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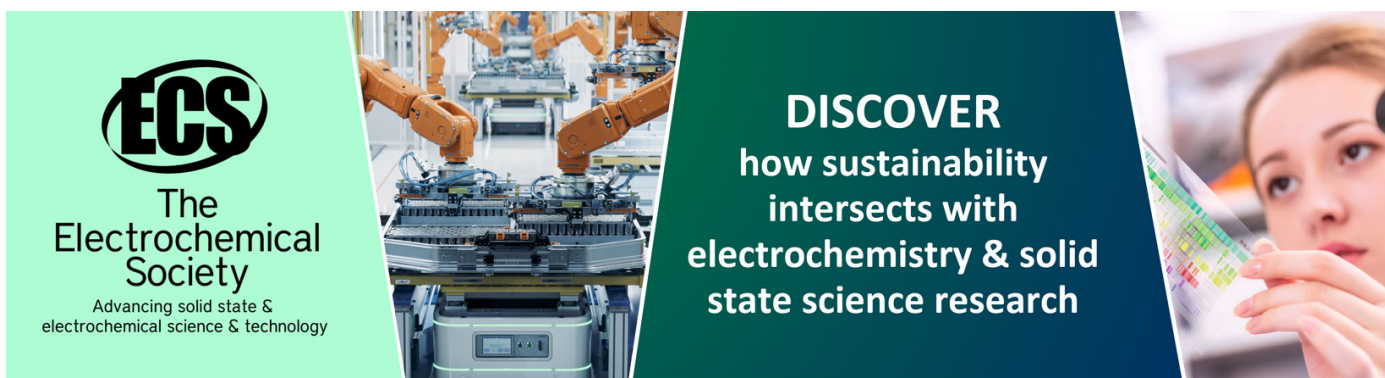
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# Video-based learning for “*learning from home*” solution in pandemic

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**Abstract.** The COVID-19 pandemic forces the government, especially the Ministry of Education and Culture to implement the learning from the Home policy as an effort to implement social distancing as one of the health protocols to prevent the transmission of COVID-19. This policy directs teachers to be able to carry out online learning, one of which is by using instructional video media. With qualitative methods, this study examines relevant studies in order to determine the effectiveness level of using video as an online learning medium. Based on the results of the study conducted, it was found that video was a learning medium that was widely used by teachers. Learning videos make it easy for teachers to deliver the material. Furthermore, the teacher provides a formative test as a form of confirmation to students in understanding the material presented. It should be noted that the use of instructional videos that are used must be adjusted to the character of the learning material provided to students. Due to relatively difficult learning materials, instructional videos with the instructor's views in the video can be a factor of misconceptions among students. Therefore it needs to be understood that the use of instructional videos on relatively difficult material should be applied with direct instruction by educators when watching the learning videos together. It is done as an effort to create an atmosphere of learning from home to be similar to learning at school as the teacher directs students from each material being conveyed.

## 1. Introduction

The COVID-19 pandemic has had a major impact on various sectors in all affected countries, including Indonesia. One sector that has become the government's attention is the education sector. The COVID-19 health protocol, which urges the public not to crowd and/or interact at a safe distance of two meters, has an impact on the implementation of teaching and learning activities in schools. Therefore, the government launched the “Learning from Home” program as stated in Circular Number 15 of 2020 concerning Guidelines for Organizing Learning from Home in an Emergency for the Spread of Covid-19 by the Ministry of Education and Culture [1]

It has been four months since learning from home has been carried out at all levels of education. As explained in the circular, the implementation of learning from home is accompanied by each educational institution using an online or online system. In the Circular of the Secretary-General of the Ministry of Education and Culture Number 15 of 2020, the Ministry of Education and Culture provides several online learning media, including [sources.belajar.kemdikbud.go.id](https://sources.belajar.kemdikbud.go.id), [video.kemdikbud.go.id](https://video.kemdikbud.go.id), [guruberbagi.kemdikbud.go.id](https://guruberbagi.kemdikbud.go.id) and so forth [2]. Apart from online learning media provided by the



government, there are other online learning platforms provided by private parties such as [ruangguru.ac.id](http://ruangguru.ac.id), [Google.classroom.com](https://classroom.google.com), [Microsoft.teams.com](https://teams.microsoft.com) and so on.

Online learning has its obstacles in its implementation. First, online learning is something new in education in Indonesia, especially at the primary and secondary levels. Second, most teachers are not familiar with online learning media, so they experience difficulties in using them. Third, limited internet quota and unstable internet network [3].

With these obstacles, most teachers think that a possible solution in implementing online learning is by using video as a medium for delivering information compared to video conferences or with modules. Video is considered capable of delivering material better than modules and reducing the quantity of internet quota usage compared to video conferences. This condition is also strengthened by the trend of video lessons by a private company, namely Ruang Guru, which is the first online tutoring platform in Indonesia. With the claim that the teacher room is the number 1 tutoring in Indonesia, the Teacher Room has become the standard for making instructional videos. One of the characteristics of the Ruang Guru application is the video display in the form of animation and text material as well as the appearance of the video instructor that appears in each scene. The Teacher Room application tries to make the school learning process as real as possible, which is packaged in a learning video product. Coinciding with the pandemic that demands a home learning program, the teacher room application is an alternative solution for students to study independently at home [4].



**Figure 1.** Display of Ruang Guru learning videos [5]

It changes the nuances of conventional learning into video-based learning [6] that's done online. It is not surprising that many educators have started to pursue video learning technology. The focus of the discussion is whether learning videos during the pandemic can be a solution for the learning process from home. It should be noted that students usually lack the ability and knowledge according to their capacities [7] and metacognition [8] learning video material to be analyzed during the learning process from home.

## 2. Method

This article is included in descriptive qualitative research with systematic and systematic like reviews method. Qualitative research refers to an understanding of the phenomena. It is associated with the research subject, namely the learning video and the overall objectives. Descriptive means words in a natural context and uses a variety of scientific methods (Moleong (2011) in [9]) which in this article is a systematic and systematic like review method, namely assessing and synthesizing articles that are similar to the focus of the article discussion. This systematic review is complete, transparent and provides a new understanding of the results of verification of the evidence of the articles referred to [10]. The presentation was oriented towards the use of learning videos during the COVID-19 pandemic or when the "Learning from Home" program was promoted by the government nationally.

## 3. Results and Discussion

Learning media that are feasible to be applied to teaching and learning activities must have the following characteristics: (a) fixative property, which can record, deviate, and reconstruct an event; (b) manipulative property, which can present a visual image of the time-lapse recording of an event that

occurs over a relatively long time (days); (c) distributive property, namely transporting objects in an integrated view and simultaneously, and objects displaying the same conditions in actual events (Arsyad (1997) [8].

Learning videos are considered capable of helping both educators and students because they can be listened to repeatedly and contain audio and visual content [11] so that it is expected to be able to help the learning process from home be as concrete as learning at school [12]. Learning videos can provide a memory stimulus for material information, even on material that is quite difficult for students [13]. Various studies have been carried out by modifying the characters of instructional videos at school such as video learning assisted by Eduwebtv [14], *online video-based environments* [8], *augmented reality video* [12], *instructional video* [13], *video modelling examples* [15], *online video-based YouTube* [9], *Video-Based Powerpoint* [16], *video-based professional development* [17], and so forth. Research results also tend to lead to positive results that are oriented towards improving the ability and/or student learning outcomes depending on the specific objectives of each study.

However, it needs to be understood that the condition of the research that has been carried out is before the pandemic where video-assisted learning is still taking place at school (learning at school) with educators being with students directly in teaching and learning activities. The contribution of the presence of educators during teaching and learning activities is certainly different when meeting in person where educators can discuss the material together compared to the presence of educators who only interact online. Moreover, it will be even more different if the ongoing online learning process does not get the supervision of the educator. Students are given a learning video then asked to study the video independently then continue in the assignment process.

The main factor of information transfer did not increase or decrease due to the addition of instructors or lecturers with audio narration on the video, especially on the relatively difficult cognitive comprehension of the material. It happens because the process of student attention increases, so the need to see the visual video of learning is not more important than the explanation from the instructor, in this case, it is the educator about the discussion in the video [10]. This statement distinguishes the positive contribution between the instructor in the instructional video and the instructor for the instructional video.

It is a concern because often learning videos (current trends) present a display along with the instructor in the video so that instead of helping students, it can become a factor for students' attention that does not focus on the material presented and focuses more on the visual of the instructor. Placing instructors in learning videos must pay attention to the appearance of the material being explained, especially on difficult material [10].

Learning videos that are based on lectures may not necessarily help students understand relatively difficult material. It is assumed that students watch over and over again [8] in the learning video segment that has not been understood, this does not show any significant results, so students need additional support in the form of video instructors (not in the video) [7] and/or direct responses from educators during the learning video [17]. This finding can occur because there are two characteristics of how students can understand the material, namely; (a) a verbalizer is a student who can effectively understand the material from the audio that is heard and (b) a visualizer is a student who is effectively able to understand the material from the image display of the material compared to digesting the audio material. (Mayer & Massa (2003) [4].

Therefore, educators must understand the characteristics of the material to be delivered. If the material delivered is material that is abstract or cannot be found directly in everyday life, then the educator should be able to describe the material presented in animation and/or a photo of the material components. However, it cannot be separated from the instructor's instructions when showing the video. Because as the character of the video lecture is the instructor's verbal, the results of the study show that the attention to the verbalizer is higher than the visualizer regardless of the video representation in the form of text, video, animation to web pages. Audio content on complex material tends to be noticed and induced higher than image content (Chen & Wu, 2015) [4].

Stepping up at a higher video level is by using interactive learning videos. Of course, this is a challenge for educators because educators are increasingly attached to the use of interactive learning videos because participants need to be directed on how to use the available features. Interactive learning videos are proven to be able to improve the student learning process more actively [13] and independent [5]. The reality in the field is not always the same as the research theory suggests because many factors can hinder successful technology integration, especially in schools which must involve educators directly. After all, teachers are not given enough support to apply technology to the learning process in schools. The success of an educator in the use of technology relies heavily on a commitment to overcoming obstacles and access to technology in learning [11]. Likewise in the learning process from home, the challenge of developing technology integration, especially learning videos is not only by using existing learning videos then making learning videos as learning media from home, but there is also a greater responsibility in its use considering the process that is taking place is online. Home learning solutions in the form of learning videos can be realized, but educators must understand that learning videos can be a solution if they are used appropriately. Siti Salbiah et al. (2010) [11] conveyed that the skills of teachers in the use of instructional technology were still moderate skills such as those of Eduwebtv resources. It does not close the possibility that the instructional videos have an impact on students' misconceptions because the learning process from home does not get direct (online) monitoring by educators, especially on relatively difficult material. The trend of instructional videos with instructors in the video must be observed wisely by educators because it is not always the character of the material being taught that uses the characters of the learning video.

#### 4. Conclusion

Learning media using instructional videos can be a solution for the home learning program if the use of learning videos is adapted to the character of the learning material. For learning materials that are relatively difficult (according to the level of education), instructional videos with the instructor's display in the video are not necessarily effective in online learning because they can cause student misconceptions when viewing videos. Educators are expected to be able to use learning videos wisely by continuing to monitor directly together with the video given to students so that students remain focused on understanding the material provided.

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