

Knowledge Enhancement Through Oral Hygiene Learning Videos

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ABSTRACT

Learning media is expected to enhance students' interest in learning. This research aims to investigate the impact of instructional videos on the level of oral hygiene knowledge. The research methodology employed in this study is Quasi-Experimental, utilizing a quantitative design with pre-test and post-test approaches. Purposive sampling was employed as the sampling technique. The analysis, conducted using the Paired T-Test, yielded a p-value of 0.000 ($p < 0.05$), indicating a significant change in the mean knowledge scores before and after the educational intervention using oral hygiene instructional videos. One alternative approach to dental health education, particularly in tooth brushing, is through the use of videos. Using videos is more effective as it facilitates easier retention and understanding of lessons, transcending reliance on a single sensory input. It is anticipated that future research can develop applications related to accessing oral hygiene instructional videos.

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INTRODUCTION

COVID-19 is a contagious disease caused by a newly discovered type of coronavirus known as the SARS-CoV-2 virus, infecting humans and leading to a condition called COVID-19 (Corona Virus Disease 2019), which is fatal. As a result, the World Health Organization (WHO) has declared it a pandemic (Yurianto, & Wibowo, 2020). This pandemic has startled the entire world, prompting many educational institutions to postpone learning activities (Hussein, et al., 2020).

Governments have urged the public to work, learn, and worship from home to reduce the number of COVID-19-exposed individuals. Online learning activities have been implemented to prevent the spread of the coronavirus (COVID-19) disease (Menteri Pendidikan dan Kebudayaan, Menteri Agama, Menteri Kesehatan dan Menteri Dalam Negeri, 2020).

Online learning (on the network) is an education system conducted without face-to-face interaction between teachers and students but carried out online using the internet (Alqurashi, 2019). Teachers must ensure that the teaching and learning process continues, even though students are at home. The solution involves teachers innovatively designing learning media by leveraging online platforms (Harnani, 2020).

Online learning is an educational activity that utilizes internet networks with flexibility, accessibility, connectivity, and the ability to generate various types of learning interactions, facilitating the learning process (Margayu, Yelianti, & Hamidah, 2020). Students can use communication devices, computers, software, and the internet as learning media, with instruction tailored to individual needs (Al-Azzam, Elsalem, & Gombedza, 2020).

The shift from face-to-face learning to full online learning significantly affects various aspects and arrangements in education. Research findings indicate that massive implementation of online learning is the first, with not only students forced to learn online, but also limited interactions among peers, leading to adverse effects on children's conditions, resulting in decreased learning motivation and impacting academic performance ((Jan, 2020; Debbarma, & Durai, 2021; Ichsan, et al., 2020; Muthuprasad, et al., 2021).

Distance learning provides convenience and opportunities in shared conditions. The global impact of COVID-19 was unforeseen. Primary school teaching methods were replaced with online methods through specific applications, enabling continued learning despite being at home (Khasanah, Pramudibyanto, & Widuroyukti, 2020).

UNESCO supports the widespread implementation of distance learning programs and platforms to reach students remotely. The impact of the coronavirus pandemic is now reaching the education sector, with central and regional governments implementing policies to close all educational institutions as a preventive measure against the spread of the virus (Purwanto, et al., 2020).

Preliminary research on the Impact of COVID-19 on the Implementation of Online Learning in Elementary Schools shows that online learning can effectively break the chain of COVID-19 transmission (Dewi, 2020).

Research on Student Activity Sheets for Remote Learning Based on Scientific Literacy on the Topic of Coronavirus Disease 2019 (COVID-19) suggests that activity sheets need evaluation before broader use. Their broader application can be utilized for learning practice and research replication purposes (Setiawan, 2020). This research aims to investigate the impact of instructional videos on the level of oral hygiene knowledge.

METHOD

The research design employed in this study is Quasi-Experimental with a quantitative design approach, specifically using a pre-and post-test one-group design (Bisallah, et al., 2018), with ethical approval number 34/KEPK/EC/VI/2023.

The population comprises students from elementary schools in Subang, with purposive sampling used to select the sample. The inclusion criteria for subjects in this study are third and fifth-grade elementary school students whose parents own and can operate smartphones. Exclusion criteria for subjects in this study are students who do not complete the provided questionnaires, resulting in a sample size of 60. Data analysis utilized the Paired T-Test (Riyanto, 2013; Faturrohman, & Sobry, 2010).

RESULTS AND DISCUSSION

Table 1. Normality Test Results Before and After the Intervention.

	Mean	Std. Deviation	p-value
Pre-Test	10,75	2,26	0,341
Post-Test	26,62	2,811	0,284

Table 1 shows that the normality test of knowledge data before and after the intervention, using the Kolmogorov-Smirnov test, resulted in data that follows a normal distribution with a p-value > 0.05. As the data is normally distributed, the statistical test used is the Parametric test, namely the Paired T-Test.

Table 2. Statistical Test Results Before and After the Intervention.

	Before			After			p-value
	Minimum	Maximum	Mean	Minimum	Maximum	Mean	
Respondent	6	15	10,75	19	30	26,62	0,000*

Table 2 indicates that the average knowledge score before the intervention was 10.75, with the lowest knowledge score at 6 and the highest at 15. After the intervention, the average knowledge score increased to 26.62, with the lowest score at 19 and the highest at 30. The analysis using the Paired T-Test yielded a p-value = 0.000 ($p < 0.05$), indicating a significant change in the average knowledge scores before and after the education using oral hygiene knowledge videos.

This is consistent with the statement that information obtained from both formal and non-formal education can have a short-term impact, leading to changes or improvements in knowledge. Providing information about health, health maintenance, and the like can enhance an individual's knowledge about health (Komulasari, 2010).

Learning models serve as a framework or framework for implementing a teaching approach, method, and technique. A learning model is a pattern used as a guide in planning classroom or tutorial learning. It can be defined as a conceptual framework that outlines systematic procedures for organizing learning experiences to achieve learning objectives (Roestiyah, 2001; Priana, 2017).

Knowledge is the result of human sensing or someone's awareness of an object through their senses (sight, smell, hearing, etc.). The acquisition of knowledge is greatly influenced by the intensity of attention and perception of the object during sensing. Most knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes). An individual's knowledge of an object has varying intensities or levels (Komulasari, 2010).

The development of information and communication technology can be utilized as a means to self-develop in the process of knowledge transformation, including through videos. By leveraging videos as a learning medium, it is hoped to increase students' interest in learning. Student interest can be enhanced by selecting the appropriate media, in line with technological developments and environmental conditions, to maximize learning objectives (Rusman, 2011).

Video is a medium for conveying messages, including audio-visual or visual media. The advantages of video-based learning include presenting learning objects concretely or realistically, which is excellent for enhancing learning experiences; having its own appeal and serving as a motivator for learners; being effective for achieving psychomotor learning objectives; reducing learning boredom, especially when combined with lecture and discussion techniques; enhancing memory retention; and being portable and easily distributed (Ahmadi, 2011).

The prevalence of videos on social media has become a routine for young people, with YouTube being particularly popular. The effects of videos can manifest cognitively, affectively, and behaviorally. Research on the use of vlogs states that vlogs can influence the formation of a person's attitudes (Ibrahim, et al., 2021). Another study on vlogs states that vlogs can influence a person's behavior (Shim, & Lee, 2020).

One alternative for providing dental health education, especially on tooth brushing, is through the use of videos. Using videos tends to make it easier to remember and understand lessons because it engages multiple senses. The research by Mell Silberman indicates that visual learning can increase retention from 14% to 38%, and according to them, using videos makes children more interested (Priana, 2017).

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The benefits of video for dental health promotion are that video media allows for closer observation of moving subjects, saves time, and recordings can be replayed repeatedly, facilitating the knowledge absorption process. Video falls under audio-visual media as it involves both hearing and seeing senses. This audio-visual medium is capable of yielding better learning outcomes for tasks such as remembering, recognizing, recalling, and connecting facts and concepts (Rusman. 2011).

CONCLUSION

Based on the results of the conducted research, it can be concluded that there is a significant change in the average knowledge scores before and after conducting education using oral hygiene knowledge videos. One alternative for providing dental health education, especially on tooth brushing, is through the use of videos. Using videos tends to make it easier to remember and understand lessons because it engages multiple senses. It is hoped that in future research, an application can be developed to facilitate access to the required videos.

REFERENCES

- Ahmadi, I. K. (2011). *Strategi pembelajaran sekolah terpadu*. Jakarta: PT. Prestasi Pustakarya.
- Alqurashi, E. (2019). Predicting student satisfaction and perceived learning within online learning environments. *Distance education*, 40(1), 133-148.
- Al-Azzam, N., Elsalem, L., & Gombedza, F. (2020). A cross-sectional study to determine factors affecting dental and medical students' preference for virtual learning during the COVID-19 outbreak. *Heliyon*, 6(12).
- Bisallah, C. I., Rampal, L., Lye, M. S., Mohd Sidik, S., Ibrahim, N., Iliyasa, Z., & Onyilo, M. O. (2018). Effectiveness of health education intervention in improving knowledge, attitude, and practices regarding Tuberculosis among HIV patients in General Hospital Minna, Nigeria - A randomized control trial. *PloS one*, 13(2), e0192276. <https://doi.org/10.1371/journal.pone.0192276>
- Debbarma, I., & Durai, T. (2021). Educational disruption: Impact of COVID-19 on students from the Northeast states of India. *Children and youth services review*, 120, 105769.
- Dewi, W. A. F. (2020). Dampak Covid-19 terhadap implementasi pembelajaran daring di Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 2(1), 55-61.
- Faturrohman, P., & Sobry M. S. (2010). *Strategi Belajar Mengajar melalui Penanaman Konsep Umum & Konsep Islami*. Bandung: PT. Refika Aditama.
- Harnani, S. (2020). *Efektivitas Pembelajaran Daring Di Masa Pandemi Covid-19*. Jakarta: Kementerian Agama Republik Indonesia.
- Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and youth services review*, 119, 105699.
- Ibrahim, A. F., Attia, A. S., Asma'M, B., & Ali, H. H. (2021). Evaluation of the online teaching of architectural design and basic design courses case study: College of Architecture at JUST, Jordan. *Ain Shams Engineering Journal*, 12(2), 2345-2353.
- Ichsan, I. Z., Rahmayanti, H., Purwanto, A., Sigit, D. V., Kurniawan, E., Dewi, A. K., ... & Marhento, G. (2020). Covid-19 dan E-Learning: Perubahan strategi pembelajaran sains dan lingkungan di SMP. *JINoP (Jurnal Inovasi Pembelajaran)*, 6(1), 50-61.
- Jan, A. (2020). A phenomenological study of synchronous teaching during COVID-19: A case of an international school in Malaysia. *Social sciences & humanities open*, 2(1), 100084.
- Khasanah, D. R. A. U., Pramudibyanto, H., & Widuroyekti, B. (2020). Pendidikan Dalam Masa Pandemi Covid-19. *Jurnal Sinestesia*, 10(1), 41-48.
- Komulasari, K. (2010). *Pembelajaran Kontekstual Konsep dan Aplikasi*. Bandung: PT. Refika Aditama.

- Margayu, T., Yelianti, U., & Hamidah, A. (2020). Pengembangan LKPD Berbasis Inkuiri Terbimbing Pokok Bahasan Klasifikasi Mahluk Hidup:(Development of Student Worksheet Based on Guided Inquiry on Natural Science Subjects Chapter of Living Thing Classifications). *Biodik*, 6(2), 133-144.
- Menteri pendidikan dan kebudayaan, Menteri agama, Menteri Kesehatan dan Menteri Dalam Negeri. (2020). *Panduan Penyelenggaraan Pada Tahun Ajaran 2020/2021 Tahun Akademik 2020/2021 Dimasa Pandemi Coronavirus Disease 2019 (COVID 19)*. Jakarta: Kementerian pendidikan dan kebudayaan, Menteri agama, Menteri Kesehatan dan Meteri Dalam Negeri.
- Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID-19 pandemic. *Social sciences & humanities open*, 3(1), 100101.
- Priana, R. Y. S. (2017, May). Pemanfaatan vlog sebagai media pembelajaran teritegrasi teknologi informasi. *Prosiding Seminar Nasional Pendidikan FKIP*, 313-316.
- Purwanto, A., Pramono, R., Asbari, M., Hyun, C. C., Wijayanti, L. M., & Putri, R. S. (2020). Studi eksploratif dampak pandemi COVID-19 terhadap proses pembelajaran online di sekolah dasar. *EduPsyCouns: Journal of Education, Psychology and Counseling*, 2(1), 1-12.
- Riyanto, A. (2013). *Statistik Deskriptif Untuk Kesehatan*. Nuha Medika.
- Roestiyah, N.K., (2001). *Strategi Belajar Mengajar*. Jakarta: Rineka Cipta.
- Rusman. (2011). *Model-model Pembelajaran*. Jakarta: PT. Raja Grafindo Persada.
- Setiawan, A. R. (2020). Lembar kegiatan literasi saintifik untuk pembelajaran jarak jauh topik penyakit coronavirus 2019 (COVID-19). *Edukatif: jurnal ilmu pendidikan*, 2(1), 28-37.
- Shim, T. E., & Lee, S. Y. (2020). College students' experience of emergency remote teaching due to COVID-19. *Children and youth services review*, 119, 105578.
- Yurianto, A., & Wibowo, B. K. P. (2020). *Pedoman pencegahan dan pengendalian coronavirus disease (covid-19)*. Kementerian Kesehatan Republik Indonesia.