the results of the distribution of questionnaires to 88 students from various junior and senior high school in the city of Palangka Raya and surrounding areas, it was found that 48 students experienced obstacles in online learning. Student’s answers to the problems encountered in online learning include bad internet networks and limited internet data (Figure 1).

![Figure 1. Percentage](image)

**Online Learning Problems**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad internet networks</td>
<td>75%</td>
</tr>
<tr>
<td>Limited internet data</td>
<td>19%</td>
</tr>
<tr>
<td>Don't understand the lesson</td>
<td>6%</td>
</tr>
</tbody>
</table>

The problem of a bad internet network and internet data is what makes students unable to take lessons, thus resulting in students not understanding the lesson. Also, some schools don't do online learning. The teacher only gives assignments to students without giving subject matter, so students are confused about how to do the given task.

So far, to do online learning, the teacher use the available applications. Based on the results of student questionnaires about application or media used in online learning, students answered WhatsApp, google classroom, zoom, and other applications (Figure 2). Where the features available in each application are limited. So for the subject matter needs, the student has to download more than one application. In the same question, 27% of students answered more than one application used in online learning. This makes students have to download many applications, also the subject matter is not collected in one place.
The use of applications can be avoided by using a website, even the Ministry of Education and Culture provides various website links to support online learning, one of them is the Portal Rumah Belajar. In research (Yanti, Kunarto, & Kurniawan., 2020) teachers use the Kemendikbud’s Portal Rumah Belajar for learning in elementary schools. However, this website has shortcomings including separate material that is not in one place, blogs displayed in the feature cannot be opened, the content has been deleted, and cannot find the word sought, the display features are confusing, and learning videos cannot be played via cellphone (Nurjat, 2019).

This can be overcome if the teachers design or even make their website. If the teacher designs his website, the teacher can adjust the features on the website based on online learning problems and subject matter needs. A website is something that is commonly used in education. In Indonesia, many school institutions already have a school profile website, as a medium to increase the effectiveness and efficiency of delivering information from the school to students or the wider community (Akbar & Tjendrowaseno, 2015). Making a website on the internet can be done easily, even without knowledge of basic programming (Aditya, 2015). Also, based on observations on the internet, many tutorials make websites available on the internet and website building applications that can be accessed, for example, Zyro, Wix, Snappages, or the most famous one, WordPress.

If ordinary learning requires classrooms, so also online learning should have online classrooms as a gathering place for teachers and students. So the teacher has room to organize students and subject matter. In this paper, the website is referred to as an online classroom because website development is intended as a special space between the teacher and students so that the features in it are adjusted based on the limitations of students and subject matter collected on the website.

The website as an online classroom should have complete features so that no other application is needed to do online learning. Also, online classrooms are expected to be exclusive to teachers and students so that they are not freely accessible to others. Therefore, the teacher can provide material according to the student's abilities and can relate the material to events that occur around students, then the student can relate to the material so that it is easily understood.

Based on observations, in this paper, an online study room was built in the form of a website called Think Math. Think Math is an online classroom for online junior and senior high school mathematics learning that can be accessed at the link.
Think Math was built using one of the website building platforms, Wix. Wix was chosen because it is easy to use, users just choose a template and change the titles in the template. Also, Wix has an attractive appearance and provides complete features.

By using Wix, the Think Math website is designed to be an online classroom that has full features but remains internet data-friendly. At Think Math, learning materials and videos can be obtained, live streaming, and there are forum features also the page for assignment collection. Furthermore, to overcome the student's limited internet data, Think Math is designed so that students can download material so that students do not open the site repeatedly, and video streaming can be played back so that even if the internet network is not good when the teacher is live streaming, students can watch back in the live stream.

In this paper, Think Math is used to get responses from students and teachers about the website as an online learning space. Based on the results of student questionnaires, 90% of students think of features on the Think Math is complete. So that 83% of students agree if the teacher makes a website for online learning.

Based on the distribution of questionnaires result regarding website development to help online learning. Obtained from five teachers from different schools who became respondents all interested in learning using this website. But the teacher is not sure whether website development can be used to overcome all obstacles in online learning. Thus, research is needed on the effectiveness of online learning using websites. So that if there are problems in website development, they can be overcome immediately.

Based on observations on the Think Math website, features can be used well. However, this is a learning video that is directly uploaded on the site (not a link from another platform) and live streaming cannot be done more than 10 minutes. This is because it uses Wix for free. Therefore, to build a website, observation is needed in choosing the platform used to avoid feature limitations.

In designing and creating a website, it would be better if the school helps the teacher. Schools can assist teachers in developing web sites by providing IT experts or helping with costs for better web sites.

**CONCLUSION**

Indonesia has challenges in solving problems of online learning, those are limited internet data, bad internet networks, and the use of many applications. The problem of online learning causes many students to not be able to take lessons. Website development as an online classroom for online learning is needed to make online learning media designed based on students’ problems the subject matter needs without additional applications. Website development requires effort from the teacher and support from the school.

**REFERENCES**


