

## Learning Technology in Elementary School

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### ABSTRACT

Teachers currently face greater challenges than the previous era, where teachers are required to utilize technology in the learning process. This article provides a comprehensive overview of the technology used by primary school teachers. This study uses a qualitative descriptive method that explains what learning technologies are used by elementary school teachers. The instrument in this study was a questionnaire about the learning technology used and its strengths and weaknesses. The results showed 68% of the 335 teachers used the video call application via Whatsapp to create classes, Microsoft Power Point to create online learning media, Microsoft Word to create online student worksheets, Kinemaster to make learning videos, Whatsapp Group for online assignments, and Google Form for online evaluation. The advantage of this technology is that it is the only learning tool that is the most effective and efficient during this pandemic, while the disadvantage lies in the high costs involved in providing internet data packages. It is highly recommended for teachers to develop effective and efficient learning technology.

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## 1. INTRODUCTION

Online learning as a learning solution in elementary schools in facing the challenges of the times. This policy was set by the government as an effort to continue education in Indonesia. The implementation of online learning is complicated, especially in creating contextual learning during this pandemic (Poth, 2020). This is a challenge for teachers in Indonesia. Every teacher must learn to master technology so that much effort is made to train teachers to learn learning technology (Topolovčan & Matijević, 2014). This policy also applies to elementary school teachers, so that at the primary school level teachers must be able to adapt the right technology for elementary school age children. The role of teachers in online learning is very important, especially at the elementary school level. Teachers must be able to integrate all material into the technology used. The application of online learning, especially

during the COVID-19 pandemic, has a positive impact on the continuity of education in Indonesia (Abduloh; Muhammadiyah, Mas'ud; Harizahayu; Susilo, Catur Budi; Sa'odah; Arifin, 2021).

Teachers have a very important role in education (Awaliati, 2022). If previously teachers were required to make innovations in the classroom, now teachers are required to make innovations by using technology. Every teacher must have the skills to use technology, starting from creating online classes, online learning media, online student worksheets, learning videos, online assignments, to conducting online evaluations (Jannah et al., 2020)(Husaini et al., 2021). This condition is a challenge for teachers in dealing with technology-based education. Teachers are required to be able to master technology in supporting the learning process (Aspi & Syahrani, 2022)

Every teacher in Indonesia learns to provide learning using applications that are easily accessible to students with their gadgets (Armanda & Yosintha, 2022). At the primary school level with the characteristics of students who are still at the stage of introducing technology so that the challenges for elementary school teachers are higher (Yaroshenko, Samborska & Kiv, 2022). In addition, not all elementary school age students have permission to use gadgets independently (Wahyuningtyas, Rochanah & Izatovna (2022). So that in addition to teachers who are needed to help students learn is the role of parents (Fauziah, Izzaty & Kusumawardani, 2022).

Research conducted by education practitioners on online learning during a pandemic shows that many factors can affect the success of online learning including the availability of adequate technology and support from all parties, including schools, teachers, and parents (Rasmitadila et al., 2020)(Choiri et al., 2021)(Aisa & Lisvita, 2020). In addition, there are studies that show the impact of technology on learning, namely improving student learning outcomes in certain fields (Zuniga-Velasquez et al., 2020). Based on previous research, it can be concluded that online learning is the most effective learning during this pandemic (Abduloh; Muhammadiyah, Mas'ud; Harizahayu; Susilo, Catur Budi; Sa'odah; Arifin, 2021). However, it is necessary to pay attention to several things such as the availability of infrastructure (Fauzi & Sastra Khusuma, 2020)(Laksana, 2021). The purpose of this study is to provide a comprehensive picture of the technology used by elementary school teachers during the Covid-19 pandemic.

## 2. METHODS

This research uses descriptive qualitative research (Gall, Gall, & Borg, 2014). This research describes the use of technology in learning by elementary school teachers. This research was conducted by involving 335 teachers from several regions on the island of Java. The research instrument used was a questionnaire containing the technology used by the teacher to carry out learning from beginning to end. This questionnaire was distributed online through social media, namely WhatsApp. The analysis of the research results was carried out in a qualitative manner by reducing the research data about the technology used by elementary school teachers. Furthermore, the grouping is based on usage and ends with the conclusion of the research results.

## 3. FINDINGS AND DISCUSSION

The results showed that the learning technology often used by elementary school teachers to create online classes, online learning media, online student worksheets, instructional videos, online assignments, and online evaluations included:

Table 1. Use of Technology in Learning

Technology usage	Technology used	Percentage of users
Online classes	Video Call Whatsapp	77%
Online learning media	Microsoft Power Point	78%
Online student worksheets	Microsoft Word	70%
Tutorial video	Kinemaster	49%
Online assignments	Group Whatsapp	82%
Online evaluation	Google Form	52%
average		68%

(data obtained from 335 respondents)

Based on table 1, it can be seen that every teacher is able to integrate technology in learning. This is evidenced by 68% of the 335 teachers using applications that are effectively used in learning, including: 77% use video calls via Whatsapp to create online classes, 78% use Microsoft Power Points to create online learning media, 70% use Microsoft Word to make sheets online students work, 49% use Kinemaster to make learning videos, 82% use Whatsapp Groups for online assignments, and 52% use Google Forms for online evaluations. So it can be concluded that the technology is effective and efficient to use in learning and is easily applied by teachers or students. However, it has a weakness in the amount of costs that must be incurred to provide internet data packages.

### Discussion

The results of the study show that the demands of the government to use technology in learning can be implemented by teachers properly. The teacher's efforts to create innovative learning are also proven by the variety of technologies used. Technology has become a cutting edge tool for transforming learning, because it can help improve learning and communication between teachers and students (Trust, 2018) (Burdina et al., 2019). In addition, it can help teachers create learning that is efficient and easily accepted by students (Lee & Thomas, 2011; Wahyono et al., 2020; Andarini & Salim, 2021).

The technologies that are easiest for teachers to master are Whatsapp video calls, Microsoft Power Point, Microsoft Word Kinemaster, Google Form Whatsapp Group. These six technologies really support the implementation of learning from beginning to end. Effective online learning is learning that can achieve learning goals (Uzir et al., 2020). Even though the current condition is in the pandemic era, the learning completeness criteria are still guided by the achievement of learning objectives.

### 4. CONCLUSION

Technology is needed by teachers to create innovative learning in elementary school. Based on the results of the research, it is proven that 68% of the 335 teachers use applications that are effectively used in learning include: 77% use video calls via Whatsapp to create online classes, 78% use Microsoft Power Points to create online learning media, 70% use Microsoft Word to make sheets online students work, 49% use Kinemaster to make learning videos, 82% use Whatsapp Groups for online assignments, and 52% use Google Forms for online evaluations. So. it can be concluded that the technology is effectively used in learning and is easily applied by teachers or students. The advantage of this technology is that it is the only learning tool that is the most effective and efficient during this pandemic, while the disadvantage lies in the high costs involved in providing internet data packages. It is highly recommended for teachers to develop effective and efficient learning technology in elementary school.

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