

## **The Effectiveness of Learning Videos to Improve Elementary School Teachers' Understanding of the Learning Characteristics of Students with Special Needs**

**Ade Kartini\*, Imas Diana Aprilia, Endang Rochyadi**

Universitas Pendidikan Indonesia, Bandung, Indonesia

E-mail: [adekartini05@upi.edu](mailto:adekartini05@upi.edu)

**Abstract:** The lack of understanding of elementary school teachers about the learning characteristics of students with special needs and the lack of adaptive learning media is allegedly factors that do not optimize learning. This study aims to measure the effectiveness of learning videos in improving elementary school teachers' understanding of the learning characteristics of students with special needs. The research method used is descriptive quantitative with One Group Pre-test and Post-test design. Data collection was carried out through tests with research subjects, namely six teachers from two elementary schools in Sumedang Regency. The results of this study indicate an increase in teachers' understanding of the learning characteristics of students with special needs with a percentage of 59.61%. So it can be concluded that learning videos are effective in increasing teachers' understanding of students with special needs. The recommendation is that teachers can use interactive learning videos to help fulfill the learning needs of students with special needs in elementary schools.

**Keywords:** Learning characteristics; students with special needs; learning videos.

### **INTRODUCTION**

As a teacher, understanding the learning characteristics of students is a major asset in successful learning. Judging from the role of the teacher as an educator is to deliver students to become mature and virtuous human beings through the formation of attitudes, mentality, and character by paying attention to the habits, negligence, specificity, advantages, and disadvantages of each student (Aqib, 2020). In line with efforts to improve the quality of learning in the classroom, namely the importance of the teacher's role in determining the success of learning (Amtu et.al, 2020). These statements show that teachers must understand well the learning characteristics of students to determine the steps to be taken in achieving the goals of learning. Likewise, learning for students with special needs where in the learning process some are slow and those who understand lessons too quickly (Komariyah et al, 2017).

The reality in the field shows that many teachers who have students with special needs in their classes are still lacking in understanding the learning characteristics of students with special needs (Johan & Yassin, 2019), this can be an obstacle to achieving learning goals and have an impact on student learning needs not being met, so that students feel neglected and left behind from their other colleagues. Based on Ni'matuzahroh's research (2015), one of the factors influencing school unpreparedness is the teacher's understanding of treating students with special needs with the results stating that 76.8% of teachers need knowledge provision, on how to teach and handle students with special needs. Meanwhile, based on Firli's research. Irma, et al (2020) many teachers are still confused about responding to students with special needs in the classroom, especially in providing appropriate directions according to student needs. Based on the results of this study, it is necessary to make efforts to improve the understanding of regular teachers, in this case, elementary school teachers who have students with special needs in their classes.

In addition, the difficulties experienced by teachers are not only limited to understanding students with special needs but also access to this understanding, such as the lack of appeals and the provision of training for teachers by the local government so there needs to be an alternative that can reach the information needs of teachers, one of which is through learning videos. This is based on research by Kartini, & Aprilia, (2022) one of the challenges of regular teachers in improving teacher competence is the limited competency improvement services that regular teachers can access in developing the competencies that teachers should have to understand the learning characteristics of students with special needs.

Video is an electronic media that combines visuals and audio by broadcasting information dynamically and interestingly. Goldman in Boateng, et.al (2016) says that video provides a good illustration of digitized images, text, and sound that can be uploaded to a shared virtual community. In its application, video media can help comprehension skills where the brain processes information by using more than one, namely through visual and audio capabilities. According to Mayer & Moreni (2003) on the Cognitive Theory of Multimedia Learning built on Cognitive Load Theory, noting that working memory has two channels for acquiring and processing information, namely visual or image channels, and auditory or verbal processing channels, this certainly maximizes a person's information reception. The results of Brame, (2016) research on effective video media can be summarized as follows:

1. The video is made brief and focused on learning objectives
2. Using audio and visual elements to convey the appropriate parts of the right explanation
3. Uses cues to highlight important ideas or concepts.
4. Uses a conversational and enthusiastic style to increase engagement
5. Incorporating guiding questions, interactive elements, or providing assignments.

Based on the usefulness of videos in learning can help understanding easier to absorb so this study aims to measure the effectiveness of learning videos in improving the understanding of elementary school teachers in improving teachers' understanding of learning the characteristics of students with special needs.

## METHOD

The method in this study is descriptive quantitative with One Group Pre-test and Post-test design. This method explains the results of the pretest-posttest calculation to see the effectiveness of the use of learning videos. begins by testing the normality of the test instruments given, continues by looking at the differences from the pretest-posttest results, and ends by looking at the effectiveness of the use of learning videos in improving elementary school teachers' understanding of the learning characteristics of students with special needs. The participants consisted of 6 teachers from two elementary schools in Sumedang Regency. The following table shows the design of the One Group Pre-test Post-test design:

**Table 1. Research Design One Grup Pre-test Post-test**

<i>Pre-test</i>	<i>Treatment</i>	<i>Post-test</i>
O1	X	O2

Description:

X = treatment; O1 = Pre-test value (before treatment); O2 = Post-test value (after treatment)

Based on the One Group Pre-test Post-test design, the stage of the research begins with taking the initial data of the Pre-test, namely the assessment before being given treatment, where the treatment is in the form of a learning video for elementary school teachers about understanding the learning characteristics of students with special needs. The results of the initial assessment are used as material for compiling material in the learning video. After the learning video is given to measure the effectiveness of the learning video, an assessment is carried out for the final Post-test data. The data collection technique used is a test in the form of multiple-choice questions. The instrument used is an instrument of teacher learning outcomes related to the learning characteristics of students with special needs. To test the effectiveness of learning videos, the Normality Test is used for the significant value of the pre-test and post-test question instruments, the Paired Sample T-Test to see the difference in learning outcomes in conceptual abilities obtained by teachers before and after using learning videos, and the Normalized Gain Test to determine the effectiveness of using learning videos with pre-test post-test.

## FINDING AND DISCUSSION

### Finding

The study aimed to determine the effectiveness of learning videos to improve elementary school teachers' understanding of the learning characteristics of students with special needs. Then the results of the study seen by looking based on the results of the pre-test and post-test are as follows:

1. Based on the results of the pre-test and post-test, the normality test was carried out using SPSS, it is known that the mean value obtained by the post-test is higher, namely 79.33 than the pre-test, namely 48.00. To determine the significance value of the question instrument using the Shapiro-Wilk test, the pre-test result is  $0.468 > 0.05$ , which means the data is normally distributed. The significance value for the question instrument from the post-test is  $0.5 > 0.05$ , which means that the data is also normally distributed.

**Table 2. Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	48.00	6	18.931	7.729
	Posttest	79.33	6	9.522	3.887

2. The results of the paired sample T-Test test, known as Sig. (2-tailed) is  $0.004 < 0.05$ , then  $H_0$  is rejected and  $H_1$  is accepted. It is concluded that there is a difference between the average pre-test and post-test results of teachers' understanding of the characteristics of students with special needs.

**Table 3. Paired Samples Test**

		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pretest - Posttest	-31.333	15.108	6.168	-47.189	-15.478	-5.080	5	.002	.004

3. The results of the Normalized Gain test are to determine the effectiveness of learning videos for teachers' understanding of the characteristics of students with special needs before and after being given X treatment. The results show that the Mean N-Gain score of 0.59 is included in the medium category, namely  $0.3 < g > 0.7$  and the Mean N-Gain percent of 59.61% is included in the high enough category, namely the percentage of 56-75 or quite effective, which means that the use of learning videos is effective in increasing teachers' understanding of the learning characteristics of students with special needs.

**Table 4. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
NGain_score	6	.50	.82	.5962	.12730
NGain_percentase	6	50.00	82.35	59.6167	12.72977
Valid N (listwise)	6				

## Discussion

In this era of technology, teachers need to keep up with the times. Social media, the internet, and various technological sophistication make it very easy for users anywhere and anytime (Haleem et.al, 2022). It is no different from the world of education that continues to progress, therefore everyone can access videos anywhere either through social media such as TikTok, Instagram, or Youtube. A lot of access to information related to students with special needs should not make it difficult for teachers or even lay people to understand it (Balakrishnan, & Alias, 2017). However, the access obtained has not been able to reach the need to understand the learning characteristics of students with special needs (Tokatly Latzer, et.al, 2021). This happens because of the lack of experts who provide media that covers this understanding with the target of elementary school teachers.

Learning videos with attractive and interactive displays is one of the many creativities facilitated by teachers. The existence of this research accommodates elementary school teachers to understand the learning characteristics of students with special needs, where the problem at school is that teachers are confused about finding learning methods and media that can accommodate the learning needs of each student. The complex needs of each student are homework that needs to be resolved. In line with the function of education according to Mursita et.al (2018), namely developing what students potentially have, because students are not empty glasses that must be filled from outside. They already have something, a little or a lot, have developed (actualized) or at all still bud (potential).

The results showed that the effectiveness of learning videos to improve teachers' understanding of the characteristics of students with special needs has increased based on the results of the pre-test and post-test, namely with a percentage of 59.61% quite effective. This is reinforced by the statement of Brame, (2016) that videos can be an effective tool in the teaching tool kit.

## CONCLUSION

Based on the results of the study, show that the use of learning videos can improve the competence of teachers' understanding of the learning characteristics of students with special needs, namely based on the results of the effectiveness of learning videos with a percentage of 59.61%. From the use of learning videos, elementary school teachers can understand the learning characteristics of students with special needs in the classroom. This understanding becomes a reference for teachers in improving learning which of

course can help the quality of learning for students with special needs. Of course, for elementary school teachers, this initial step can achieve learning targets with various student conditions. This research recommends that teachers use interactive learning videos to help fulfill the learning needs of students with special needs in elementary schools.

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