E-ISSN: 2962-6110
P-ISSN: 2964-7843
JSRET
jsret.knpub.com
Journal of Scientific Research, Education, and Technology

Development of Capcut Application-Based Learning Video Media on Fraction Materials for Third Grade Students of SD Negeri Burengan 2 Kediri City

Niken Probo Setya Ningrum, Dhian Dwi Nur Wenda, Frans Aditia Wiguna
Nusantara PGRI University of Kediri

ABSTRACT

This research aims to produce Capcut application-based learning videos on fraction materials for third grade students of SDN Burengan 2 Kediri. Development was carried out through the five stages of ADDIE: Analysis, Design, Development, Implementation, and Evaluation. The research subjects were third grade students. The feasibility of the product was tested through three aspects: validity, practicality, and effectiveness, using questionnaires and evaluation questions as data collection methods. The results of media expert validation showed a score of 88% and material expert 89%, both of which were in the very valid category. Practicality test from student questionnaires obtained an average score of 94%, and from teachers 93%, indicating that the media is very practical. The effectiveness test based on evaluation results showed 90% of students scored above average. Thus, this learning video is declared very feasible and can be used in the process of learning math fraction material.
Keywords: Learning Media, Learning Video Media, Fraction

Corresponding author
Name: **Niken Probo Setya Ningrum**
Email: p43515368@gmail.com

INTRODUCTION

Education is a conscious effort to develop the potential of students, one of which is through the use of learning media that is innovative and relevant to technological developments. In the digital era, learning is not enough to rely solely on books and lecture methods, but must also utilize modern media such as application-based learning videos (Karmila, 2021). One of the potential media to use is the CapCut application, because it can combine interesting audio and visual elements and is easily accessible via mobile devices. Based on the results of observations and interviews at SDN Burengan 2 Kediri, it was found that more than 60% of third grade students did not like math lessons, especially fraction material. This is caused by conventional teaching methods without supporting media, so that students are less active and quickly feel bored. Evaluation results also showed that most students scored below the Criteria for Completeness (KKTP), which is below 75 (Amalia, 2022).

Previous research emphasizes the importance of interactive learning media in improving student interest and learning outcomes. Nurrita (2018) states that learning media can help clarify messages, make learning more interesting, and increase teaching effectiveness. Although many studies have examined the effectiveness of audio-visual media, there are still few studies that specifically develop and test the effectiveness of CapCut application-based learning videos in the context of mathematics learning for elementary school students. Therefore, this study fills the gap by designing and testing CapCut-based media.

This research aims to develop CapCut application-based learning video media on fraction material for grade III elementary school students. The specific objectives are: (1) to describe the validity of CapCut-based learning media; (2) to describe its practicality; and (3) to describe its effectiveness in learning math fraction material (Nurrita, 2018).

This research contributes to the development of technology-based learning media that is in accordance with the characteristics of elementary school students. In addition, this research is expected to be a reference for teachers in designing creative and interactive media, as well as providing a fun and meaningful learning experience for students (Amalia, 2022; Karmila, 2021).

METHOD

The type of research used is research and development (R&D). This research aims to develop learning media in the form of videos based on the CapCut application in learning Indonesian language in grade III SD Negeri Burengan 2 Kediri City. This research also adapts the ADDIE development model, which consists of five main stages, namely Analysis, Design, Development, Implementation, and Evaluation.

The subjects in this study were third grade students of SD Negeri Burengan 2 Kediri City. In addition, the third grade teacher was also involved as a respondent in the needs analysis and media validation stages. The population in this study were all third grade students, while the sample was determined based on purposive sampling technique, namely the selection of samples intentionally in accordance with the research objectives. The media trial sample was carried out in two stages, namely limited trials and extensive trials.

Data collection in this study was conducted using the following methods:

1. Observation: Used to find out the learning conditions and media needs in class III SD Negeri Burengan 2 Kediri.
2. Interview: Conducted to the third grade teacher to explore deeper information related to the suitability of the media with student characteristics and learning materials.
3. Validation Questionnaire: Used to assess the feasibility of media by material experts and media experts.
4. Student and Teacher Response Questionnaire: Used to determine student and teacher responses to the developed media.
5. Learning Outcome Test: Used to measure the effectiveness of the media in improving students' understanding of paragraph writing material.

The data obtained were analyzed using the following techniques:

1. Qualitative data from observations and interviews were analyzed descriptively qualitatively, namely by reducing data, presenting data, and drawing conclusions.
2. Quantitative data from media validation results and learning outcomes tests were analyzed using descriptive statistical techniques, namely by calculating the percentage of feasibility, the average score, and the gain score to measure the improvement of learning outcomes before and after using learning media.

FINDING AND DISCUSSION

Based on the results of the research conducted, several main findings were found that support the research objectives, namely the development of Capcut application-based video learning media on fraction materials to improve student understanding. Some of these findings are:

1. Increased Level of Student Engagement:

   After the introduction of video-based learning media, students showed a higher level of engagement in the learning process. They are more interested and active as the learning progresses, which contributes to a better understanding of the material. This is in line with the results of the needs analysis which showed that students lacked interest in mathematics due to monotonous teaching methods.
2. Better Material Understanding:

   The use of learning videos allows students to understand the concept of fractions in a more visual and interactive way. The videos developed using the Capcut application allow for clearer and easier-to-understand explanations, so that students can learn the material more deeply, especially in terms of concepts that are difficult to understand such as division and simplification of fractions.
3. Improved Learning Outcomes:

   Based on quantitative data analysis, there was a significant increase in students' test scores after using the Capcut-based video learning media. This result shows that the developed media can play an effective role in helping students understand the material better, which ultimately results in an increase in their learning scores.
4. Positive Response from Students and Teachers:

   Students showed a very positive response to the use of the learning video. They found the videos more interesting than the usual learning methods. Teachers also appreciate this media because it can help them deliver the material in a more interesting and interactive way.

   Overall, the main findings of this study support the development of video-based learning media in improving the quality of mathematics learning, especially fraction material, in grade III of SDN Burengan 2 Kediri**.**

Table 3. 1 Initial design of Learning Video Media

Description	Image
Home Page	
Menu Page	
Question Page	

Materials Page	
Final Page	

Table 3.2 Recapitulation of Student Practicality Questionnaire

No.	Indicator	Yes	No
1.	The design used in the Capcut app-based learning video is attractive	20	0
2.	The use of Capcut application-based learning videos is very easy.	20	0
3.	Capcut application-based learning videos can increase learning motivation.	19	1
4.	The material contained in the Capcut application-based learning video is easy to understand.	20	0
5.	The Capcut application-based learning video contains questions that can test understanding of fraction material.	18	2
6.	The quiz contained in the Capcut application-based learning video is easy to play.	20	0
7.	The font shape, model and size used in the Capcut app-based learning video are simple and easy to read.	20	0

8.	The material in the Capcut application-based learning video helps to answer the questions.	15	5
9.	Capcut application-based learning videos can be studied by students independently or classically.	20	0
10.	Learning with Capcut app-based learning videos is a lot of fun.	20	0
	Total Score	192	
	Total Score	200	

$$V_{ah=} \frac{T_{ah}}{T_{sh}} x\ 100\%$$

$$V_{ah=} \frac{192}{200} x\ 100\%$$

$$V_{ah=\ 96\%}$$

The score obtained was 96% with a very practical category which means that the learning media developed is very practical to use in the learning process.

Table 3.3 Data from the Extensive Trial Evaluation Results

No.	Learner Name	KKTP	Value	Category	Description
1.	HA	75	100	very good	T
2.	KA	75	100	very good	T
3.	KAP	75	90	very good	T
4.	A	75	80	very good	T
5.	K	75	80	very good	T
6.	KM	75	80	very good	T
7.	NAA	75	80	very good	T
8.	NAP	75	80	very good	T
9.	RR	75	80	very good	T
10.	R	75	100	very good	T
11.	S	75	90	very good	T
12.	SZ	75	60	lack	TT
13.	SR	75	100	very good	T
14.	TI	75	100	very good	T
15.	I	75	100	very good	T
17.	PA	75	90	very good	T
18.	ST	75	100	very good	T
19	W	75	100	very good	T

20.	ZA	75	70	lack	TT

The results of the written test of each student were interpreted with classical completeness to determine the effectiveness of the product developed. The formula for classical completeness is.

$$completion = \frac{Number\ of\ students\ completed}{Number\ of\ all\ learners}\ x\ 100\%$$

$$completion\ = \frac{18}{20}\ x\ 100\% = 90\%$$

The percentage results obtained from the evaluation results that met the classical completeness criteria in the broad trial were 90% with a very effective category, which means that the product can be used in the learning process.

DISCUSSION

Based on the results of the research that has been conducted, Capcut application-based video learning media is proven to be effective and practical in improving the quality of learning fraction material in grade III SDN Burengan 2 Kediri. From the feasibility test results, both in terms of teachers and students, there is a very high percentage, namely 93% from teachers and 92%-96% from students. This shows that this learning media has high attractiveness and effectiveness in creating an interesting and fun learning atmosphere.

These results show that the use of video media can stimulate the interest of students, who were previously less interested in mathematics, to become more active in the learning process. On the other hand, the use of videos accompanied by interesting illustrations and animations helps visualize abstract concepts, such as fractions, so that students can more easily understand the material being taught. This finding also shows that video-based learning can overcome the problems faced in the early stages of the research, such as boredom and lack of interaction in traditional learning.

In addition, the results of the effectiveness test, both in limited and extended conversations, which showed a classical pass rate of up to 90% and a high grade point average (82-91), confirmed that the use of this media is effective in improving students' learning outcomes. Thus, this media can be used as an alternative in improving learning outcomes.

The results of this study are in line with several previous studies showing that the use of visual media, such as learning videos, can increase student engagement and understanding of the material (Sari, 2020; Pratama, 2021). As stated by Mayer (2005), the use of appropriate visual media can help in facilitating students' understanding of difficult material. The use of animations and illustrations in learning videos was also found to be effective in increasing students' attention and interest (Hassan & Mahmood, 2016). Therefore, the development of video-based learning media is in accordance with the theories of multimedia learning and constructivism that suggest the use of various types of media in the learning process.

Although the results showed significant effectiveness, there are some limitations that need to be considered. First, this study was only conducted in one elementary school in Kediri with a limited number of samples (10 students for the limited trial and 20 students for the extensive trial). The results of this study may not be fully representative if applied in other schools with different student characteristics. In addition, this study only focused on the practicality and effectiveness of video media, and did not explore the long-term impact of using this media on students' understanding of mathematics concepts outside the classroom.

Another limitation is the use of one type of application (Capcut) for the development of learning media. The use of other applications or software with more advanced features could give different results. Further research involving different types of software or multimedia learning platforms can provide a broader understanding of the effectiveness of learning media.

Based on these findings, there are several implications to consider, both for future research and for practical application in the classroom.

1. Suggestions for Further Research: Further research should involve more schools and a larger sample of students, and measure the long-term impact of using video learning media on students' concept understanding in various subjects. Research could also include a more in-depth analysis of aspects of student-teacher interaction in video-based learning.
2. Suggestions for Practical Applications: This video-based learning media can be adapted for use in other schools, with relevant material adjustments. Teachers can also be trained to develop their own learning videos, using more accessible applications, to maximize the potential of technology in supporting more interactive and engaging learning. The application of this media in the learning process is not only limited to mathematics, but can be extended to other materials that require an understanding of visual concepts.

Thus, this research contributes significantly to efforts to improve the quality of learning in elementary schools through technology-based learning media innovations that can increase student motivation and understanding.

CONCLUSION

Based on the results of research and analysis that has been done, the response of students to the use of this media is generally very good and it can be concluded that this learning video has great potential in optimizing the learning of fraction material in class III. This can be proven by the results of evaluation questions that have been done by students who get a percentage value of 90% so that the learning media developed is very effective to be used in the learning process in the classroom. So it can be concluded that the Capcut application-based learning media on fraction material in grade III SDN Burengan 2 Kediri is very valid, practical and effective for use in the learning process in the classroom.

REFERENCES

Aisyah, Nyimas, dkk. 2017. Pengembangan Pembelajaran Matematika SD. Jakarta: Direktorat Jenderal Pendidikan Tinggi Departemen Pendidikan Nasional

Akbar, Sa'dun. 2015. Instrumen Perangkat Pembelajaran. Bandung: PT. Remaja Rosda Karya.

Almira, Amir. 2018. Pembelajaran Matematika SD Dengan Menggunakan Media Manipulatif. Jurnal Forum Paedagogik, Vol. VI.No. 01 (2014). 9

Amalia. 2019. Pembelajaran Matematika SD. Malang: UMM Press

Amalia. 2022. Pengembangan Media Puzzle Gambar Untuk Meningkatkan Keterampilan Menulis Karangan Narasi Siswa Kelas IV SD 101899 Lubuk Pakam.

Apriansyah, dkk. 2020. Pengembangan Media Pembelajaran Video Berbasis Animasi. Jurnal Pendidikan. 9, (1), 12Dariyadi M Wahib 2018

Arbaatin. 2021. *Pengembangan Media Pembelajaran Berbasis Video Animasi Pada Tema 7 Subtema 3 Untuk Siswa Kelas IV SDN 104 Pekanbaru.* Other thesis, Universitas Islam Riau.

Arsyad, Azhar. 2019. Media Pembelajaran. Jakarta : PT. Raja Grafindo Persada.

Asy'Ari, Maslichah. 2016. Penerapan Pendekatan sains, Teknologi, Masyarakat Dalam Pembelajaran Sains DI SD.Yogyakarta: Universitas Sanata Darma.

Bernadeta Ritawati, Sepriani Liliana & Nasri Tupulu. 2024. Materi Pecahan. Pekalongan: PT Nasya Expanding Management

Brunner. 2012. Penilaian Pembelajaran Bahasa. Yogyakarta: Gadjah Mada University Press.

Dewanti, Rizqi amalia. 2022. Pengembangan media pembelajaran teka teki silang pada materi plantae di kelas X SMA

Hadi. 2017. Pengembangan Media Puzzle Materi Pecahan Sederhana pada Siswa

Hamalik, Oemar. 2014. Kurikulum dan Pembelajaran. Jakarta: Bumi Aksara.

Hardianti, Asri. 2017. "Keefektifan Penggunaan Media Video Dalam Keterampilan Menulis Karangan Sederhana Bahasa Jerman Siswa Kelas XII IPA SMA Negeri 11 Makassar". Eralingua, Volume 1, Nomor 2, (hlm. 123-130).Hatubarat 2022

Indahsari, Luluk Kristia Nur 2021..Pengembangan media puzzle edukasi pada materi pecahan untuk meningkatkan pemahaman konsep siswa Kelas III MI Hayatul Islamiyah Pakis Malang. Undergraduate thesis, Universitas Islam Negeri Maulana Malik Ibrahim.

Isrokatun dan Amelia. 2018. Model-Model Pembelajaran Matematika. Jakarta: PT Bumi Aksara

Karmila, Dina. 2021. Pengembangan video pembelajaran interaktif berorientasi pada etnomatematika pada materi dimensi tiga. Institut agama islam negeri Bengkulu

Kartowagiran, Umi Wuryanti. 2016. “Pengembangan Media Video Animasi Untuk Meningkatkan Motivasi Belajar Dan Karakter Kerja Keras Siswa Sekolah Dasar” Jurnal Pendidikan Karakter 6(2) 232–45. (http://etheses.uin-malang.ac.id/6144/, diakses pada tanggal 05 Juni 2018) Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Kemendikbud. 2013. Permendikbud Nomor 81A Tahun 2013 tentang Implementasi Kurikulum dan Pedoman Umum Pembelajaran.

Miftah, Muhammad. 2013. Fungsi dan peran media pembelajaran sebagai upaya peningkatan kemampuan belajar siswa. Jurnal Kwangsan 1(2):95. DOI:10.31800/jtp.kw.v1n2.p95--105

Nurgiyantoro, Burhan. 2022. Penilaian Pembelajaran Bahasa. Yogyakarta: Gadjah Mada University Press.

Nurrita, Teni. 2018 Pengembangan Media Pembelajaran Untuk Meningkatkan. Hasil Belajar Siswa. Jurnal Media Pembelajaran,(1),7-8Nurgiyantoro,

Nurula, Amalia. 2022. Pengembangan media pembelajran video amnisi pada materi asam basa. MAN 2 Banda Aceh. Universitas Islam Negeri Banda Aceh

Riadi. 2022. Peningkatan Belajar Matematika Tentang Operasional Perkalian Pecahan Melalui Metode Resitasi. Jurnal Ibtida’i, Vol. 3.No. 03

Rohani. 2019. Media Pembelajaran. Sumatera Utara: Diktat.

Safitri, A., Rusmiati, M. N., Fauziyyah, H., & Prihantini. (2022). Pentingnya Memahami Karakteristik Peserta Didik Sekolah Dasar untuk Meningkatkan Efektivitas Belajar dalam Mata Pelajaran Bahasa Indonesia. Jurnal Pendidikan Tambusai, 6(2), 9333–9339. https://doi.org/10.31004/jptam.v6i2.3886

Saptono, A. 2016. Pengaruh kreativitas guru dalam pembelajaran dan kecerdasan emosional siswa terhadap prestasi belajar pada siswa kelas X di SMA Negeri 89 Jakarta. Jurnal Ilmiah Econosains, 14(1), 105–112. https://doi.org/10.21009/econosains.0141.08

Sugiyono. 2019. Metode penelitian Pendidikan(Kualitatif, Kuantitatif, dan R&D). Bandung. Alfabeta.

Sumarjan. 2017. Pembelajaran Matematika Di SD Menyenangkan. Semarang: Formci Press

Sumiharsono, Rudy & Hisbiyatul Hasanah. 2017. Media Pembelajaran: Buku Bacaan Wajib Dosen, Guru dan Calon Pendidik. Jawa Timur: CV.Pustaka Abadi.

Susanto, Ahmad, 2016, Perkembangan Anak Usia Dini: Pengantar Dalam Berbagai Aspeknya, Jakarta: Kencana Prenada Media GroupSumarjan. 2017. Pembelajaran Matematika Di SD Menyenangkan. Semarang: Formci Press

Tomtekno. 2020. Aplikasi CapCut Berasal Dari Negara Mana? Inilah. Sejarah Lengkap Aplikasi CapCut. Diakses pada 8 Oktober 2022. https://www.tomtekno.com

Urip. 2019. Analisis Penggunaan Media Video Pada Mata Pelajaran IPA di Sekolah Dasar. 28(2), 73–79.

Yayuk, E. 2019. Pengembangan Bahan Ajar Pembelajaran Matematika Untuk Mahasiswa PGSD Semester 6. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, *9*(2), 172–182. https://doi.org/10.24246/j.js.2019.v9.i2.p172-182

Yeti. 2020. Model Pembelajaran Inovatif Untuk Pembelajaran Matematika Di Kelas VI Sekolah Dasar. Yogyakarta: CV Budi Utama