The Teachers' Perceptions of the Effectiveness of Using Virtual Learning Media

Abd. Ghofur
Universitas PGRI Adi Buana, Kampus Lamongan
Pos-el: ghofurkita@yahoo.com

Abstrak
Penelitian ini bertujuan untuk menggali persepsi guru terhadap efektivitas penggunaan media pembelajaran virtual. Metode penelitian yang digunakan adalah penelitian kuantitatif deskriptif untuk mengetahui gambaran persepsi guru terhadap efektivitas penggunaan media pembelajaran virtual selama masa pandemi covid-19 ini. Responden dalam penelitian ini adalah 813 orang guru mulai dari jenjang TK, SD, SMP, SMA yang tersebar di beberapa daerah yang ada di Indonesia. Teknik pengumpulan data yang digunakan yakni kuesioner atau angket yang disebarkan kepada responden melalui survei secara daring (menggunakan aplikasi *google form*). Hasil penelitian menunjukkan bahwa 97% guru mengatakan kalau lembaga pendidikannya telah menerapkan pembelajaran berbasis virtual. Efektivitas pembelajaran dengan menggunakan media pembelajaran virtual diakui oleh sebanyak 44% guru. Beberapa jenis media virtual yang digunakan oleh guru di antaranya ada yang menggunakan *google classroom*, edmodo, telegram, email, whatsapp dan beberapa aplikasi lain.
Kata kunci
Persepsi guru, media pembelajaran virtual

Abstract
This study aims to explore teachers' perceptions of the effectiveness of using virtual learning media. The research method used is descriptive quantitative research to determine the description of teacher perceptions of the effectiveness of using virtual learning media during the Covid-19 pandemic. Respondents in this study were 813 teachers from kindergarten, elementary, junior high school, high school levels spread across several regions in Indonesia. The data collection technique used is a questionnaire or questionnaire that is distributed to respondents through online surveys (using the google form application). The results showed that 97% of teachers said that their educational institutions had implemented virtual-based learning. The effectiveness of learning using virtual learning media was recognized by 44% of teachers. Several types of virtual media are used by teachers, including those using Google Classroom, Edmodo, Telegram, Email, WhatsApp (WA) and several other applications.
Keywords:
Teacher perceptions, virtual learning media

Introduction
Since the outbreak of the corona virus (Covid-19), especially in Indonesia, educational and learning activities have experienced quite serious obstacles. As a result of the COVID-19 pandemic, schools from kindergarten to tertiary institutions have been closed. UNESCO says that 300 million students have disrupted school activities and temporary school closures due to health and the crisis (Handoyo, 2020).

Due to covid 19, teaching and learning activities cannot be done face-to-face. In fact, within a few months the learning activities at school were closed. Although later on, health protocols were tightened for schools implementing face-to-face learning. This is based on the Joint Decree of the Minister of Education and Culture, Minister of Religion, Minister of Health, and Minister of Home Affairs of the Republic of Indonesia regarding guidelines for implementing learning in the 2020/2021 school year during the Covid-19 pandemic. Even the Indonesian Minister of Education stated that face-to-face learning is allowed but not required (Ihsanuddin, 2020).

According to the Joint Decree of the Four Ministers, there are several requirements for schools wishing to carry out face-to-face learning. First, it must have permission from three parties, namely the local government,

school principals, and parents' representatives through the school committee. Second, schools complete the checklist, including: 1) the availability of sanitation and hygiene facilities, 2) access to health service facilities, 3) the application of mandatory masks, 4) having a thermogun, and 5) having a mapping of education unit residents who have the potential to be confirmed positive for Covid-19.

Even explicitly through the circular of the Minister of Education and Culture of the Republic of Indonesia it is explained that the learning process is carried out from home to provide meaningful learning through online or distance learning. Because face-to-face learning procedures are complicated and the stages are quite strict, distance learning is the main alternative. Especially for schools that do not have adequate infrastructure for the Covid-19 health protocol, face-to-face learning in class is definitely not allowed. This condition does not happen in Indonesia alone, but also in education in almost all parts of the world. The results of the study by Arora & Srinivasan explain that educational institutions in the world must be temporarily closed, following government instructions in their respective countries, thus affecting the academic system. They have to find new alternatives for implementing learning, and virtual classroom / online learning is the most likely way forward (Arora & Srinivasan, 2020). Covid-19 has made many parties make a mass test of the implementation of online education (Sun et al., 2020).

In addition, the results of the study by Arifin & Sukati show that during the pandemic, all learning activities are carried out online. The delivery of teaching materials, assignments, discussions, and evaluations is carried out online by utilizing various online application platforms. This condition makes many teachers have to learn a lot related to the application of distance learning. Starting from technical, various digital applications, and others related to the implementation of learning using virtual media (Arifin & Sukati, 2020).

Distance learning using virtual learning media is still not familiar to teachers. Especially teachers who were not used to using digital media from the start for learning activities. This is also in line with the opinion of Nurkolis & Muhdi which states that educators who used to teach conventional models in the classroom, suddenly required to teach in a digital media, experience considerable difficulties. This is also influenced by a number of educators who are still not technologically literate. Moreover, learning that uses an online system is felt to be less effective because of several obstacles, including the provision of learning materials by the teacher, the skills to use technology from teachers and parents who will guide the child, and the child's economic condition (Nurkolis & Muhdi, 2020). According to Taufik this condition is one of the challenges for teachers in carrying out learning in a pandemic like this. Some studies reveal that online learning systems provide a positive side, but there are also disadvantages behind it (Taufik, 2019).

The ability and skills of teachers determine whether or not learning activities are effective. This is based on changes in learning and teaching patterns that occurred after the COVID-19 pandemic which requires that the learning process be carried out without face-to-face or by utilizing virtual learning media. There are several virtual media that can be used for learning activities, including google classroom, Edmodo, zoom and so on. The change in learning from conventional to online systems must be immediately greeted positively by teachers. Because, Covid-19 has had a huge impact on students, lessons that are usually carried out in a classroom with a lot of friends, now have to be inversely proportional to conditions that require students to study at home. Moreover, by looking at the different abilities of students, as well as the absorption capacity of each student, of course, they are also very different. This will automatically have an impact on student achievement and motivation in learning (Sari et al., 2021).

Learning activities after the Covid-19 pandemic have undergone a change in pattern, which previously was through face-to-face directly replaced by the use of virtual media. The teacher's role will be very decisive in the process of changing the learning pattern, especially change to online learning patterns (Zacharo et al., 2018). This shows that teachers must be ready to face various learning conditions and student conditions, including the development of life in society (Zein, 2016).

Many teachers, students and even parents are shocked by the changes in learning patterns caused by the Covid-19 pandemic. The use of virtual learning media is a very important component during distance learning. Even in a situation of limitation, many parties continue to carry out learning with a system that is relatively new for most of these communities. In this regard, this study specifically discusses the various perceptions of teachers during distance learning activities utilizing virtual learning media.

Method

This study uses a survey method. According to Neuman W. Lawrence, survey research is quantitative research, in which researchers ask questions to several people (respondents) about beliefs, opinions, characteristics of an object and past or present behavior. The survey research method deals with questions about a person's beliefs and behavior. The data collection instrument is in the form of a questionnaire (W. Lawrence Neuman, 2020). This research is to find out what teachers' perceptions of the use of virtual media in learning have been in their respective schools since the Covid-19 pandemic occurred. Questions were given to 813 teachers at the level of kindergarten, elementary, junior high, high school spread across several regions in Indonesia using the google form application. Based on the results of data analysis, it is known that the majority of respondents are 31-40 years old, namely 30.3%, then 28.2% are 41-50 years old, then 26.3% of respondents stated that they are old.

Result and Discussion

Based on the results of data analysis, it is known that the majority of respondents said that their educational institutions had implemented virtual-based learning, this was based on as many as 97% of the teachers who were respondents said it. The remaining 3% of respondents said they had never implemented virtual learning in their class. In detail, the response to the use of virtual media in educational units can be seen in figure 1 below.
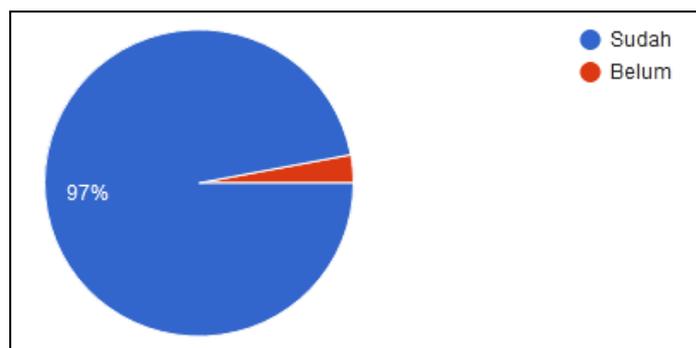

Figure 1
Application of virtual-based media in educational units

The majority of the use of virtual-based media in learning activities is due to the ban on face-to-face learning caused by the COVID-19 pandemic. This is based on the results of data analysis which state that 60.3% of respondents said that their education unit used virtual-based media after the COVID-19 pandemic. The remaining 39.7% of respondents said that they had used virtual media since before the COVID-19 pandemic. This shows that sometimes urgent conditions can force someone to apply something that has the potential to do something that is out of the ordinary, including the use of virtual media in learning. Motivation to continue to develop self-competence is certainly an option for teachers so that they can adapt well to the situation they are experiencing. High teacher motivation to continue learning new things is important to continue to do. According to Novianti, motivation to learn in a person will arouse passion or increase enthusiasm for learning. Motivation to learn contains efforts to achieve learning objectives, namely understanding of the material and developing learning. In addition, learning motivation is a driving force or impetus that makes someone interested in learning so that they will learn continuously (Novianti, 2011).

Motivation to learn in an application of virtual media is also an important part of a pandemic situation where face-to-face learning is not allowed. The results of the survey on the percentage of time using virtual media in educational units can be seen in figure 2 below.
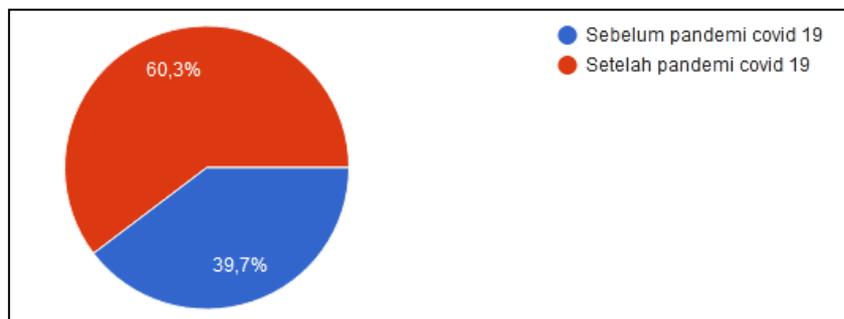
Figure 2
Time of application of virtual-based media in educational units

Many types of virtual media are used by teachers, including those using Google Classroom, Edmodo, Telegram, Email, WhatsApp (WA) and several other applications. Based on the results of data analysis, it shows that the virtual media application used by the majority of teachers is using WhatsApp (WA), which is 58.7%. Then 32.8% used the google classroom application, and the rest used Edmodo, zoom meetings, google meet, and so on. The results of data analysis on the use of virtual media in educational units can be seen in figure 3 below.
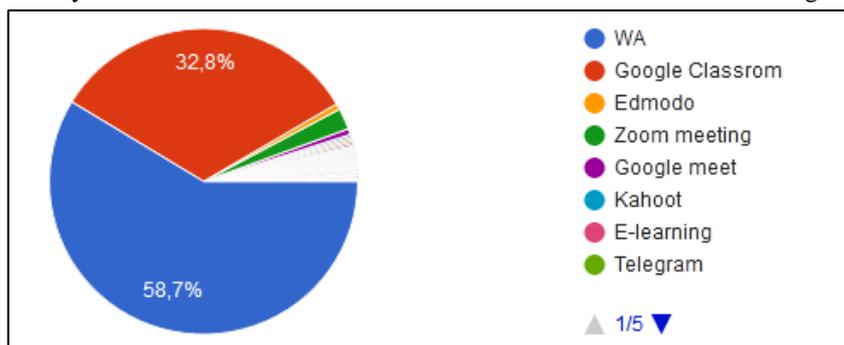

Figure 3
Virtual media used by teachers in learning

Based on the data above, this condition indicates that the teacher has sufficiently understood a variety of digital applications for these learning activities. Although the majority still use the WhatsApp application for their learning activities. One of the reasons is that WhatsApp is quite easy to use and almost all students and parents have the application. The results of this study are also in accordance with the results of research conducted by Fuadi & Musriandi which concluded that several types of applications that are most often used by educators in carrying out the online learning process are as follows; (1) zoom, (2) google classroom, (3) WhatsApp group, (4) google meet, (5) skype, (6) Webex, (7) email, (8) Edmodo and (9) camstudio (Tuti Marjan Fuadi, Riki Musriandi, 2020).

The zoom meeting application has also been implemented by teachers in learning activities. This is done as an effort to increase student participation rates when participating in learning activities without face to face. In the implementation of zoom, teacher meetings can be more interactive when compared to using the WhatsApp application. Based on the results of data analysis, it is known that as many as 64.1% of respondents agree that the use of the zoom meeting application can increase the participation of students in virtual learning. Then as many as 23.9% of respondents answered strongly agree, then the rest answered doubtfully and also did not agree that the use of the zoom meeting application can increase student participation in virtual learning. Visually, it can be seen in Figure 4 below.
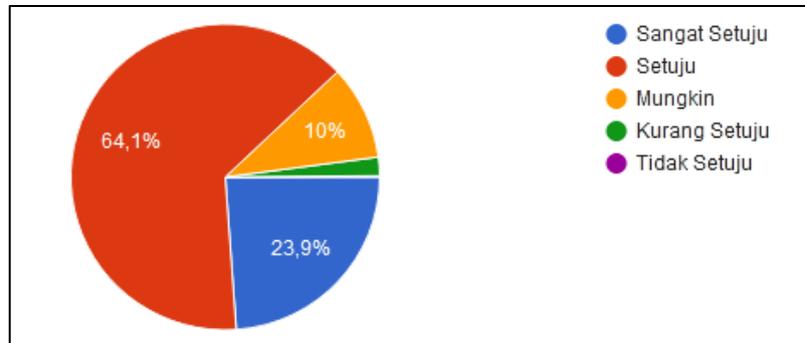
Figure 4
Teacher responses related to the level of student participation in virtual learning
with the zoom meeting application

The hope of implementing a zoom meeting is that there will be direct interaction between teachers and students virtually which cannot be done in other online applications. However, the results of Setiani's study state several obstacles when learning using the zoom meeting application. Among them, (1) consuming a lot of internet data credit or quota, (2) not all students can take part in learning with zoom meetings because the family economy is different, and (3) the level of network speed in rural areas (Adris Setiani, 2020).

In addition, based on the results of data analysis when the teacher carried out learning using virtual media, it was known that many students did not use pictures directly, only showing pictures or written names. In this regard, 38.7% answered agree and 9.5% of the teachers answered strongly that if students did not show their original pictures in the Zoom meeting, it was likely that there were other activities that could not focus on virtual learning activities. Then as many as 40.7% answered doubtfully, and the rest did not agree if students who did not show the original picture in the Zoom meeting, most likely there were other activities. Visually, it can be seen in Figure 5 below.
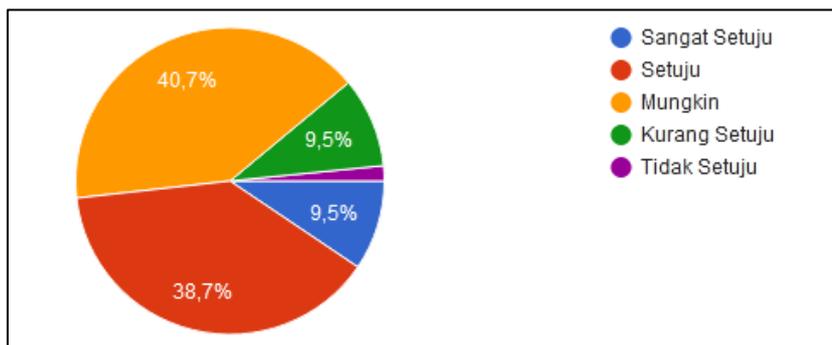

Figure 5
Teacher responses related to students who do not use the original view on the zoom meeting application

Another virtual application used by teachers in distance learning is Google Classroom. Google classroom is a virtual class that is used instead of learning activities that are usually carried out in the classroom. For example, providing material, doing assignments, and others. Based on the results of data analysis, it is known that virtual learning interactions using google classroom run optimally, this is agreed by the majority of respondents, namely 67.4% and 17.2% of respondents said they strongly agree. Then the rest answered doubts and disagreed. To find out the details of the respondent's answer can be seen in Figure 6 below.
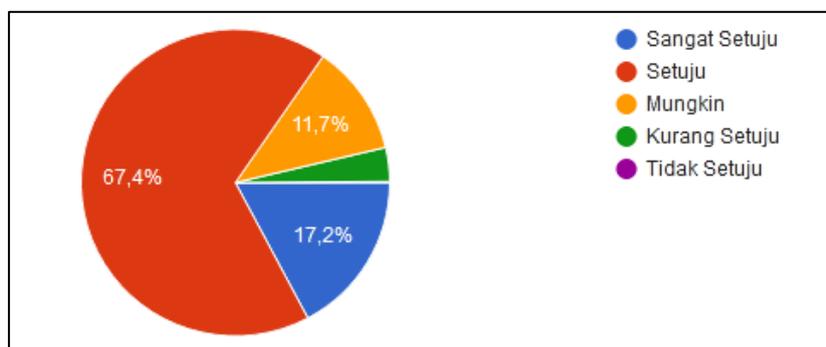
Figure 6
Teacher responses related to optimization of interactions using google classroom

Optimism of distance learning using virtual media must be the main choice by all parties. Apart from the pandemic situation that hinders direct face-to-face learning, technological developments have also been extremely rapid, so the use of digital media is no longer negotiable to be part of learning activities. Even though the pandemic is over, the use of virtual media will continue. According to the results of a study by Santoso, it shows that the online learning process can improve learning achievement (Santoso, 2009). A similar opinion is also expressed by Maudiarti which states that online learning can be done for everyone, anytime and anywhere by using attributes and learning resources from digital technology (Maudiarti, 2018).

However, what about the application of distance learning using virtual media in schools? The majority of teachers said that they were optimistic that using distance learning could be applied in the education unit of the teachers who were the respondents of this study. Visually, it can be seen in Figure 7 below.
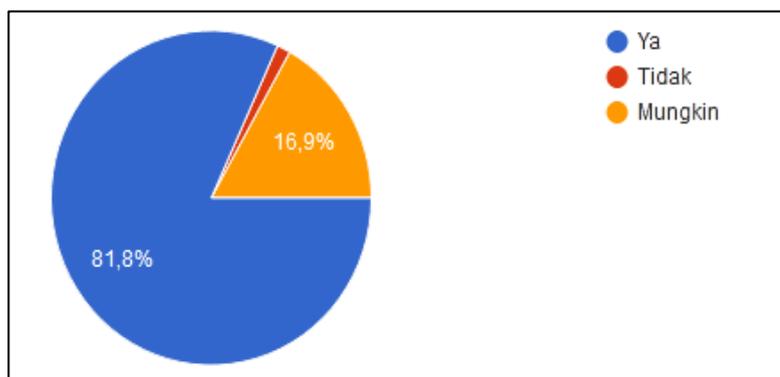

Figure 7
Potential application of distance learning using virtual media in educational units

Based on Figure 8 above, it is known that 81.8% of respondents said that in their education unit distance learning could be applied using virtual media, then 16.9% of respondents said they were in doubt, and the rest said that their education unit was still unable to implement it. Based on the results of research by Abidin, Hudaya, & Anjani, it is concluded that distance learning, which is organized by many educational units in Indonesia, seems sudden and unprepared (Abidin et al., 2020).

However, it is not necessarily that distance learning using virtual media can be directly used in a school environment, the success or failure of achieving educational goals depends a lot on how the learning process experienced by students. According to Slameto, in the learning process that has an effect on ongoing educational goals, one of the psychological factors in it is readiness (Slameto, 2013).

Readiness is the overall condition of a person that makes him ready to respond in a certain way to a situation. Willingness to respond or react. Willingness arises from within a person and is also related to maturity, because

maturity means readiness to carry out skills. This readiness needs to be considered in the learning process, because if students learn and there is readiness for them, the learning outcomes will be better (Slameto, 2013).

The application of distance learning with virtual media is not easy to implement in educational units. Considering that the implementation is relatively sudden because of the policy that prohibits face-to-face activities in schools so that many educational units experience several obstacles in their implementation. Among them as many as 47.5% said the obstacle to implementing learning using virtual media was the availability of the internet network. This is also in accordance with the results of research by Dwiyanti which states that the availability of the internet and its supporting facilities plays a very important role. Because no matter how good the quality of the material in virtual learning, if it is not supported by adequate internet access, it will still not be conveyed properly to students (Dwiyanti, 2021).

Then the next obstacle is the limited IT equipment in the school, as many as 20% of respondents answered this. Then as many as 14.5% said that the obstacle faced in implementing distance learning with virtual media was parental support. Based on the results of research from Ratu at first many parents refused online learning for their children, because they were still unfamiliar with technology (Ratu et al., 2020). But over time, parents began to accept this online learning (Shereen et al., 2020). Because the application of distance learning with virtual media does not meet face-to-face and interact directly with the teacher, the presence and support of parents is an important part of this process. As a party that directs their children as a connector for what information has been conveyed by the teacher and other virtual media that students learn.

In addition, as many as 10.9% of respondents said that student motivation was also an obstacle in the application of distance learning. Visually, the obstacles experienced by educational units in implementing distance learning using virtual media are as shown in Figure 8 below.
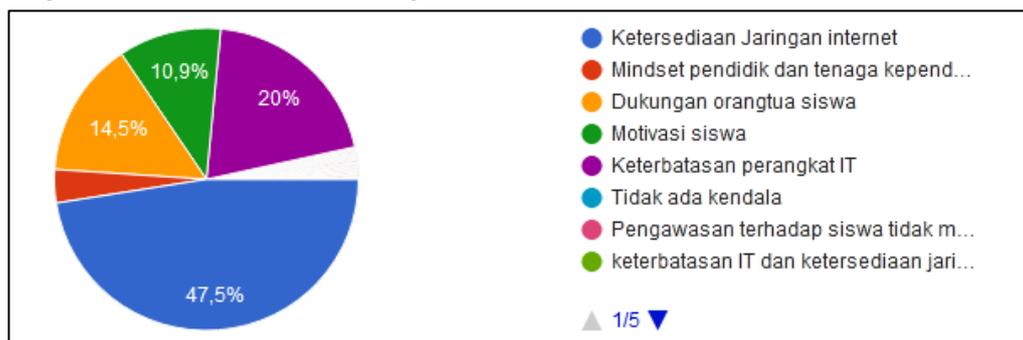

Figure 8
Constraints faced by educational units in the application of distance learning using virtual media

Distance learning with virtual media makes many parties have a lot to learn to adapt. This is done so that learning that does not meet directly as usual can run effectively. According to 44% of respondents said that learning using virtual media that they have implemented has been effective. Then as many as 34.6% of respondents said that virtual learners were less effective, and as many as 14.9% said that they were in doubt about the effectiveness of the application of learning with virtual media that they had implemented. Visually, the level of effectiveness of learning with virtual media is shown in Figure 9 below.
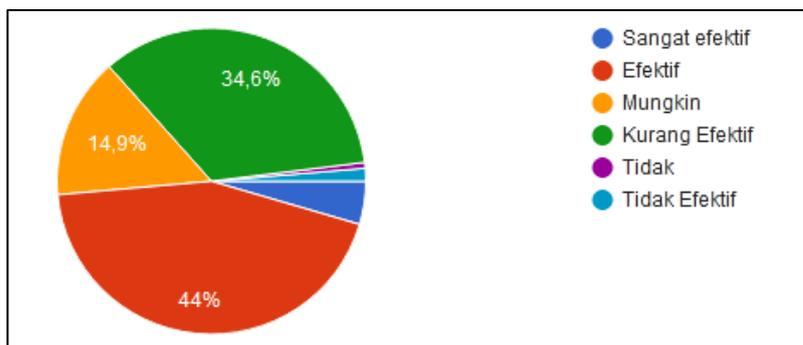
Figure 9
The level of effectiveness of learning with virtual media

Conclusion

Based on the results of data analysis, it is known that as many as 44% of teachers who have implemented learning using virtual media said that the learning was effective. Even with the limitations of the internet network in each area. Some of the virtual media used by several teachers include WhatsApp (WA), google classroom, edmodo, zoom meetings, email, and others. However, most teachers use the WA group for their online learning activities. This is because the WA application is more familiar and easier to use than other applications that they don't know much about.

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