

Design for Development of Canva Application-Based Audio-Visual Teaching Materials on the Thematic Subject "Myself (Me and My New Friends)" Elementary School Students

Binti Khoiriyah¹, Rani Darmayanti^{2*}, Dwilita Astuti³

^{1,3} Universitas Nahdlatul Ulama Lampung,

² Pendidikan Matematika, Universitas Muhammadiyah Malang *

Email : khoiriyahmaliki@gmail.com¹, ranidarmayanti90@webmail.umm.ac.id^{2*},
dwilita51@gmail.com³

Abstract

Pembelajaran matematika kurang optimal karena keterbatasan media pembelajaran. Sebagian besar guru hanya mengandalkan materi dan latihan manual, yang terlalu membatasi. Penelitian ini bertujuan untuk membuat media pembelajaran *audiovisual* berbasis aplikasi *Canva* pada pembelajaran tematik kelas 1 SD. Jenis penelitian ini adalah pengembangan media berdasarkan model pengembangan *four-D*. Karena keterbatasan peneliti, pengembangan media ini baru sampai pada tahap pengembangan. Dengan kata lain baru sampai tahap validasi oleh validator. Subjek penelitian ini adalah dua profesional media, dua profesional materi, dan dua praktisi, serta lima belas siswa. Metode pengumpulan data dalam penelitian ini adalah metode observasi, wawancara, dan kuesioner. Data dianalisis secara kualitatif dan kuantitatif dengan menggunakan rumus rata-rata untuk mendapatkan skor efikasi rata-rata. Hasil penelitian menunjukkan bahwa media *audiovisual* berbasis aplikasi *Canva* Tematik pada topik 'Diriku (Aku dan Teman Baruku)' memperoleh skor relevansi 4,73 untuk ahli materi dan 4,92 untuk ahli media Berdasarkan media *audiovisual* dari Pengembangan pembelajaran berbantu aplikasi *Canva*.

Kata Kunci: *Aplikasi Canva, Audiovisual, Bahan ajar, Tematik.*

Abstract

Mathematics learning is not optimal because of limited learning media. Most teachers rely solely on manual materials and exercises, which are too limiting. This study aims to create audiovisual learning media based on the Canva application for thematic learning in grade 1 elementary school. This type of research is media development based on the four-D development model. Due to the limitations of researchers, the development of this media has only reached the development stage. In other words, it has just reached the validation stage by the validator. The subjects of this research were two media professionals, two materials professionals, and two practitioners, as well as fifteen students. Data collection methods in this study are observation, interview, and questionnaire methods. The data were analyzed qualitatively and quantitatively using the average formula to obtain an average efficacy score. The results showed that audiovisual media based on the Canva Thematic application on the topic 'Me (Me and My New Friends)' obtained a relevance score of 4.73 for material experts and 4.92 for media experts. Based on audiovisual media from the Canva application-assisted learning development.

Keywords: *Canva application, Audiovisual, Teaching materials, Thematic.*

INTRODUCTION

The world of education today is closely related to the rapid advancement of information technology. In addition to educational developments, technology is also very important in influencing the development of more diverse learning (Anjarwati et al., 2023; Haviland et al., 2021). Advances in information technology can improve the quality of education, so it is hoped that education will always adapt to technological advances to improve the quality of human resources (Demidova, 2022; Sah et al., 2023). Technological advances that can improve the quality of education by increasing human resources are inseparable from the learning process in the 21st century (Sah et al., 2022; Seagal, 2022). Learning in the 21st century is learning that prepares students to face various global demands and challenges. In this century, advances in technology and information are developing very rapidly, impacting all areas of human life, one of which is education (Humaidi et al., 2022; Kováts & Takács, 2022; ND Safitri et al., 2023).

Every year we need professionals who can keep up with changing times, especially in the *new normal era* like today (Anjarwati et al., 2023; Darmayanti, Baiduri, et al., 2022). One of the lessons that can be strengthened by the community is thematic learning. Because thematic learning with subjects covers very broad topics, the learning process requires appropriate learning media (Rizki et al., 2022; Vidyastuti et al., 2022; Wulandari et al., 2022). Thematic learning can also be described as a learning approach that combines different educational content on the topic of education and personality development in basic education (Darmayanti, Sugianto, et al., 2022; Sugianto et al., 2022). Thematic learning is not only about identifying and mastering a subject, but also about what aspects should be taught and how students can understand the concepts they learn according to their personality and (McAdoo et al., 2019; Rahmah et al., 2022). But the reality in the field of learning subjects is not optimal because of the limitations of learning media. Most teachers rely on manuals and exercises that are too limited (Darmayanti, et al., 2022). The learning process is expected to be similar to SD YALC Pasuruan, using relevant learning media to convey material.

Based on observations and interviews at SD YALC Pasuruan it is known that the learning process carried out does not stimulate students' attention, interest, thoughts and emotions. As a result, students who were previously inactive became spontaneously active, and some students were even busy chatting with their friends or flipping through books in front of them. This is because not all students read fluently and do not understand the contents or intent of the books they are studying. The importance of student orientation, interest in learning and positive encouragement in learning, because new information can be added to students to facilitate the design of the learning process and enable them to achieve their learning goals adequately. When students are usually not fluent in reading because the teacher does not use innovative and creative media in the learning process, they have difficulty understanding the content of the material, especially the topics. Limitations of media, facilities and infrastructure used in the thematic learning process limit the production of computational/digital-based media. Students feel bored and less motivated to work on the subjects they have studied. There is no audiovisual based on his Canva app for the subject. Especially the topic "Me: Me and my new friend". Limitations of supporting facilities and infrastructure are also one of the limitations in the learning process. In addition, teacher innovation and creativity are still lacking in utilizing and developing learning media or learning aids. These factors can make student boredom easily arise, causing students to be less active in participating during the learning process (Fransina 2014). The provision of media that is less innovative, creative and less focused on material is one of the obstacles in the online learning process or limited face-to-face treatment which only takes a few minutes.

A possible solution is to use learning media as a facilitator for disseminating thematic material in elementary schools. The presence of learning media is very important for teachers in the learning process to achieve the goal of carrying out learning activities on an ongoing basis (Darmayanti et al., 2023; Sugianto et al., 2022). Learning media can be in the form of tools, materials, or the environment that is used as a facilitator of the learning process (Fauza et al., 2022; Ghozali et al., 2019). Therefore, teachers must be able to create appropriate learning media so that the learning process becomes interesting and of high quality.

There are several types of learning media. Audio, visual and audiovisual media (Mashudi et al., 2021). Audio media is media that contains sound elements to provide auditory information to students (Anjarwati et al., 2023; Darmayanti, Baiduri, et al., 2022; van der Meij et al., 2017). Visual is media that contains elements of visualization that enable students to learn about vision (Kramer et al., 2020; Sah et al., 2023). Audio visual media is media that can be seen or heard that is used to convey information or messages, such as sound films, videos, television and slide shows. Certain applications are available to support the use of audiovisual learning media. One of them is the Canva application (Elsa & Anwar, 2021; ND Safitri et al., 2023; Sekaryanti et al., 2022). Audiovisual learning media based on the Canva application is a good medium for learning mathematics (Mekariani & Mudinillah, 2021; Rizki et al., 2022; Wulandari et al., 2022). Based on the Canva application, this audiovisual learning media can solve your student's learning problems. The Importance of Developing Audiovisual Learning Media This can increase students' interest in learning and increase their motivation in the learning process, increase involvement in the learning process, and help them really know the names of their new friends and how to introduce themselves. hope. Students learn to listen to audiovisual media and repeat material anywhere, because indirectly they are invited to continuously understand concepts and practice their skills (Isnaini et al., 2021).

Previous research findings state that audiovisual media can improve students' understanding of learning materials (Rahmatullah et al., 2020). Audiovisual media can also improve student learning outcomes (Alfian et al., 2022). Canva application-based audiovisual learning media. You can use audiovisual learning media in the Canva app (Yundayani et al., 2019). Animated videos based on the Canva app increase student motivation and performance. Create animated videos based on the Canva application that are suitable for use in the learning process (Tri & Adam, 2022). The difference in this study is "Myself: Me and my new friend" in thematic learning, showing cartoon animations of elementary school students who are named the same as the students in the class itself, namely grade 1 students. Further learning is carried out in *new normal conditions*. Moreover, the learning that is carried out on the Importance of Developing Canva Application Audiovisual Learning Media can increase students' interest in learning and increase their motivation in the learning process (Darmayanti, Sugianto, et al., 2022). It helps students understand the material, and it's new and fun. Learning experiences based on attractive characteristics provide media packaging. Therefore, it is important to develop audiovisual learning media based on the Canva application for thematic learning of the topic "Me and My New Friends" because the content of textbooks is very limited and they tend not to be able to read or study independently due to the transition from kindergarten. Students are too shy to listen and ask questions. The kids finally decided to be quiet.

METHODS

The model used in this study is the 4D development model (Thiagarajan et al., 1974) (Define, Design, Develop, and Disseminate) were selected based on consideration of the ease of model representation when designing 4D learning models (Anjarwati et al., 2023). In the research on the development of audiovisual learning media based on the Canva application, various approaches or stages of development were carried out according to the 4D model, namely the Define Stage which consists of four parts, namely Needs Analysis, Curriculum Analysis, and Analysis. student characteristics and media analysis. The second stage is design. At this stage the researcher designed a Canva application-based audiovisual learning media storyboard consisting of an opening, core, and closing. Start-to-finish activities involving audio recordings, laptops, and the Canva application in the audiovisual media editing process. The development stage of this research was carried out by developing products that had previously been consulted with the supervisor for suggestions and input to overcome existing deficiencies. The dissemination stage of this research was carried out solely through the dissemination of audiovisual learning media products based on his Canva application using the YouTube platform so that the media can be used to support learning.

Interviews, observations, and questionnaires are data collection methods used in Canva's development research, an application-based audiovisual learning media with the theme "me (me and my new friend)". The results of the questionnaire are needed to determine the effectiveness and practicality of the media used. In this study, a 5-point rating scale was used as the research

instrument. The instrument used in this study was a questionnaire instrument which was tested by material experts and media experts. In Table 1 the material professional grid tools, the media professional grid tools are shown in Table 2. The following is the description (Darmayanti, Sugianto, et al., 2022).

Table 1. Material validation sheet grid

Number	Viewpoint	Instruction	item th	units
1	Simplicity, cohesiveness, language, text	Usage, shape and size, illustrations, storyline, language compilation	1, 2, 3, 4, 5, 6, 7	7
2	Colors, tools, appeal	Composition, layout, appeal	8, 9, 10, 11, 12	6
3	Quality and usefulness	Learning objectives, material completeness, material integration, material benefits, quality of motivation	13, 14, 15, 16, 17, 18, 19, 20, 21, 22	10

Table 2. Media validation sheet grid

Number	Viewpoint	Instruction	item th	units
1	Media Quality, Language Use	The quality of the video displayed, the ease of use, the clarity of the videos and images, the language and suitability of expressions.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	10
2	Audio and text, media layout	Vocal clarity, clarity text/readability, video playback, video playback	11, 12, 13, 14, 15, 16, 17, 18, 19, 20	10

Due to the limitations of researchers, the development of this media has only reached the development stage. In other words, it has just arrived at the validation stage by the validator. Two methods and methods are used for the data analysis method of this development study: a qualitative descriptive analysis method and a quantitative descriptive analysis method. Validity test using the Gregory formula. Relevance is the relevance, meaning, and usefulness that emerge from the evaluation of a tool. The effectiveness of the content can be determined by expert (judge) evaluation of the items in the tool grid. The average score obtained is transformed using a scale of five transformation guidelines to determine the effectiveness of each component of the media developed, and the media developed as a whole. Rating Scale 5: 4.22–5 (very useful); 3:41-4:21 (practice); 2.61 – 3.40 (very practical); 1.80 – 2.60 (not very practical); 1 to 1.79 (very impractical).

RESULTS AND DISCUSSION

In the Canva application-based audiovisual learning media development research, various processes or stages of development based on the *Four - D* model were carried out.

Define

First, the definition phase consists of four parts: needs analysis, curriculum analysis, analysis of student characteristics, media analysis. Based on the results of observations and interviews with class 1 teachers at SD YALC Pasuruan, the learning process in *new normal conditions* is known to apply an *offline learning system*. Class 1 is the most difficult class, because apart from requiring an extraordinary level of patience, a learning strategy is also needed where the teacher must teach and

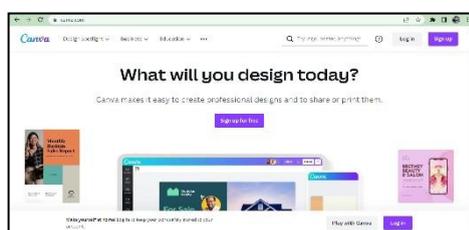
introduce elementary school learning as much as possible which will be realized by students who were previously at the kindergarten level. In other words, students will have difficulty understanding the contents/concepts/readings of the books they are studying, namely thematic books on theme 1 Myself "Me and My New Friends". It takes media and technology innovations used in the learning process to support the smooth learning process. The limited availability of media, facilities and infrastructure used in the learning process limits the production of computer/digital based media. Students feel bored and less motivated to actively participate in learning. There is no Canva audiovisual application around and in the "Me and My New Friend" theme book for grade 1 elementary school. Based on the curriculum analysis conducted, basic competencies and indicators of success in learning textbooks, student books, and mathematics curriculum were determined to be used as a reference for discussing material in audiovisual learning media. Basic Competency (KD) and metrics are shown in Table 5.

Table 3. Basic competencies and Thematic Indicators Theme 1 sub theme 1 (Myself: Me and My New Friends)

Basic Competency (KD)
3.9. Define spoken and written vocabulary and phrases about self-image, family, and people in the place where you live. This is supported by regional language vocabulary.
4.9. Introduce yourself, family and people in a simple way using appropriate vocabulary and expressions (both written and spoken)

Design

In the second stage of *design*, the product designed is in the form of an audiovisual learning media based on the Canva application which explains the theme "Me and My New Friends" in Grade 1 Elementary School. First, we must log in to be able to use this application by typing the link <https://www.canva.com>. Figure 2 below is a display of the Canva application used in this development.



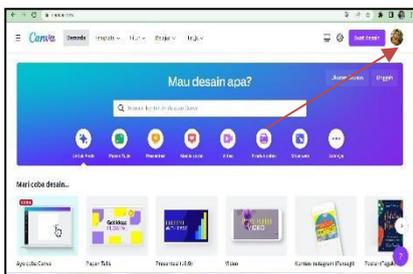
Gambar 1. Tampilan halaman web aplikasi

After typing the *link*, then click on the *login menu*. To be able to *log in*, you can use an account from a *Google account* that was previously used, you can also use a *Facebook account* or another email address (which is already registered). Look at the following 3 pictures.



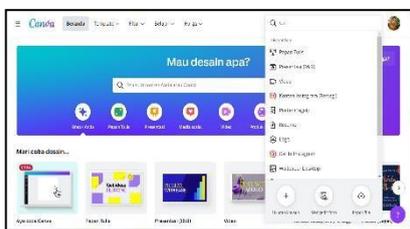
Gambar 2. Tampilan menu login aplikasi canva

After successfully logging in, the main page of the Canva application appears, then to create the teaching material that we will develop, namely the theme "SELF" then click the button on the design menu.



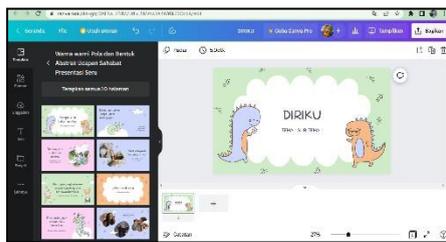
Gambar 3. Tampilan halaman beranda (utama) aplikasi

The design menu is used to select the design template that we will need to deliver the material, all of which are available here. Because the development of this media is audiovisual based, choose a template design with a presentation type.



Gambar 4. Tampilan halaman menu desain pada aplikasi canva

Choose a template from the many template menus provided, choose an attractive template that matches the theme of elementary school children. After selecting, write down the title of today's lesson. Suppose we can write as follows.



Gambar 5. Tampilan halaman menu editing pada aplikasi canva

Designing and creating Canva application-based audiovisual learning media consisting of an opening, core and closing. The opening (opening) to closing (closing) activities use sound recordings, laptops and the Canva application in the audiovisual media editing process. So that the developed learning media can attract students' attention, the video contains a type of background music that is used, namely ghost music, and by using voice as the narrator, the learning media has existing talent. Next, create a storyboard that is intended to visually represent audiovisual learning media based on the Canva application on the theme "Me and My New Friend" Grade 1 Elementary School.

Develop

Implementation of the current stage, namely development (Develop) in this study was carried out by making development products. After the audiovisual learning media was developed based on the Canva application, we evaluated the audiovisual learning media to determine its effectiveness. The examination of the adequacy of audiovisual learning media consisted of four instructors, two instructors as teaching material experts and two instructors as media experts. The results of the efficacy test obtained an average score of audiovisual learning media testing based on the Canva application, with the theme "Me and My New Friend" with a total average of 4.73 for material experts and 4.92 for media experts. Translating these results into a 5-step conversion guide yielded scores ranging from 4.22 to 5.00, rated very well by professionals in the Canva application based on audiovisual learning media for the theme "Me and My New Friends" grade 1 SD rated 'Valid'. Product revisions were carried out based on suggestions and input from material

and media experts to improve the learning media that were developed. Criticism and suggestions from experts, namely the volume of background sound is reduced, adding practice questions, adding examples such as asking who the names of the family are. The following is a display of audiovisual media that has been designed.



Gambar 6. Tampilan media audiovisual pada tema "DIRIKU"

In this development research, we created an audiovisual learning media based on the Canva application to explain material on the theme "Me and My New Friend" 1st grade. An audiovisual media application based on Canva on the theme material "Me and My New Friend" was developed with the aim of overcoming existing problems in the learning process, especially in thematic learning in elementary schools. The development of this learning media is related to the stages of the 4D model which are easy to implement. The 4D model, which is arranged in a systematic sequence of activities, is suitable as a basis for developing learning tools and media (Darmayanti et al., 2023). The stages of the 4D model development are definition, formation, development and dissemination (Sugianto et al., 2022). The Canva application-based audiovisual learning media is considered very qualified because it has unique characteristics compared to other audiovisual media. First, the audiovisual learning media based on the Canva application is suitable for use in the learning process related to the material or topics presented in the media.

Second, the Canva application-based audiovisual learning media design is suitable for use in the learning process. The development of Canva application-based audiovisual learning media contains several learning topics that can save time, videos contain interesting videos, animations, so that through Canva application-based audiovisual learning media students get an interesting and fun learning experience. and music. Watching audiovisual media not only attracts students' attention, but also focuses their attention. Because students do not want to be left behind (Astuti, 2021; Tiara Melinda & Erwin Rahayu Saputra, 2021). Canva's application-based learning media makes it easy for students to engage in technology-based learning processes (Mudinillah & Rizaldi, 2021; Tanjung & Faiza, 2019). Canva's design results can increase students' interest and motivation in learning activities by presenting interesting material. Canva has a variety of attractive designs that make the learning process less monotonous and boring (Wijaya et al., 2021). The Canva app has an attractive design and lots of features. Canva application-based audiovisual media can be used as an alternative to support the process of learning activities that involve students actively. Interesting learning media such as learning videos can also be used as fun media for students so they don't get bored quickly, especially when studying thematic material. Therefore, further development is needed as teaching materials in conveying material on the theme "Me and My New Friend" grade 1 SD.

CONCLUSION

Audiovisual media based on the *Canva* Thematic application for Grade 1 Elementary School on the topic 'Me (Me and My New Friends) obtained a relevance score of 4.73 for material experts and 4.92 for media experts. Based on *audiovisual media from the Canva* application-assisted learning development . Media that has been developed is feasible to be tested in the learning process so that the effectiveness and practicality of the media can be known. However, the development carried out is limited to the develop stage, therefore the suggestion from this research is to continue to the next stage.

REFERENCE

- Alfian, A. N., Putra, M. Y., Arifin, R. W., Barokah, A., Safei, A., & Julian, N. (2022). Pemanfaatan Media Pembelajaran Audio Visual berbasis Aplikasi Canva. *Jurnal Pengabdian Kepada Masyarakat UBJ*, 5(1). <https://doi.org/10.31599/jabdimas.v5i1.986>
- Anjarwati, S., Darmayanti, R., & Khoirudin, M. (2023). Development of “Material Gaya” Teaching Materials Based on Creative Science Videos (CSV) for Class VIII Junior High School Students. *Jurnal Edukasi Matematika Dan Sains*, 11(1), 163–172. <https://doi.org/10.25273/jems.v11i1.14347>
- Astuti, S. P. (2021). Pengembangan Media Canva Sebagai Media Pembelajaran pada Materi Listrik Statis. *Navigation Physics*, 3(1).
- Darmayanti, R., Baiduri, B., & Sugianto, R. (2022). Learning Application Derivative Algebraic Functions: Ethnomathematical Studies and Digital Creator Books. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 06(02), 2212–2227.
- Darmayanti, R., Sugianto, R., Baiduri, Choirudin, & Wawan. (2022). Digital comic learning media based on character values on students’ critical thinking in solving mathematical problems in terms of learning styles. *Al-Jabar: Jurnal Pendidikan Matematika*, 13(1), 49–66. <http://ejournal.radenintan.ac.id/index.php/al-jabar/index>
- Darmayanti, R., Usmyatun, U., Setio, A., Sekaryanti, R., & Safitri, N. D. (2023). Application of Vygotsky Theory in High School Mathematics Learning Material Limit Functions. *Jurnal Edukasi Matematika Dan Sains*, 11(1), 39–48. <https://doi.org/10.25273/jems.v11i1.14099>
- Demidova, E. E. (2022). Conceptual features of the TSAR concept in the 20-21 centuries period. *Bulletin of Chelyabinsk State University*, 1. <https://doi.org/10.47475/1994-2796-2022-10115>
- Elsa, E., & Anwar, K. (2021). The Perception of Using Technology Canva Application as a Media for English Teacher Creating Media Virtual Teaching and English Learning in Loei Thailand. *Journal of English Teaching, Literature, and Applied Linguistics*, 5(1). <https://doi.org/10.30587/jetlal.v5i1.2253>
- Fauza, M. R., Inganah, S., Darmayanti, R., Prasetyo, B. A. M., & Lony, A. (2022). Problem Solving Ability: Strategy Analysis of Working Backwards Based on Polya Steps for Middle School Students YALC Pasuruan. *Jurnal Edukasi Matematika Dan Sains*, 10(2), 353–363. <https://doi.org/10.25273/jems.v10i2.13338>
- Ghozali, F. A., Asnawi, R., Khairudin, M., P Jati, M., & Hoirul, A. (2019). Designing a Skill Tree Model for Learning Media. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 25(1), 132–140. <https://doi.org/10.21831/jptk.v25i1.20234>
- Haviland, S., Robbins, S., Belur, V., Cherfrere, G., & Klieger, D. (2021). Improving Workforce Readiness Skills Among Community College Adult Learners Through New Technologies: *Metropolitan Universities*, 32(1). <https://doi.org/10.18060/23884>
- Humaidi, N., Darmayanti, R., & Sugianto, R. (2022). Challenges of Muhammadiyah’s Contribution in Handling Covid-19 in The MCCC Program in Indonesia. *Khazanah Sosial*, 4(1), 176–186. <https://doi.org/10.15575/ks.v4i1.17201>
- Isnaini, K. N., Sulistiyani, D. F., & Putri, Z. R. K. (2021). PELATIHAN DESAIN MENGGUNAKAN APLIKASI CANVA. *SELAPARANG Jurnal Pengabdian Masyarakat Berkemajuan*, 5(1). <https://doi.org/10.31764/jpmb.v5i1.6434>
- Kováts, L., & Takács, M. G. (2022). Clausewitz’s Small War in the 21 st Century . *Land Forces Academy Review*, 27(1). <https://doi.org/10.2478/raft-2022-0001>
- Kramer, M., Förtsch, C., Stürmer, J., Förtsch, S., Seidel, T., & Neuhaus, B. J. (2020). Measuring biology teachers’ professional vision: Development and validation of a video-based assessment tool. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1823155>
- Mashudi, M., Komariah, K., & Irvan, F. (2021). The use of audio-visual media in improving Culinary students learning outcomes in Chicken Carcass material. *Jurnal Pendidikan Vokasi*, 11(1), 14–23. <https://doi.org/10.21831/jpv.v11i1.36439>
- McAdoo, R. M., Key, K. N., & Gronlund, S. D. (2019). Task effects determine whether recognition memory is mediated discretely or continuously. *Memory and Cognition*, 47(4). <https://doi.org/10.3758/s13421-019-00894-9>
- Mekariani, M., & Mudinillah, A. (2021). Penerapan Canva Pada Mata Pelajaran IPA di Sekolah Dasar Kelas 5 Rambatan pada Era Revolusi Industry 4.0. *Elementar : Jurnal Pendidikan Dasar*, 1(2). <https://doi.org/10.15408/elementar.v1i2.22830>
- Mudinillah, A., & Rizaldi, M. (2021). Using the Canva Application as an Arabic Learning Media at SMA Plus Panyabungan. *At Tasyrih: Jurnal Pendidikan Islam*, 2(1).
- ND Safitri, R Darmayanti, U Usmyatun, & D Nurmalitasari. (2023). 21st Century Mathematics Learning Challenges: Bibliometric Analysis of Trends and Best Practices in Shinta Indexed Scientific

- Publications. *JEMS: Jurnal Edukasi Matematika Dan Sains*, 11(1), 136–152.
- Rahmah, K., Inganah, S., Darmayanti, R., Sugianto, R., & Ningsih, E. F. (2022). Analysis of Mathematics Problem Solving Ability of Junior High School Students Based on APOS Theory Viewed from the Type of Kolb Learning Style. *INDoMATH: Indonesia Mathematics Education*, 5(2), 109–122. <https://indomath.org/index.php/>
- Rahmatullah, R., Inanna, I., & Ampa, A. T. (2020). Media Pembelajaran Audio Visual Berbasis Aplikasi Canva. *Jurnal Pendidikan Ekonomi Undiksha*, 12(2).
- Rizki, N., Laila, A. R. N., Inganah, S., & Darmayanti, R. (2022). Analysis of Mathematic Connection Ability in Mathematics Problem Solving Reviewed from Student's Self-Confidence. *Seminar Nasional Teknologi Pembelajaran*, 2(1), 111–126. <http://snastep.um.ac.id/pub/index.php/proceeding/indexKeahlianDanPerformaPakardalamTeknologiPendidikanuntuk>
- Sah, R. W. A., Darmayanti, R., Maryanto, B. P. A., & Choirudin. (2022). Updating Curriculum Through 21st-Century Learning Design. *Seminar Nasional Teknologi Pembelajaran*, 127–142. <http://snastep.um.ac.id/pub/index.php/proceeding/indexKeahlianDanPerformaPakardalamTeknologiPendidikanuntuk>
- Sah, R. W. A., Laila, A. R. N., Setyawati, A., Darmayanti, R., & Nurmalitasari, D. (2023). Misconception Analysis of Minimum Competency Assessment (AKM) Numeration of High School Students from Field Dependent Cognitive Style. *Jurnal Edukasi Matematika Dan Sains*, 11(1), 58–69. <https://doi.org/10.25273/jems.v11i1.14112>
- Seagal, K. Ya. (2022). Development of Punctuation theory in First Quarter of 21st Century: Main Trends. *Nauchnyi Dialog*, 11(2). <https://doi.org/10.24224/2227-1295-2022-11-2-94-121>
- Sekaryanti, R., Cholily, Y. M., Darmayanti, R., Rahma, K., Prasetyo, B., & Maryanto, A. (2022). Analysis of Written Mathematics Communication Skills in Solving Solo Taxonomy Assisted Problems. *Jurnal Edukasi Matematika Dan Sains*, 10(2), 395–403. <https://doi.org/10.25273/jems.v10i2.13707>
- Sugianto, R., Cholily, Y. M., Darmayanti, R., Rahmah, K., & Hasanah, N. (2022). Development of Rainbow Mathematics Card in TGT Learning Model for Increasing Mathematics Communication Ability. *Kreano: Jurnal Matematika Kreatif-Inovatif*, 13(2), 221–234. <http://journal.unnes.ac.id/nju/index.php/kreano>
- Tanjung, R. E., & Faiza, D. (2019). CANVA SEBAGAI MEDIA PEMBELAJARAN PADA MATA PELAJARAN DASAR LISTRIK DAN ELEKTRONIKA. *Voteteknika (Vocational Teknik Elektronika Dan Informatika)*, 7(2). <https://doi.org/10.24036/voteteknika.v7i2.104261>
- Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1974). Instructional development for training teachers of exceptional children: A sourcebook. In *indiana university, Bloomington, Indiana*. [https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)
- Tiara Melinda, & Erwin Rahayu Saputra. (2021). CANVA SEBAGAI MEDIA PEMBELAJARAN IPA MATERI PERPINDAHAN KALOR DI SEKOLAH DASAR. *JIPD (Jurnal Inovasi Pendidikan Dasar)*, 5(2). <https://doi.org/10.36928/jipd.v5i2.848>
- Tri Wulandari, & Adam Mudinillah. (2022). Efektivitas Penggunaan Aplikasi CANVA sebagai Media Pembelajaran IPA MI/SD. *Jurnal Riset Madrasah Ibtidaiyah (JURMIA)*, 2(1). <https://doi.org/10.32665/jurmia.v2i1.245>
- van der Meij, M. G., Broerse, J. E. W., & Kupper, F. (2017). Supporting Citizens in Reflection on Synthetic Biology by Means of Video-Narratives. *Science Communication*, 39(6). <https://doi.org/10.1177/1075547017730585>
- Vidyastuti, A. N., Mahfud Effendi, M., & Darmayanti, R. (2022). Aplikasi Tik-Tok: Pengembangan Media Pembelajaran Matematika Materi Barisan dan Deret Untuk Meningkatkan Minat Belajar Siswa SMA. *JMEN: Jurnal Math Educator Nusantara*, 8(2). <http://ojs.unpkediri.ac.id/index.php/matematika>
- Wijaya, I. G. N. S., Ciptahadi, K. G. O., Ayuningsih, N. P. M., Yasa, I. G. D., & Adnyani, N. K. E. P. (2021). PELATIHAN MEDIA PEMBELAJARAN CANVA BAGI GURU SDN TULANGAMPIANG DENPASAR DI MASA PANDEMI COVID-19. *INTEGRITAS: Jurnal Pengabdian*, 5(2). <https://doi.org/10.36841/integritas.v5i2.1143>
- Wulandari, T., Nurmalitasari, D., Susanto, K., Darmayanti, R., & Choirudin. (2022). Etnomatematika Pada Batik Daun Sirih dan Burung Kepodang Khas Pasuruan. *Seminar Nasional Teknologi Pembelajaran*, 2(1), 95–103. <http://snastep.um.ac.id/pub/index.php/proceeding/index>
- Yundayani, A., Susilawati, & Chairunnisa. (2019). Investigating the Effect of Canva on Student's Writing Skills. *English Review: Journal of English Education*, 7(2).