Jurnal Ilmiah Sekolah Dasar
Volume 7, Number 2, 2023 pp. 327-335
P-ISSN: 2579-3276 E-ISSN : 2549-6174
Open Access: https://doi.org/10.23887/jisd.v7i2.56769

Problem-Based Learning-Based Learning Videos on Natural Science Content for Fifth Grade Elementary Schools

Ayu Carpathia Ellyana[1*], I Made Tegeh[2]

[1,2] Program Studi Teknologi Pendidikan, Universitas Pendidikan Ganesha, Singaraja, Indonesia

ARTICLE INFO

Article history:
Received January 08, 2023
Accepted April 30, 2023
Available online May 25, 2023

Kata Kunci:
Video Pembelajaran, Pembelajaran Berbasis Masalah, Pengembangan

Keywords:
Learning Videos, Problem-Based Learning, Deelopment

This is an open access article under the CC BY-SA license.

Copyright © 2023 by Author. Published by Universitas Pendidikan Ganesha.

ABSTRAK

Kurangnya penggunaan teknologi secara maksimal dalam proses pembelajaran, berdampak terhadap hasil belajar siswa yang kurang efektif. Tujuan penelitian yaitu mendeskripsikan rancang bangun media video pembelajaran, validitas dan efektivitas dalam bentuk media video pembelajaran berbasis problem based learning pada muatan IPA Kelas V. Penelitian ini tergolong kedalam jenis penelitian pengembangan yang dilakukan dengan menggunakan model ADDIE. Subjek penelitian ini yakni satu ahli desain pembelajaran, ahli media, ahli isi, tiga orang siswa uji coba perorangan, dan sembilan orang siswa uji coba kelompok kecil. Pengumpulan data dalam penelitian dilakukan menggunakan metode tes dan non tes, dengan instrument penelitian berupa angket/kuesioner dan tes obyektif. Analisis data yang digunakan adalah analisis deskriptif kuantitatif dan analisis statistik inferensial uji-t. Hasil penelitian dari uji ahli teknologi pendidikan sebesar 95,83%, hasil oleh uji ahli desain pembelajaran sebesar 89,58%, uji ahli media sebesar 94,44%, uji ahli isi sebesar 100%, uji coba perorangan sebesar 99,53%, dan uji coba kelompok kecil sebesar 93,67% yang keseluruhan persentasenya berkualifikasi sangat baik. Pada uji efektivitas didapatkan terdapat perbedaan hasil belajar siswa setelah menggunakan video pembelajaran berbasis problem based learning pada muatan IPA. Berdasarkan hasil tersebut maka dapat disimpulkan bahwa video pembelajaran berbasis problem based learning pada muatan IPA efektif digunakan pada siswa kelas V.

ABSTRACT

The lack of optimal use of technology in the learning process impacts student learning outcomes that are less effective. The research aims to describe the design and construction of instructional video media, validity, and effectiveness in problem-based learning video media on Class V science content. This research belongs to the development research conducted using the ADDIE model. The subjects of this study were one instructional design expert, a media expert, a content expert, three individual trial students, and nine small-group trial students. Data collection in the study was carried out using test and non-test methods, with research instruments in the form of questionnaires and objective tests. The data analysis used was quantitative descriptive analysis and t-test inferential statistical analysis. The research results from the educational technology expert test were 95.83%, the results from the learning design expert test were 89.58%, the media expert test was 94.44%, the content expert test was 100%, individual trials were 99.53%, and small group trials of 93.67%, the overall percentage of which has very good qualifications. In the effectiveness test, it was found that there were differences in student learning outcomes after using problem-based learning videos on natural science content. Based on these results, problem-based learning-based learning videos on science content are effective for fifth-grade students.

1. INTRODUCTION

The rapid development of information and communication technology has had a very beneficial impact on people's lives. Information and communication technology has facilitated human activities in various fields of life, such as politics, culture, society, economy, and education. The development of information and communication technology in the current era of globalization inevitably demands the world of education always to develop and adapt to technological developments to improve the quality of education (Melinda et al., 2018; Syafi'i et al., 2020). The success of a learning process is determined by three components, namely through the stages of design, implementation, and evaluation (Jannah & Atmojo, 2022; Prehanto et al., 2021). The development of science and technology can encourage teachers to produce

Corresponding author
*E-mail addresses: ayu.carpathia@undiksha.ac.id (Ayu Carpathia Ellyana)

technology-based learning to improve the quality of education (Mulyani & Haliza, 2021; Widiyasanti & Ayriza, 2018). Teachers are expected to be able to use appropriate models, methods, and media in the learning process in a way that aligns with the objectives of the 2013 Curriculum, namely educating creative, critical, and innovative people. Media as a learning resource is essentially a component of an instructional system which includes messages, people, materials, tools, techniques, and the environment, which can affect student learning outcomes, interactive learning media has proven effective in accommodating the learning process and is also able to improve learning activities to be effective (Andari, 2019; Eskha, 2018; Hasiru et al., 2021). The components of the learning process must be interconnected to create quality learning. Media use in learning can positively impact and benefit the student learning process. Media can enhance learning process activities and make the learning process more interesting (Anggraeni et al., 2021; Harsiwi & Arini, 2020; Tegeh et al., 2019; Yendrita & Syafitri, 2019). In addition, learning media is an indispensable basis that is complementary and an integral part of the success of the learning process (Carolin et al., 2020; Novita et al., 2019).

But in reality, with advances in technology and science, much learning is still done conventionally (Dewantara & Abadi, 2021; Priyantini et al., 2021). It causes students' interest in learning to decrease. A student will be interested in participating in learning, and learning will be more meaningful if the learning takes place in a comfortable atmosphere (Nopiantari & Agung, 2021; Yuanta, 2020). Based on the results of initial observations and interviews at one of the schools, namely SD Negeri 5 Kampung Baru, it was found that the teacher and students experienced problems, one of which was using IT. The teacher only relied on blackboards, books, videos taken from YouTube, and simple power points on learning activities. The teacher has not used supporting media such as animation in the learning videos. It is considered less attractive to students and tends to be boring when learning activities occur. In addition, the method used is limited to lectures, questions, and answers. It is because the learning activities carried out are still centered on the teacher, so the active role of students is classified as lacking, and students cannot fully accept the material presented. Moreover, the learning process, which is 50% online and 50% offline, makes learning less effective than 100% face-to-face at school. This can be seen from the daily learning process through the Whatsapp group, where students only listen to explanations from the teacher without an active role and feedback from students. In other words, learning is still centered on the teacher. Online learning during the Covid19 pandemic, student learning activity decreased quite a bit. Hence, problems found in the field had to be followed up to impact student learning outcomes that could have been more optimal.

The solution to overcoming the existing problems is developing problem-based learning video media. Learning media are tools, means, intermediaries, and connectors to convey a message so that it can stimulate students' thoughts, feelings, actions, and interests, and has functions and characteristics so that the teaching and learning process occurs in students (Biassari et al., 2021; Lukman et al., 2019). The use of appropriate media can provide benefits in the learning process activities. Through the media, teaching materials will be clearer in meaning so that students can better understand them, can provide opportunities for students to provide responses to the material presented and allow students to master learning objectives better (Dewi & Mubarokah, 2019; Nuritha & Tsurayya, 2021; Wardhani, 2022). Learning media is recognized as one of the success factors of learning. With media, students can be motivated and actively involved physically and psychologically, maximize all the senses of students in learning, and make learning more meaningful (Firmansah & Firdaus, 2021; Susanto et al., 2022). The media to be developed is problem-based learning-based learning videos. Video media was chosen because video helps teachers convey concepts about the material and interpret abstract things into concrete. After all, it presents information in text, images, and sound. Video media is any electronic format that stimulates students' thoughts, feelings, and learning interests that display ideas, messages, and information (Marjuki et al., 2021; Rahmawati & Atmojo, 2021). A learning video can encourage student learning because the video contains animated illustrations that attract students' attention. Learning videos can also clarify teaching material so that students easily understand learning (Styowati & Utami, 2022; Wardani & Syofyan, 2018).

Several previous studies have revealed that learning video media based on a contextual approach is valid and feasible to develop because it can improve students' learning outcomes in mathematics (Suantiani & Wiarta, 2022). The results of other studies revealed that learning video media significantly affected social studies learning outcomes for fifth-grade elementary school students (Dewi & Mubarokah, 2019). The results of subsequent research also revealed that contextually based science learning videos could be used by students to help their learning process from home so that they easily understand basic science concepts (Jundu et al., 2020). Based on some of the results of these studies, learning video media is very feasible to develop because it can help the student learning process. In previous studies, no studies specifically discussed problem-based learning or video-based learning in fifth-grade science content. So this research focused on this study to describe the design and construction of instructional video media, validity, and effectiveness in the form of problem-based learning video media in fifth-grade science content.

2. METHOD

This type of research is research and development (Research and Development/R&D). In a broad sense, research and development (Research and Development/R&D) use creative effort and knowledge that is carried out systematically based on new applications to increase scientific and technical knowledge. This method is very relevant for solving educational problems in research and development. This research was conducted at SD Negeri 5 Kampung Baru, located in Kampung Baru, Buleleng District, Buleleng Regency, Bali Province. The subjects in this study were educational technology experts, learning content experts, instructional design experts, learning media experts, individual tests of fifth-grade students in elementary school, and small group tests of fifth-grade students in elementary school. The learning content expert is a teacher who teaches at SD Negeri 5 Kampung Baru. The expert in educational technology, design, and learning media is a lecturer at the Educational Technology Study Program at Ganesha University of Education. The individual test subjects were three fifth-grade students at SD Negeri 5 Kampung Baru consisting of students with high, medium, and low abilities. The subjects for the small group trial were nine fifth-grade students at SD Negeri 5 Kampung Baru consisting of 3 high ability students, three moderate students, and three low-ability students. This research model uses the ADDIE stage, which provides an opportunity to evaluate development activities at each stage. The ADDIE model has five stages: analysis, design, development, implementation, and evaluation.

The method used in this research is the questionnaire method and the test method. This questionnaire/questionnaire was used to collect student response data by analyzing student characteristics, the results of reviews by educational technology experts, content or subject matter experts, instructional media experts, instructional design experts, results from individual trials, and small group trials. At the same time, the test method is a way to conduct an assessment carried out directly or in a systematic research place. The research instrument used questionnaires/questions, which were used to collect review data from trials of educational technology experts, subject content experts, instructional design experts, instructional media experts, small group trials, and individual trials. Furthermore, objective test sheets are used to measure student learning outcomes in collecting data to test the effectiveness of learning outcomes to obtain learning outcomes scores in the pre-test and post-test activities. The research instrument grids can be seen in Table 1, Table 2, Table 3, Table 4, and Table 5.

Table 1. Educational Technology Expert Instruments

No	Aspect	Indicator	Total Item
1	Development Model Used	a. The suitability of the development model used with the characteristics of the product produced b. Appropriate reasons for selecting the development model c. Ease of using the media	3
2	Development Stages	a. Compatibility of the stages of development carried out with the development model used b. The accuracy of the description of the stages of development	2
3	Clarity, Practicality, and Consistency	a. Clarity of development stages based on the development model used b. The level of practicality of the development process implemented c. The sequence of development steps	3
4	Formative and Summative Evaluation	a. The accuracy of the evaluation design according to the model used b. Clarity of evaluation instruments developed. c. The validity and reliability of the evaluation instrument used d. The accuracy of the experimental subjects involved	4
		Total	**12**

Table 2. Instructional Design Expert Instruments

No	Aspect	Indicator	Total Item
1	Material	a. The suitability of the theme with the learning objectives b. Appropriateness of the theme with the material	4

		c. Clarity of description of the material presented	
		d. The suitability of the material with the learning objectives	
2	Media Visualization	a. Matching colors presented	
		b. The accuracy of writing spelling on the material	
		c. The suitability of the type and size of the letters on the video	5
		d. Audio clarity	
		e. Animation suitability	
3	Evaluation	a. Relevance of questions to the material	
		b. Questions are easy to understand	3
		c. Can provide an understanding of meaningful learning messages	
Total			**12**

Table 3. Learning Media Expert Instruments

No	Aspect	Indicator	Total Item
1	Media Visualization	a. Text readability in learning videos	
		b. Text size in learning videos	
		c. Types/types of letters used in learning videos with student characteristics	6
		d. Match the color of the letters with the background used	
		e. The clarity and quality of the images, graphics, symbols, and icons used	
		f. Video quality used	
2	Use of Narration, Music, and Sound Effects	a. Use of music and sound effects	
		b. The quality of each audio and sound effect used	3
		c. The tutor's voice is in sync with the text and graphics used	
Total			**9**

Table 4. Instruments for Learning Content Experts

No	Aspect	Indicator	Total Item
1	Material	a. Material suitability with learning indicators	
		b. Material suitability with learning objectives	
		c. The suitability of the material with study instructions	
		d. The content of the material has a correct and precise concept.	6
		e. The content of the material is by competency standards.	
		f. The content of the material is by the basic competencies.	
2	Language	a. Clarity of language used	1
3	Clarity of Messages/Materials	a. Ease of understanding the material being taught	
		b. Clarity of examples of matter	2
4	Evaluation	a. The formulation of evaluation questions is by the learning objectives	1
Total			**10**

Table 5. Individual Trial Instruments and Small Group Trials

No	Aspect	Indicator	Total Item
1	Materi	a. The accuracy of the language used	
		b. Compatibility of examples with material	
		c. The use of learning videos can motivate learning.	5
		d. Videos make the learning process easy.	
		e. Ease of understanding the material	
2	Animasi	a. Animation quality	
		b. Animation fun	2

No	Aspect	Indicator	Total Item
3	Gambar	a. Image attractiveness b. Image quality	2
4	Audio	a. Sound/sound quality b. Back sound (background music)	2
5	Media	a. The attractiveness of the video view b. Color attractiveness c. Text clarity (readability level)	3
6	Evaluasi	a. The questions presented are by the material b. Clarity of instructions for working on questions with tests	2
7	Aksebilitas	a. Ease of using media b. Clarity of instructions for use	2
		Total	**18**

Two data analyses were used in this development research: quantitative descriptive analysis and t-test inferential statistical analysis. The quantitative descriptive analysis method is a way of processing data that is carried out by systematically compiling in the form of figures and or percentages regarding an object under study so that general conclusions are obtained. In this study, the data analysis technique used for the first research objective was designed to process data from the results of educational technology expert tests by looking at the responses, suggestions, and criticisms of the questionnaire results. While the second research objective is product validity using quantitative descriptive analysis techniques and criticism of the questionnaire results. Furthermore, the t-test inferential statistical analysis method is a way of processing data carried out by applying inferential statistical formulas to test a research hypothesis proposed by the researcher, and conclusions are drawn based on the results of testing the hypothesis. In this study, the data analysis techniques used for the third research objective were product effectiveness, namely to process data from student objective test results (pre-test and post-test) by converting them into scores/grades.

3. RESULT AND DISCUSSION

Result

The results of this development research discuss three main points: the design and construction of instructional video media, the validity of instructional video media, and the effectiveness of instructional video media. The media development carried out in this study uses the ADDIE development model, which includes analysis stages, design stages, development stages, implementation stages, and evaluation stages. In the design of the learning video, the five stages of the ADDIE development model are used as follows. The analysis phase is carried out through an analysis of student characteristics and problems at school, curriculum analysis, and analysis of facilities or the environment at school. Student characteristic analysis activities are carried out to determine student character in the learning process. The results of interviews with the fifth-grade homeroom teacher showed that students were classified as active when learning using audio-visual media. The questionnaire results distributed to students via the Google form showed that students preferred learning with learning videos to using worksheets. Curriculum analysis activities are carried out to determine the competencies used in the learning process and the learning competencies used refer to the 2013 Curriculum. Moreover, the analysis of school facilities or environments shows that schools already have sufficient learning facilities that accommodate learning convenience for students. In more detail, the results of the curriculum analysis can be seen in Table 6.

Table 6. Results of curriculum analysis

No	Basic competencies		Indicator	
1	3.5	Analyze the relationship between ecosystem components and food webs in the surrounding environment	3.5.1	Understand the abiotic, biotic ecosystems that exist in the surrounding environment correctly.
	4.5	Create work on the concept of food webs in an ecosystem.	3.4.1	Properly render ecosystem component nonfiction text.
2	3.5	Analyze the relationship between ecosystem components and food webs in the surrounding environment.	3.5.1	Classify animals based on the type of food correctly.

No	Basic competencies		Indicator	
	4.5	Create work on the concept of food webs in an ecosystem.	4.5.1	Presenting the results of reports on the classification of animals based on the type of food correctly.
3	3.5	Analyze the relationship between ecosystem components and food webs in the surrounding environment.	3.5.1	Make food webs in an ecosystem correctly.
	4.5	Create work on the concept of food webs in an ecosystem.	4.5.1	Presenting the results of reports on ecosystem nets appropriately.

In the design stage activities carried out at this design stage include making flowcharts and storyboards that are used as guidelines for making products at the development stage. Then at this stage, the selection of software used to develop the product is also carried out. The software used to develop learning video media products are the Powtoon, Filmora 9, Canva, and Articulate Storyline 3 applications. In the development stage, this activity combines media such as subject matter, animation, text, narration, audio, and so on, with the help of software development that is used to develop learning videos into complete media. According to the material, animation, text, narration, and audio unite one another in the development process. The results of media development are presented in Figure 1.

Figure 1. Results of Media Development

In the implementation phase, the activities carried out are validation tests of learning video media based on aspects of learning content validation tests by learning content experts, learning video validation tests based on design aspects by learning design experts, learning video media validation tests based on aspects by learning media experts, trials individual and small group trials, which aim to determine the feasibility and quality of this learning video media that was developed. The results of the validity of the learning videos are presented in more detail in Table 7.

Table 7. Product Validation Test Results

No	Subject Validity Test	Validity Results	Description
1	Learning Content Expert Test	100%	Very good
2	Learning Design Expert Test	89,58%	Good
3	Learning Media Expert Test	94,44%	Very good
4	Individual Trial	99,53%	Very good
5	Small Group Trial	93,67%	Very good

Based on the analysis of the assessment data provided by the learning content expert, the value obtained is 100%, with very good qualifications. Based on the analysis of the assessment data provided by the learning design expert, the value obtained is 89.58%, with good qualifications. Based on the analysis of the assessment data provided by learning media experts, the value obtained was 94.44%, with very good qualifications. Based on the individual trial assessment data analysis, the value obtained was 99.53%, with very good qualifications. Based on the results of the trial analysis, the small group obtained 93.67% with very good qualifications. So, problem-based learning video media is suitable for use in learning. In the effectiveness test, the pre-test average was 48.87, and the post-test was 85.62, then the results obtained were tcount (20.507) > ttable (2.000) so that H0 was rejected and H1 was accepted. Based on these results, it can be concluded that problem-based learning and video-based learning on science content are effective for fifth-grade students.

Discussion

The study results show that problem-based learning video media is appropriate for learning. It is caused by several factors, namely, as follows. First, the instructional video media is appropriate based on the needs analysis results with the model developed, namely the ADDIE model, in a systematic and theoretical manner. The process of developing problem-based learning video media refers to the ADDIE development model, so it has implications for the feasibility of learning video media products produced in the development process, besides that the ADDIE development model is used to produce a product that aims to create an effective learning environment for students and teachers (Cahyadi, 2019; Rustandi & Rismayanti, 2021; Sugihartini & Yudiana, 2018). Furthermore, using instructional video media can improve learning outcomes and student learning motivation. Learning videos can help students learn and make it easier to understand the material well (Widyastuti & Susiana, 2019).

Second, using learning video media can facilitate understanding and strengthen students' memories by understanding the material in learning videos associated with activities that exist in students' daily lives. Learning media is anything that can be used to transmit messages from the sender to the recipient so that it can stimulate students' thoughts, feelings, concerns, and interests. Audio (sound) and animation in one unit provide a special attraction for students to learn through the presentation of audio-visual material (Firmansah & Firdaus, 2021; Susanto et al., 2022). In the problem-based learning video media, Powtoon discusses ecosystems. Ecosystem learning materials respond to a natural problem because ecosystems are formed from a community and its biotic and abiotic environment. Students are expected to be able to help solve problems that exist in nature with a material contained in learning, ecosystem material is more meaningful if the learning process is carried out directly, and this can be done through a problem-based learning approach that invites students to learn through direct experience (Marjuki et al., 2021; Rahmawati & Atmojo, 2021; Styowati & Utami, 2022; Wardani & Syofyan, 2018).

Problem-based learning is a learning approach that exposes students to problems in the learning process. It implements problem-based learning strategies to significantly improve teaching and learning, especially developing students' formal thinking skills (Andriyani & Suniasih, 2021; Devi & Bayu, 2020; Sari & Ganing, 2021). The results obtained in this study align with previous research results, which also revealed that video learning media based on a contextual approach is in the valid category and is very feasible to develop because it can improve students' mathematics learning outcomes (Suantiani & Wiarta, 2022). The results of other studies revealed that learning video media significantly affected social studies learning outcomes for fifth-grade elementary school students (Dewi & Mubarokah, 2019). The results of subsequent research also revealed that contextually based science learning videos could be used by students to help their learning process from home so that they easily understand basic science concepts (Jundu et al., 2020). Based on some of the results of these studies, learning video media is very feasible to develop because it can help the student learning process.

4. CONCLUSION

The development of Problem-Based Learning-based Learning Videos is classified as well-qualified and effectively used in class. Learning videos in science subjects based on problem-based learning for fifth-grade students can be applied as learning media to improve student learning outcomes.

5. REFERENCES

Andari, I. (2019). Pentingnya Media Pembelajaran Berbasis Video Untuk Siswa. *Jurnal Pendidikan*, *2*(1), 263–275. https://jurnal.untirta.ac.id/index.php/psnp/article/download/5765/4138.

Andriyani, N. L., & Suniasih, N. W. (2021). Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects in 6th-Grade. *Journal of Education Technology*, *5*(1), 37. https://doi.org/10.23887/jet.v5i1.32314.

Anggraeni, S. W., Alpian, Y., Prihamdani, D., & Winarsih, E. (2021). Pengembangan Multimedia Pembelajaran Interaktif Berbasis Video untuk Meningkatkan Minat Belajar Siswa Sekolah Dasar. *Jurnal Basicedu*, *5*(6), 5313–5327. https://doi.org/10.31004/basicedu.v5i6.1636.

Biassari, I., Putri, K. E., & Kholifah, S. (2021). Peningkatan Hasil Belajar Matematika pada Materi Kecepatan Menggunakan Media Video Pembelajaran Interaktif di Sekolah Dasar. *Jurnal Basicedu*, *5*(4), 2322–2329. https://doi.org/10.31004/basicedu.v5i4.1139.

Cahyadi, R. A. H. (2019). Pengembangan Bahan Ajar Berbasis Addie Model. *Halaqa: Islamic Education Journal*, *3*(1), 35–42. https://doi.org/10.21070/halaqa.v3i1.2124.

Carolin, L. L., Astra, I. K. B., & Suwiwa, I. G. (2020). Pengembangan Media Video Pembelajaran Dengan Model Addie Pada Materi Teknik Dasar Tendangan Pencak Silat Kelas VII SMP Negeri 4 Sukasada Tahun

Pelajaran 2019/2020. *Jurnal Kejaora (Kesehatan Jasmani Dan Olah Raga)*, *5*(2), 12–18. https://doi.org/10.36526/kejaora.v5i2.934.

Devi, P. S., & Bayu, G. W. (2020). Berpikir Kritis dan Hasil Belajar IPA Melalui Pembelajaran Problem Based Learning Berbantuan Media Visual. *Mimbar PGSD Undiksha*, *8*(2), 238–252. https://doi.org/10.23887/jjpgsd.v8i2.26525.

Dewantara, P. A. K., & Abadi, I. B. G. (2021). Pengembangan Video Pembelajaran Berbasis Problem Solving Masalah Sosial Yang Kontekstual Materi IPS Siswa Kelas IV. *Jurnal Edutech Undiksha*, *9*(1). https://doi.org/10.23887/jeu.v9i1.32820.

Dewi, A. L. S., & Mubarokah, L. (2019). Pengaruh Penggunaan Media Video Pembelajaran terhadap Hasil Belajar IPS Materi Keragaman Kenampakan Alam dan Buatan Indonesia pada Siswa Kelas V Sekolah Dasar. *Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, *3*(2). https://doi.org/10.30651/else.v3i2.3223.

Eskha, A. (2018). Peran Perpustakaan Sebagai Sumber Belajar. *Jurnal Imam Bonjol : Kajian Ilmu Informasi Dan Perpustakaan*, *2*(1), 12–18. https://doi.org/10.15548/jib.v2i1.25.

Firmansah, D., & Firdaus, D. F. (2021). Pengembangan Media Pembelajaran Video Interaktif Berbasis Aplikasi Sparkol Videoscribe pada Tema 3 Kelas III. *Terampil: Jurnal Pendidikan Dan Pembelajaran Dasar*, *7*(2), 145–158. https://doi.org/10.24042/terampil.v7i2.7386.

Harsiwi, U. B., & Arini, L. D. D. (2020). Pengaruh Pembelajaran Menggunakan Media Pembelajaran Interaktif terhadap Hasil Belajar siswa di Sekolah Dasar. *Jurnal Basicedu*, *4*(4), 1104–1113. https://doi.org/10.31004/basicedu.v4i4.505.

Hasiru, D., Badu, S. Q., & Uno, H. B. (2021). Media-Media Pembelajaran Efektif dalam Membantu Pembelajaran Matematika Jarak Jauh. *Jambura Journal of Mathematics Education*, *2*(2), 59–69. https://doi.org/10.34312/jmathedu.v2i2.10587.

Jannah, D. R. N., & Atmojo, I. R. W. (2022). Media Digital dalam Memberdayakan Kemampuan Berpikir Kritis Abad 21 pada Pembelajaran IPA di Sekolah Dasar. *Jurnal Basicedu*, *6*(1), 1064–1074. https://doi.org/10.31004/basicedu.v6i1.2124.

Jundu, R., Nendi, F., Kurnila, V. S., Mulu, H., Ningsi, G. P., & Ali, F. A. (2020). Pengembangan Video Pembelajaran Ipa Berbasis Kontekstual Di Manggarai Untuk Belajar Siswa Pada Masa Pandemic Covid-19. *Jurnal Pendidikan IPA*, *10*(2), 63–73. https://doi.org/10.24929/lensa.v10i2.112.

Lukman, A., Hayati, D. K., & Hakim, N. (2019). Pengembangan Video Animasi Berbasis Kearifan Lokal pada Pembelajaran IPA Kelas V di Sekolah Dasar. *Elementary: Jurnal Ilmiah Pendidikan Dasar*, *5*(2), 153. https://doi.org/10.32332/elementary.v5i2.1750.

Marjuki, B. A., Zuhairi, Z., & Wildaniati, Y. (2021). Pengaruh Penggunaan Media Video Interaktif Terhadap Hasil Belajar Matematika Siswa Mts Ma'arif 2 Nurul Huda Lampung Timur. *Linear: Journal of Mathematics Education*, *1*(1), 71. https://doi.org/10.32332/linear.v2i2.3819.

Melinda, V. A., Degeng, N. S., & Kuswandi, D. (2018). Pengembangan Media Video Pembelajaran IPS Berbasis Virtual Field Trip (VFT) pada Kelas V SDNU Kratonkencong. *Jinotep (Jurnal Inovasi Dan Teknologi Pembelajaran)*, *3*(2), 158–164. https://journal2.um.ac.id/index.php/jinotep/article/view/2383.

Mulyani, & Haliza. (2021). Analisis Perkembangan Ilmu Pengetahuan dan Teknologi (IPTEK) dalam Pendidikan. *Jurnal Pendidikan Dan Konseling (JPDK)*, *3*(1). https://doi.org/10.31004/jpdk.v3i1.83.

Nopiantari, I. G. A. A., & Agung, A. A. G. (2021). Meningkatkan Hasil Belajar Melalui Video Pembelajaran pada Materi Keberagaman Budaya Bangsaku Bermuatan Masalah Sosial. *Jurnal Edutech Undiksha*, *8*(1), 75–84. https://doi.org/10.23887/jeu.v9i1.32058.

Novita, L., Sukmanasa, E., & Pratama, M. Y. (2019). Penggunaan Media Pembelajaran Video terhadap Hasil Belajar Siswa SD. *Indonesian Journal of Primary Education*, *3*(2), 64–72. https://doi.org/10.17509/ijpe.v3i2.22103.

Nuritha, C., & Tsurayya, A. (2021). Pengembangan Video Pembelajaran Berbantuan Geogebra untuk Meningkatkan Kemandirian Belajar Siswa. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *5*(1), 48–64. https://doi.org/10.31004/cendekia.v5i1.430.

Prehanto, A., Aprily, N. M., Merliana, A., & Nurhazanah, M. (2021). Video Pembelajaran Interaktif-Animatif sebagai Media Pembelajaran IPS SD Kelas Tinggi di Masa Pandemi Covid 19. *Indonesian Journal of Primary Education*, *5*(1), 32–38. https://ejournal.upi.edu/index.php/IJPE/article/view/33696/15360.

Priyantini, N. L., Suranata, K., & Jayanta, I. N. L. (2021). Video Animasi dalam Pembelajaran IPA Materi Perubahan Suhu dan Wujud Benda. *Jurnal Pedagogi Dan Pembelajaran*, *4*(2), 281–289. https://doi.org/10.23887/jp2.v4i2.37248.

Rahmawati, F., & Atmojo, I. R. W. (2021). Analisis Media Digital Video Pembelajaran Abad 21 Menggunakan Aplikasi Canva Pada Pembelajaran IPA. *Jurnal Basicedu*, *5*(6), 6271–6279. https://doi.org/10.31004/basicedu.v5i6.1717.

Rustandi, A., & Rismayanti. (2021). Penerapan Model ADDIE dalam Pengembangan Media Pembelajaran di SMPN 22 Kota Samarinda. *Jurnal Fasilkom*, *11*(2), 57–60. https://doi.org/10.37859/jf.v11i2.2546.

Sari, S. M., & Ganing, N. N. (2021). Pengembangan Media Pembelajaran Powtoon Berbasis Problem Based Learning pada Materi Ekosistem Muatan IPA Kelas V Sekolah Dasar. *Jurnal Ilmiah Pendidikan Profesi Guru*, *4*(2), 288–298. https://doi.org/10.23887/jippg.v4i2.32848.

Styowati, E., & Utami, F. (2022). Pengembangan Video Pembelajaran Sains Berbasis Problem Based Learning. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *6*(4), 2472–2482. https://doi.org/10.31004/obsesi.v6i4.1970.

Suantiani, N. M. A., & Wiarta, I. W. (2022). Video Pembelajaran Berbasis Pendekatan Kontekstual Pada Muatan Matematika. *Jurnal Penelitian Dan Pengembangan Pendidikan*, *6*(1), 64–71. https://doi.org/10.23887/jppp.v6i1.45455.

Sugihartini, N., & Yudiana, K. (2018). ADDIE Sebagai Model Pengembangan Media Instruksional Edukatif (MIE) Mata Kuliah Kurikulum Dan Pengajaran. *Jurnal Pendidikan Teknologi Dan Kejuruan*, *15*(2). https://doi.org/10.23887/jptk-undiksha.v15i2.14892.

Susanto, S., Jaenuddin, R., & Basir, M. D. (2022). Pengembangan Video Pembelajaran Ilmu Pengetahuan Sosial Berbasis Student Centered Learning. *Jurnal Profit: Kajian Pendidikan Ekonomi Dan Ilmu Ekonomi*, *9*(1), 38–44. https://doi.org/10.36706/jp.v9i1.17177.

Syafi'i, I., Sa'diyah, C., Wakhidah, E. W., & Umah, F. M. (2020). Penerapan Video Pembelajaran Daring Anak Usia Dini Pada Masa Pandemi Covid-19. *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini*, *3*(2), 140–160. https://doi.org/10.24042/ajipaud.v3i2.7315.

Tegeh, I. M., Simamora, A. H., & Dwipayana, K. (2019). Pengembangan Media Video Pembelajaran Dengan Model Pengembangan 4D Pada Mata Pelajaran Agama Hindu. *Mimbar Ilmu*, *24*(2), 158. https://doi.org/10.23887/mi.v24i2.21262.

Wardani, R. K., & Syofyan, H. (2018). Pengembangan Video Interaktif pada Pembelajaran IPA Tematik Integratif Materi Peredaran Darah Manusia. *Jurnal Ilmiah Sekolah Dasar*, *2*(4), 371. https://doi.org/10.23887/jisd.v2i4.16154.

Wardhani, I. S. K. (2022). Pengembangan Video Pembelajaran Berbasis Numerasi dengan Kearifan Lokal Untuk Siswa SD. *Jurnal Educatio FKIP UNMA*, *8*(3), 908–914. https://doi.org/10.31949/educatio.v8i3.2748.

Widiyasanti, M., & Ayriza, Y. (2018). Pengembangan Media Video Animasi Untuk Meningkatkan Motivasi Belajar Dan Karakter Tanggung Jawab Siswa Kelas V. *Jurnal Pendidikan Karakter*, *9*(1). https://doi.org/10.21831/jpk.v8i1.21489.

Widyastuti, & Susiana. (2019). Using the ADDIE model to develop learning material for actuarial mathematics. *Journal of Physics: Conference Series*, *1*(1), 012052. https://doi.org/10.1088/1742-6596/1188/1/012052.

Yendrita, Y., & Syafitri, Y. (2019). Pengaruh Penggunaan Media Video Pembelajaran terhadap Hasil Belajar Biologi. *Jurnal Pendidikan Biologi Dan Sains*, *2*(1), 26–32. https://doi.org/10.31539/bioedusains.v2i1.620.

Yuanta, F. (2020). Pengembangan Media Video Pembelajaran Ilmu Pengetahuan Sosial pada Siswa Sekolah Dasar. *Trapsila: Jurnal Pendidikan Dasar*, *1*(02), 91. https://doi.org/10.30742/tpd.v1i02.816.