### **International Journal of Elementary Education**

Volume 7, Number 2, Tahun 2023, pp. 178-186 P-ISSN: 2579-7158 E-ISSN: 2549-6050

Open Access: https://doi.org/10.23887/ijee.v7i2.61717



# Animation Video Media Using Directed Reading Thinking Activity (DRTA) Strategies Improve Reading Understanding of Indonesian Language

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#### ARTICLE INFO

### Article history:

Received January 22, 2023 Accepted May 14, 2023 Available online May 25, 2023

#### Kata Kunci:

Video Animasi, DRTA, Membaca Pemahaman, Bahasa Indonesia

#### Keywords

Video Animation, DRTA, Reading Comprehension, Indonesian



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#### ABSTRAK

Kesulitan yang dihadapi siswa khususnya dalam kegiatan membaca pemahaman yaitu siswa sulit memahami isi cerita yang telah dibaca sehingga siswa kurang mampu menjawab pertanyaan yang berhubungan seputar isi bacaan. Kesulitan yang dihadapi siswa tersebut dikarenakan siswa kurang diikutsertakan dalam berkomunikasi dan berkontribusi dalam kegiatan pembelajaran. Tujuan penelitian ini yaitu menganalisis media video animasi dengan strategi directed reading thinking activity (DRTA) terhadap membaca pemahaman bahasa Indonesia. Penelitian ini merupakan eksperimen semu, desain posttest only no treatment control design. Populasi yaitu seluruh kelas IV SD sebanyak 9 kelas dengan total 327 siswa. Penentuan sampel penelitian teknik random sampling. Pengumpulan data metode non tes. Instrumen pengumpulan data yaitu Observasi. Metode analisis data yaitu metode analisis statistik inferensial. Cara analisis data merupakan teknik analisis statistik inferensial serta uji t. Hasil penelitian yaitu terdapat pengaruh yang signifikan kemampuan membaca pemahaman Bahasa Indonesia antara kelompok yang dibelajarkan strategi Directed Reading Thingking Activity (DRTA) dengan kelompok yang dibelajarkan menggunakan pembelajaran konvensional pada siswa kelas IV SD. Disimpulkan bahwa media video animasi dengan strategi directed reading thinking activity (DRTA) dapat meningkatkan kemampuan membaca pemahaman Bahasa Indonesia.

### ABSTRACT

The difficulties students face, especially in reading comprehension activities, are that they need help understanding the contents of the stories they have read, so they are less able to answer questions related to the contents of the reading. The difficulties faced by these students were because students needed to be included in communicating and contributing to learning activities. This study aims to analyze animated video media with the directed reading thinking activity (DRTA) strategy for reading comprehension in Indonesian. This research is a quasi-experimental, posttest-only design with no treatment control design. The population is all 9 classes of fourth-grade elementary school, with 327 students. Determination of the research sample using a random sampling technique. Non-test method data collection. The data collection instrument is Observation. The data analysis method is the inferential statistical analysis method. The method of data analysis is an inferential statistical analysis technique and t-test. The study results showed a significant influence on the ability to read Indonesian language comprehension between the group taught the Directed Reading Thinking Activity (DRTA) strategy and the group taught using conventional learning in fourth-grade elementary school students. It was concluded that animated video media with the directed reading thinking activity (DRTA) strategy could improve reading comprehension skills in Indonesian.

## 1. INTRODUCTION

Learning is the transfer of information from teacher to student. Learning is an effort to build character as a whole and involves images and values (Karakose et al., 2021; Lepiyanto & Pratiwi, 2015; Levrini et al., 2021). Learning a stage is carried out by someone so that a behaviour change is born due to experience and social relations. Learning is carried out so that students can achieve goals with the efficiency and effectiveness of their learning activities resulting in good student learning outcomes (Azizi & Prasetyo, 2018; Bardi & Jailani, 2015; Candra Sari et al., 2022). In the realm of learning in schools, there have been changes and shifts in the educational paradigm, resulting in rapid developments in information technology. There is a change due to the ease with which a person can obtain learning resources and many choices in using and using ICT (Hatlevik et al., 2018; Prayogi & Estetika, 2019). Technological developments are required to adapt to improve the quality of education in the learning process (Hobri et al., 2021; Maharani

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& Kartini, 2019; Salsabila et al., 2021). The existence of technology in education can support teachers in solving educational problems.

The problem that occurs at this time is that there are still many teachers who need to utilize technology. It is supported by the findings of previous studies, which state that teachers do not utilize technology in learning activities (Abdullah, 2018; Biassari et al., 2021; Bustanil S et al., 2019). It impacts students who lack enthusiasm and need help understanding learning material well (Afrianti & Musril, 2021; Hest et al., 2021; Wulandari et al., 2020). Problems regarding learning are often found in various elementary schools. The interviews found that fourth-grade students seemed to pay less attention to the material the teacher wrote on the blackboard; only a few students raised their hands when they wanted to answer questions. During the learning process, educators have yet to be able to optimize existing technology to realize learning that involves technology-based learning media. It happens because some students need their communication tools; students find it difficult to access the internet due to the difficulty of internet coverage.

In addition, the observations also found that in educational learning, the only use of learning media in the form of images in the delivery of material, especially in Indonesian language content. Some of the difficulties students face, especially in reading comprehension activities, include; first, students need help understanding the contents of the stories they have read, so they are less able to answer questions related to the contents of the reading. Second, students need help finding the main idea in each story paragraph. Third, students need help concluding a story's contents using their own words into a complete sentence. The difficulties faced by these students were because students needed to be included in communicating and contributing to learning activities.

The solution to this problem is by supporting learning media that helps children learn. Previous research findings also revealed that one of the important components in learning activities to achieve learning objectives is the existence of learning media (Arina et al., 2020; Bardi & Jailani, 2015; Setiawan et al., 2020). Learning media is a tool or tool educators use to assist the teaching and learning process, which functions to clarify the meaning of the message conveyed to achieve learning objectives effectively (Handayani et al., 2021; Hikmah & Purnamasari, 2017). Other findings also state that learning media can assist the teaching and learning process and clarify the messages' meaning effectively to achieve learning objectives (Hotimah & Muhtadi, 2018; Rusli & Antonius, 2019; Wardani & Mundilarto, 2021). One of the learning media that can be used to overcome children's learning is animated video media with the directed reading thinking activity (DRTA) strategy.

This animated video media can be used as an alternative in the field of education and used in the learning process so that the learning process can take place effectively and pleasantly (Hikmah & Purnamasari, 2017; Noviyanto et al., 2015; Permatasari et al., 2019). The use of animated video media in the learning process is expected to make it easier for students to understand the material provided because the form of this animated media is interesting (Apriansyah, 2020; Efendi et al., 2020; Lukman et al., 2019). Interesting in this case means that this animated media has a beautiful appearance in terms of colour, writing, and the shape of the images that can move (Ariani & Ujianti, 2021; Maryanti & Kurniawan, 2018). Animation media has more impact on reading comprehension supported by learning strategies. Using animated videos with directed reading thinking activity strategies can help children learn.

The Directed Reading Thinking Activity (DRTA) strategy is a learning strategy in reading theory that is considered capable of arousing enthusiasm and increasing the ability to understand the content of a reading (Apriliana & Berlianti, 2018; Yamini, 2018). Directed Reading Thinking Activity (DRTA) has 3 stages: predicting, reading, and proving (Apriliana & Berlianti, 2018; Gae et al., 2021; Halik et al., 2019; Putri et al., 2019). The DRTA model has a goal, namely to involve the thought process during reading activities because, during reading activities, one must involve his experience to understand the contents of the reading. In addition, the use of the Directed Reading Thinking Activity (DRTA) strategy is expected not only to be able to foster students' interest in reading but to increase students' concentration by involving them intellectually in the learning process, especially activities to understand reading content (Apriliana & Berlianti, 2018; Halik et al., 2019). Thus students' understanding will increase so that students can make conclusions. The Directed Reading Thinking Activity (DRTA) strategy focuses more on student activities when reading a reading text. In this strategy, students are trained to examine, make hypotheses, find evidence and make decisions based on experience and knowledge.

Previous research findings also reveal that animated videos are a medium that can facilitate the delivery of information or messages to students (Candra Dewi & Negara, 2021; Fauziah & Ninawati, 2022; Khairani et al., 2019; Swari & Ambarawa, 2022). This animated video media can be used in the learning process so that the learning process can take place effectively and pleasantly with the Directed Reading Thinking Activity (DRTA) strategy focusing on student activities when reading a reading text. Other findings also reveal that the Directed Reading Thinking Activity (DRTA) strategy can make learning easier for

students (Gae et al., 2021; Yamini, 2018; Yuliantika et al., 2018). The advantage of this strategy is that students are trained to examine, make hypotheses, find evidence and make decisions based on experience and knowledge and direct students to be able to involve thinking processes when reading. Using animated video media with the Directed Reading Thinking Activity (DRTA) strategy can increase students' concentration by involving them intellectually in the learning process, especially activities to understand reading content. There has yet to be a study on animated video media with the directed reading thinking activity (DRTA) strategy on reading comprehension in Indonesian. Based on this, this study aims to analyze animated video media with the directed reading thinking activity (DRTA) strategy for reading comprehension in Indonesian.

### 2. METHOD

This type of research is quantitative (Cemara & Sudana, 2019). The research is experimental due to efforts to reveal cause-and-effect relationships (causal). This research is a quasi-experimental study using a design, namely the Posttest Only No Treatment Control Design. The researcher applies that is providing animated media with the Directed Reading Thinking Activity (DRTA) strategy to the experimental group, providing conventional learning to the control group. Next, a posttest was given to two classes to obtain data on reading comprehension of Indonesian from the experimental and control classes. The population in this study was all of class IV, with a total research population of 9 classes with a total of 327 students. Determination of the sample was carried out through a random sampling technique. In this randomized study class, the type of random sampling used was cluster random sampling; namely, the sample selection technique did not consider individuals individually but was based on groups. After randomization, 2 classes were obtained as the research sample. Data was collected using a non-test method. The observation sheet is a non-test technique to measure students' reading comprehension ability. The observation sheet is a data collection technique carried out when learning activities are in progress with the observation sheet instrument to get maximum results. This instrument records students' reading comprehension skills based on observations in the ongoing learning process. This research was conducted using a construct validity test. Construct validity can be done by thinking rationally and using logic (Rusdiana, 2015). The instrument's validity in this study was obtained from guidance and consultation with supervisors and teachers. In the observation sheet, there are 4 variables or aspects to be measured, including reading skills, interpretive reading, critical understanding and creative understanding, and there are 5 statements on each of these variables.

The data analysis method is the inferential statistical analysis method. The method of data analysis is an inferential statistical analysis technique and t-test. Inferential statistics is an analytical technique used to analyze data, and later, the analysis results will be generalized to the population where the sample was taken (Koyan, 2012). Two conditions must be met: the normality test of data distribution and the homogeneity of variance test. The prerequisites for the normality and homogeneity tests have been fulfilled if the data is obtained. In the analysis, parametric statistics are used for the hypothesis test; parametric analysis is used, namely the mean difference test (t-test).

### 3. RESULT AND DISCUSSION

### Result

The data in this study describes the data on the reading comprehension ability of the experimental group post-test and the data on the reading comprehension ability of the control group. This research was conducted on fourth-grade students at SD Negeri VI Sukawati. All students in class IV A at SD Negeri 2 Batubulan acted as the experimental group taught by video animation using the Directed Reading Thinking Activity (DRTA) strategy. In contrast, all students in class IV B at SD Negeri 2 Batubulan were the control group. This research is experimental, the research was carried out 6 times, and in the fifth and sixth lessons, the post-test was immediately given to get the score and value of each sample. Data on reading comprehension ability was obtained through a post-test on 40 students and obtained the highest score of 100, while the lowest score was 53.

The initial step before conducting the hypothesis test is the pre-test test, namely the data normality test and the variance homogeneity test. The normality test was carried out to find out whether the data were normally distributed, which was carried out in the experimental and control groups. The normality test was carried out using the Chi-Square test (X2). The requirement to test the normality test is if  $X_{count}^2 < X_{table}^2$  so that the distribution of data is normally distributed. Calculation of the class interval data for the experimental group's mathematics learning outcomes was carried out based on the Gauss distribution (normal distribution), which was divided into 6 parts, obtained  $X_{count}^2 = 7.37$ ) and then

compared with the Chi-Square table with a significance level of 5% ( $_{\rm a}$  = 0.05) and dk 5  $\rm X^2_{table}$  (11.07). It can be seen that  $\rm X^2_{count}$  < $\rm X^2_{table}$  means that the data on reading comprehension data for the experimental class is normally distributed. While the calculation of class interval data for the control group's Indonesian learning ability was carried out based on the Gaussian distribution (normal distribution), which was divided into 6 parts, it was obtained ( $\rm X^2_{count}$  = 4,31) and then compared to the Chi-Square table at a significance level of 5% dk 5 ( $\rm X^2_{table}$  = 11,07).  $\rm X^2_{count}$  < $\rm X^2_{table}$  so that the control group's Mathematics learning activity data is normally distributed

The homogeneity test was carried out to show that the difference in the hypothesis test was due to differences in variance between groups, not differences within groups. The variance homogeneity test uses the F test. The largest variance is 156.24 divided by the smallest variance of 101.01 to get a result of 1.58. From the results of the analysis, obtained Fcount = 1.54, this result is then compared with the value of Ftable at the degrees of freedom in the numerator (n1 - 1) = (40 - 1) = 39 and the degrees of freedom in the denominator (n2 - 1) = (44 - 1) = 43 with a significance level of 5%, so that we get  $F_{table} = 1.68$  so that the value of  $F_{count} < F_{table}$ , so the data for the two groups has a homogeneous variance. Hypothesis testing was carried out using t-test statistics with the polled variance formula. The test criterion is that H0 is rejected if count>  $t_{table}$ ,  $t_{table}$  obtained from the t distribution table at a significance level of 5% with degrees of freedom dk=n1+n2-2. The t-test results are presented in Table 1.

Table 1. Calculation Results of the T-Test

Group	Dk	N	tcount	t <sub>table</sub>	
Experiment	82	40	3,608	2,000	
Control		44		2,000	

Based on the results of these calculations, it can be seen that  $t_{count}$  = 3.608 and  $t_{table}$  (3.608 > 2.000), so it can be concluded that Ho is rejected and Ha is accepted. Thus, it is stated that animated video media significantly influences the Directed Reading Thinking Activity (DRTA) strategy on reading comprehension learning Indonesian for fourth-grade students of SD Negeri in Cluster VI Sukawati. Based on the results of hypothesis testing, the t-test showed the value of  $t_{count}$  = 3.608 and  $t_{table}$  = 2.000 at a significance level of 5%. From the results of data analysis calculations, which show  $t_{count}$  >  $t_{table}$  (3.665 > 2.000), there is a significant influence of animated video media with the Directed Reading Thinking Activity (DRTA) strategy on reading comprehension of Indonesian language fourth-grade students of SD Negeri in Cluster VI Sukawati. It was concluded that animated video media with the Directed Reading Thinking Activity (DRTA) strategy could improve reading comprehension skills in Indonesian subjects.

### Discussion

The data analysis results showed a significant effect of animated video media using the Directed Reading Thinking Activity (DRTA) strategy on the reading comprehension of Indonesian students in grade IV SD. It is caused by several factors, namely, as follows. First, animated video media with the Directed Reading Thinking Activity (DRTA) strategy makes learning easier for students. The use of animated video media in the learning process can make it easier for students to understand the material provided because the form of this animated media is interesting (Hikmah & Purnamasari, 2017; Noviyanto et al., 2015; Permatasari et al., 2019; Sari et al., 2017; Satyawan, 2018; Sumarni et al., 2020). Interesting in this case means that this animated media has a beautiful appearance in terms of colour, writing, and the shape of the moving image with the Directed Reading Thinking Activity (DRTA) strategy able to foster students' interest in reading. The use of videos can also increase students' concentration by involving them intellectually in the learning process, especially activities to understand reading content (Amali et al., 2020; Amrullah et al., 2021; Melda et al., 2021; Noviyanto et al., 2015; Permatasari et al., 2019). Thus students' understanding increases so that students can make conclusions. The Directed Reading Thinking Activity (DRTA) strategy can help students to get an overall picture of the material they have read. Reading comprehension is when students read seriously to get the meaning or essence of a reading (Ni'matuzahroh, 2015; Sukma & Haryadi, 2016). Students' reading comprehension changes. It can be seen during learning activities (Fitri & Afnita, 2020; Harahap et al., 2021; Nurbaya et al., 2018). Students can find information on the elements of reading independently and apply it

Second, animated video media with the Directed Reading Thinking Activity (DRTA) strategy increases students' enthusiasm for learning. Learning activities such as answering, asking and expressing opinions students so that the learning atmosphere becomes more effective (Ayuningsih, 2017; Efendi et al., 2020; Lukman et al., 2019). Applying video media with the Directed Reading Thinking Activity (DRTA) learning strategy is a forum for students to convey their new thoughts (Halik et al., 2019; Yamini, 2018). In

reading comprehension, these activities do not arise naturally. However, there are influencing factors, such as internal factors that come from within the reader and external factors that come from outside the reader (Afrianti & Marlina, 2021; Apriliana & Berlianti, 2018; Fitri & Afnita, 2020). Factors originating from within the reader (internal), such as demands from the reader, include motivation, attitudes and interests, and interest in reading. Meanwhile, factors that come from outside the reader (external) include external encouragement, such as giving gifts or the like given by the teacher at a certain time (Afrianti & Marlina, 2021; Apriliana & Berlianti, 2018). Using animated video media increases students' enthusiasm when participating in learning (Oktafiyana & Septiana, 2021; Swari & Ambarawa, 2022; Yuniarni et al., 2020). Previous research findings also revealed that animated video media increased students' enthusiasm (Masykuroh & Khairunnisa, 2022; Wulandari et al., 2020).

Third, animated video media with the Directed Reading Thinking Activity (DRTA) strategy creates a pleasant atmosphere. The media cannot be separated from the teaching and learning process because the media is an important part of achieving educational goals (Fauzan & Rahdiyanta, 2017; Putri et al., 2020). Using learning media creates a fun learning atmosphere so students do not feel bored while participating in learning. It is consistent with research which reveals that learning media is a tool that can be used to channel messages in learning to increase attention (Purwati, 2021; Sudiarta & Sandra, 2016; Susanti, 2019). The media cannot be separated from the teaching and learning process because the media is an important part of achieving educational goals (Candra Dewi & Negara, 2021; Prasetya et al., 2021). Animated videos with the Directed Reading Thinking Activity (DRTA) strategy also make students fully involved in learning. This strategy is very suitable for improving students' reading comprehension skills. The Directed Reading Thinking Activity (DRTA) strategy has the goal of developing students' ability to understand reading content, including: 1) explaining the purpose of reading, 2) quoting, understanding, and assimilating information, 3) discussing reading material based on reading goals, 4) relying on decisions, 5) make decisions based on information obtained from reading activities (Apriliana & Berlianti, 2018; Gae et al., 2021; Halik et al., 2019; Putri et al., 2019). The Directed Reading Thinking Activity (DRTA) strategy directs students to be able to involve thinking processes when reading. The findings of previous research also reveal that the Directed Reading Thinking Activity (DRTA) strategy has the aim of involving the thought process during reading activities because, during reading activities, one must involve his experience to understand the content of the reading (Apriliana & Berlianti, 2018; Yamini, 2018). It makes the learning atmosphere more lively and fun.

### 4. CONCLUSION

Based on the results of the research and discussion that has been presented, it can be concluded that the average value of the reading comprehension ability of the Indonesian learning group that is taught through animated video media using the Directed Reading Thinking Activity (DRTA) learning strategy is higher than the group of students who are taught through conventional learning. The hypothesis test results showed that learning using animated video media with the Directed Reading Thinking Activity (DRTA) strategy affected the ability to read comprehension of learning Indonesian in class IV SD. It was concluded that animated video media with the Directed Reading Thinking Activity (DRTA) strategy increased reading comprehension skills.

### 5. REFERENCES

- Abdullah, A. H. (2018). Pengaruh Pemanfaatan Teknologi Informasi dan Motivasi Belajar terhadap Perilaku Belajar Siswa. *Jurnal Ilmiah Iqra'*, *3*(1), 37–52. https://doi.org/10.30984/jii.v3i1.548.
- Afrianti, M. N., & Marlina, M. (2021). Peningkatan kemampuan membaca pemahaman melalui strategi probing-prompting bagi anak berkesulitan belajar. *Jurnal Basicedu*, *5*(1), 272–279. https://doi.org/10.31004/basicedu.v5i1.653.
- Afrianti, S., & Musril, H. A. (2021). Perancangan Media Pembelajaran TIK Menggunakan Aplikasi Autoplay Media Studio 8 di SMA Muhammadiyah Padang Panjang. *Jurnal Informatika Upgris*, 6(2), 2–7. https://doi.org/10.26877/jiu.v6i2.6471.
- Amali, L. N., Zees, N., & Suhada, S. (2020). Motion Graphic Animation Video As Alternative Learning Media. *Jambura Journal of Informatics*, 2(1). https://doi.org/10.37905/jji.v2i1.4640.
- Amrullah, A. R., Suryanti, S., & Suprapto, N. (2021). The development of kinemaster animation video as a media to improve science literacy in elementary schools. *PENDIPA Journal of Science Education*, 6(1), 151–161. https://doi.org/10.33369/pendipa.6.1.151-161.
- Apriansyah, M. R. (2020). Pengembangan Media Pembelajaran Video Berbasis Animasi Mata Kuliah Ilmu Bahan Bangunan Di Program Studi Pendidikan Teknik Bangunan Fakultas Teknik Universitas

- Negeri Jakarta. Jurnal PenSil, 9(1). https://doi.org/10.21009/jpensil.v9i1.12905.
- Apriliana, A. C., & Berlianti, R. P. (2018). Upaya Meningkatkan Keterampilan Membaca Pemahaman Melalui Strategi Directed Reading Thingking Activity (Drta) Pada Siswa Kelas V Sdn Gudangkopi Ii Kecamatan Sumedang Utara Kabupaten Sumedang Tahun Pelajaran 2015/2016. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 3(1). https://doi.org/10.23969/jp.v3i1.1027.
- Ariani, N. K., & Ujianti, P. R. (2021). Media Video Animasi untuk Meningkatkan Listening Skill Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini Undiksha*, 9(1), 43. https://doi.org/10.23887/paud.v9i1.35690.
- Arina, D., Mujiwati, E. S., & Kurnia, I. (2020). Pengembangan Multimedia Interaktif Untuk Pebelajaran Volume Bangun Ruang Di Kelas V Sekolah Dasar. *Prima Magistra: Jurnal Ilmiah Kependidikan*, 1(2), 168–175. https://doi.org/10.37478/jpm.v1i2.615.
- Ayuningsih, K. (2017). Pengaruh Video Animasi Terhadap Hasil Belajar Kognitif Pada Mata Pelajaran IPS Materi Menghargai Jasa Pahlawan di Kelas V SDN Sidokumpul Sidoarjo. *JICTE (Journal of Information and Computer Technology Education)*, 1(1), 43. https://doi.org/10.21070/jicte.v1i1.1129.
- Azizi, M., & Prasetyo, S. (2018). Kontribusi Pengembangan Media Komik Ipa Bermuatan Karakter Pada Materi Sumber Daya Alam Untuk Siswa Mi/Sd. *Al-Bidayah : Jurnal Pendidikan Dasar Islam*, 9(2), 75. https://doi.org/10.14421/jpdi.2017.0902-07.
- Bardi, B., & Jailani, J. (2015). Pengembangan Multimedia Berbasis Komputer Untuk Pembelajaran Matematika Bagi Siswa SMA. *Jurnal Inovasi Teknologi Pendidikan*, 2(1), 49–63. https://doi.org/10.21831/tp.v2i1.5203.
- 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.
- Bustanil S, M., Asrowi, & Adianto, D. T. (2019). Pengembangan Media Pembelajaran Interaktif Berbasis Video Tutorial Di Sekolah Menengah Kejuruan. *JTP Jurnal Teknologi Pendidikan*, 21(2), 119–134. https://doi.org/10.21009/jtp.v21i2.11568.
- Candra Dewi, N. M. L., & Negara, I. G. A. O. (2021). Pengembangan Media Video Animasi IPA pada Pokok Bahasan Sistem Pernapasan Kelas V. *Jurnal Edutech Undiksha*, 9(1), 122–130. https://doi.org/10.23887/jeu.v9i1.32501.
- Candra Sari, R., Rika Fatimah, P. L., Ilyana, S., & Dwi Hermawan, H. (2022). Augmented reality (AR)-based sharia financial literacy system (AR-SFLS): a new approach to virtual sharia financial socialization for young learners. *International Journal of Islamic and Middle Eastern Finance and Management,* 15(1), 48–65. https://doi.org/10.1108/IMEFM-11-2019-0484.
- Cemara, G. A. G., & Sudana, D. N. (2019). Pengaruh Model Pembelajaran SAVI Bermuatan Peta Pikiran Terhadap Kreativitas dan Penguasaan Kompetensi Pengetahuan IPA Siswa. *Jurnal Ilmiah Sekolah Dasar*, *3*(3), 359–368. https://doi.org/10.23887/jisd.v3i3.18895.
- Efendi, Y., Adi, E., & Sulthoni, S. (2020). Pengembangan Media Video Animasi Motion Graphics pada Mata Pelajaran IPA Di SDN Pandanrejo 1 Kabupaten Malang. *JINOTEP (Jurnal Inovasi dan Teknologi Pembelajaran): Kajian dan Riset Dalam Teknologi Pembelajaran*, 6(2), 97–102. https://doi.org/10.17977/um031v6i22020p097.
- Fauzan, M. A., & Rahdiyanta, D. (2017). Pengembangan Media Pembelajaran Berbasis Video pada Teori Pemesinan Frais. *Jurnal Dinamika Vokasional Teknik Mesin*, *2*(2), 82–88. https://doi.org/10.21831/dinamika.v2i2.15994.
- Fauziah, M. P., & Ninawati, M. (2022). Pengembangan Media Audio Visual (Video) Animasi Berbasis Doratoon Materi Hak dan Kewajiban Penggunaan Sumber Energi Mata Pelajaran PPKn di Sekolah Dasar. *Jurnal Basicedu*, 6(4), 6505–6513. https://doi.org/10.31004/basicedu.v6i4.3257.
- Fitri, M., & Afnita. (2020). Korelasi keterampilan membaca pemahaman dan keterampilan menulis teks eksposisi siswa kelas VII SMP Negeri 11 Padang. *Jurnal Penelitian Bidang Pendidikan*, 26(2), 77–81. https://doi.org/10.24114/jpbp.v26i2.17925.
- Gae, N. A., Ganing, N. N., & Kristiantari, M. G. (2021). Pengembangan Media Video Animasi Berorientasi Membaca Pemahaman dengan Strategi Directed Reading Thinking Activity (DRTA) pada Muatan Bahasa Indonesia. *Jurnal Penelitian & Pengembangan Pendidikan*, 5(1). https://doi.org/10.23887/jppp.v5i1.32453.
- Halik, A., Israwaty, I., & Monalisa, M. (2019). Penerapan Metode Directed Reading Thingking Activity (Drta) Untuk Meningkatkan Hasil Belajar Bahasa Indonesia Siswa Kelas V Sdn 65 Parepare. *Jurnal Nalar Pendidikan*, 7(2). https://doi.org/10.26858/jnp.v7i2.11820.
- Handayani, D., Elvinawati, E., Isnaeni, I., & Alperi, M. (2021). Development Of Guided Discovery Based Electronic Module For Chemical Lessons In Redox Reaction Materials. *International Journal of Interactive Mobile Technologies (iJIM)*, 15(07), 94. https://doi.org/10.3991/ijim.v15i07.21559.

- Harahap, D. M., Harahap, R., & Solin, M. (2021). Pengembangan Bahan Ajar Membaca Untuk Kegiatan Literasi. *Jurnal Penelitian Pendidikan Bahasa dan Sastra*, 6(2), 94–98. https://doi.org/10.32696/jp2bs.v6i2.942.
- Hatlevik, O. E., Throndsen, I., Loi, M., & Gudmundsdottir, G. B. (2018). Students' ICT self-efficacy and computer and information literacy: Determinants and relationships. *Computers and Education*, *118*, 107–119. https://doi.org/10.1016/j.compedu.2017.11.011.
- Hest, Y. A. L., Riyadi, Kamsiyati, S., & Purnamasari, V. (2021). Pengembangan Bahan Ajar Berbasis Muatan Lokal Keanekaragaman Motif Batik Ngawi sebagai Sumber Belajar di Kelas V Sekolah Dasar. *Jurnal basicedu*, *5*(2), 1060–1066. https://doi.org/10.31004/basicedu.v5i1.721.
- Hikmah, V. N., & Purnamasari, I. (2017). Pengembangan Video Animasi "Bang Dasi" Berbasis Aplikasi Camtasia Pada Materi Bangun Datar Kelas V Sekolah Dasar. *Pengembangan Video Animasi "Bang Dasi" Berbasis Aplikasi Camtasia Pada Materi Bangun Datar Kelas V Sekolah Dasar*, 4(2), 182–191. https://doi.org/10.23819/mimbar-sd.v4i2.6352.
- Hobri, Adeliyanti, S., Fatekurrahman, M., Wijaya, H. T., Oktavianingtyas, E., Putri, I. W. S., & Ridlo, Z. R. (2021). E-Comic Mathematics Based on STEAM-CC and its Effect on Students Creative Thinking Ability. *Journal of Physics: Conference Series*, 1839(1). https://doi.org/10.1088/1742-6596/1839/1/012036.
- Hotimah, H., & Muhtadi, A. (2018). Pengembangan multimedia pembelajaran interaktif IPA untuk meningkatkan pemahaman siswa pada materi Mikroorganisme SMP. *Jurnal Inovasi Teknologi Pendidikan*, 4(2), 201–213. https://doi.org/10.21831/jitp.v4i2.15047.
- Karakose, T., Polat, H., & Papadakis, S. (2021). Examining Teachers' Perspectives on School Principals' Digital Leadership Roles and Technology Capabilities during the COVID-19 Pandemic. In *Sustainability* (Vol 13, Number 23). https://doi.org/10.3390/su132313448.
- Khairani, M., Sutisna, S., & Suyanto, S. (2019). Meta-analysis study of the effect of learning videos on student learning outcomes. *Journal of Biological Education and Research*, 2(1), 158. https://doi.org/10.23960/jpp.v11.i2.202113.
- Koyan. (2012). Statistik Pendidikan. Undiksha Press.
- Lepiyanto, A., & Pratiwi, D. (2015). Pengembangan Bahan Ajar Berbasis Inkuiri Terintegrasi Nilai Karakter Peduli Lingkungan Pada Materi Ekosistem. *BIOEDUKASI (Jurnal Pendidikan Biologi)*, 6(2), 143–147. https://doi.org/10.24127/bioedukasi.v6i2.344.
- Levrini, O., Tasquier, G., Barelli, E., Laherto, A., Palmgren, E., Branchetti, L., & Wilson, C. (2021). Recognition and operationalization of Future-Scaffolding Skills: Results from an empirical study of a teaching–learning module on climate change and futures thinking. *Science Education*, 105(2), 281–308. https://doi.org/10.1002/sce.21612.
- 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.
- Maharani, N., & Kartini, K. S. (2019). Penggunaan google classroom sebagai pengembangan kelas virtual dalam keterampilan pemecahan masalah topik kinematika pada mahasiswa jurusan sistem komputer. *PENDIPA Journal of Science Education*, *3*(3), 167–173. https://doi.org/10.33369/pendipa.3.3.167-173.
- Maryanti, S., & Kurniawan, D. (2018). Pengembangan Media Pembelajaran Video Animasi Stop Motion Untuk Pembelajaran Biologi Dengan Aplikasi Picpac. *Jurnal BIOEDUIN: Program Studi Pendidikan Biologi*, 8(1), 26–33. https://doi.org/10.15575/bioeduin.v8i1.2922.
- Masykuroh, K., & Khairunnisa. (2022). Pengembangan media video animasi mengenal sampah untuk membangun karakter peduli lingkungan anak usia dini. *Jurnal Program Studi PGRA (SELING)*, 8(2), 220–228. https://doi.org/10.29062/seling.v8i2.1236.
- Melda, F., Hilda Putri, D., & Hamka Air Tawar Barat, J. (2021). Development of microbiology learning animation videos for biology students at padang state university. *International Journal of Progressive Sciences and Technologies (IJPSAT, 26*(1), 46–53. https://doi.org/10.52155/ijpsat.v26.1.2938.
- Ni'matuzahroh. (2015). Efektifitas Strategi Membaca Kolaboratif untuk Meningkatan Pemahaman Bacaan Siswa Sekolah Dasar. *Jurnal RAP*, 6(2). https://doi.org/10.24036/rapun.v6i2.6621.
- Noviyanto, T. S. H., Juanengsih, N., & Rosyidatun, E. S. (2015). Penggunaan Media Video Animasi Sistem Pernapasan Manusia Untuk Meningkatkan Hasil Belajar Biologi. *Edusains*, 7(1), 57–63. https://doi.org/10.15408/es.v7i1.1215.
- Nurbaya, S., Rahman, F., Rustono, & Subyantoro. (2018). Pengaruh Skemata Terhadap Kompetensi Membaca Pemahaman Berbasis Taksonomi Ruddell. *LITERA*, *17*(1), 59–69. https://doi.org/10.1177/0011000099273004.

- Oktafiyana, C., & Septiana, Y. A. (2021). Pengembangan Media Pembelajaran Interaktif Menggunakan Game Educandy dan Video Animasi Kinemaster dan Animaker pada Pembelajaran Pengenalan Kosakata Anggota Tubuh dan Panca Indera beserta Fungsi dan Cara Perawatannya. *Edustream: Jurnal Pendidikan Dasar*, 5(2), 166–174. https://doi.org/10.26740/eds.v5n2.p166-174.
- Permatasari, I. S., Hendracipta, N., & Pamungkas, A. S. (2019). Pengembangan Media Pembelajaran Video Animasi Hands Move Dengan Konteks Lingkungan Pada Mapel Ips. *Terampil: Jurnal Pendidikan dan Pembelajaran Dasar*, 6(1), 34–48. https://doi.org/10.24042/terampil.v6i1.4100.
- Prasetya, W. A., Suwatra, I. I. W., & Mahadewi, L. P. P. (2021). Pengembangan Video Animasi Pembelajaran Pada Mata Pelajaran Matematika. *Jurnal Penelitian dan Pengembangan Pendidikan*, *5*(1), 60–68. https://doi.org/10.23887/jppp.v5i1.32509.
- Prayogi, R. D., & Estetika, R. (2019). Kecakapan abad 21: kompetensi digital pendidik masa depan. *Jurnal Manajemen Pendidikan*, 14(2), 144–151. https://doi.org/10.23917/jmp.v14i2.9486.
- Purwati, P. (2021). Implementasi Media Video Animasi Interaktif Secara Daring Untuk Meningkatkan Hasil Belajar Dan Keaktifan Siswa Kelas IV SDN Tulung 03 Pada Tema 8 Semester 2 Tahun Pelajaran 2020/2021. *Journal Of Education Research*, 3(2). https://doi.org/10.36653/educatif.v3i2.76.
- Putri, A., Kuswandi, D., & Susilaningsih, S. (2020). Pengembangan Video Edukasi Kartun Animasi Materi Siklus Air untuk Memfasilitasi Siswa Sekolah Dasar. *JKTP: Jurnal Kajian Teknologi Pendidikan*, 3(4), 377–387. https://doi.org/10.17977/um038v3i42020p377.
- Putri, P. N. A. K., Arini, N. W., & Sumantri, M. (2019). Pengaruh strategi Directed Reading Thinking Activity (DRTA) berbantuan media flip chart terhadap keterampilan membaca pemahaman. *Jurnal Ilmiah Sekolah Dasar*, 3(2). https://doi.org/10.23887/jisd.v3i2.17762.
- Rusdiana, R. (2015). Evaluasi Pembelajaran. CV PUSTAKA SETIA.
- Rusli, M., & Antonius, L. (2019). Meningkatkan Kognitif Siswa SMAN I Jambi Melalui Modul Berbasis E-Book Kvisoft Flipbook Maker. *Jurnal Sistem Komputer dan Informatika (JSON)*, 1(1), 59. https://doi.org/10.30865/json.v1i1.1397.
- Salsabila, U. H., Utami, S. N., Zahra, A., Haikal, F., & Cahyono, A. (2021). Pengaruh Penggunaan Media Belajar Online Selama Pandemi. *Jurnal Ilmiah Wahana Pendidikan*, 7(1), 1–9. https://doi.org/10.5281/ZENODO.4412063.
- Sari, S. L., Widyanto, A., & Kamal, S. (2017). Pengembangan Media Pembelajaran Berbasis Video Animasi dalam Smartphone pada Materi Sistem Kekebalan Tubuh Manusia untuk Siswa Kelas XI di SMA Negeri 5 Banda Aceh. *Jurnal Prosiding Seminar Nasional Biotik*, 4(1), 476–485.
- Satyawan, V. (2018). The Use Of Animation Video To Teach English At Junior High School Students. *Jellt* (Journal of English Language and Language Teaching), 2(2), 89–96. https://doi.org/10.36597/jellt.v2i2.3277.
- Setiawan, N. C. E., Dasna, I. W., & Muchson, M. (2020). Pengembangan Digital Flipbook untuk Menfasilitasi Kebutuhan Belajar Multiple Representation pada Materi Sel Volta. *Hydrogen: Jurnal Kependidikan Kimia*, 8(2), 107. https://doi.org/10.33394/hjkk.v8i2.3194.
- Sudiarta, I. G. P., & Sandra, I. (2016). Pengaruh Model Blended Learning berbantuan Video Animasi Terhadap Kemampuan Pemecahan Masalah dan Pemahaman Konsep Siswa. *Jurnal Pendidikan dan Pengajaran*, 49(2). https://doi.org/10.23887/jppundiksha.v49i2.9009.
- Sukma, S., & Haryadi, H. (2016). Keefektifan strategi REAP dan request dalam pembelajaran membaca pemahaman siswa kelas VIII SMP. *Lingtera*, *3*(1). https://doi.org/10.21831/lt.v3i1.8476.
- Sumarni, R. A., Bhakti, Y. B., Astuti, I. A. D., Sulisworo, D., & Toifur, M. (2020). The development of animation videos based flipped classroom learning on heat and temperature topics. *Indonesian Journal of Science and Mathematics Education*, *3*(3), 304–315. https://doi.org/10.24042/ijsme.v3i3.7017.
- Susanti, B. (2019). Penggunaan Media Pembelajaran Video Scribe Untuk Meningkatkan Motivasi Belajar Siswa Kelas V Madrasah Ibtidaiyah At-Taqwa Pinang. *NATURALISTIC: Jurnal Kajian Penelitian Pendidikan dan Pembelajaran, 3*(2), 387–396. https://doi.org/10.35568/naturalistic.v3i2.399.
- Swari, I. G. A. A. M., & Ambarawa, D. P. (2022). Video Animasi Mengenal Huruf dan Angka untuk Menstimulus Kemampuan Kognitif dan Bahasa Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini Undiksha*, 10(1), 163–172. https://doi.org/10.23887/paud.v10i1.47346.
- Wardani, Y. R., & Mundilarto. (2021). Development of Android-based physics e-book to local Wisdom of traditional games Nekeran. *AIP Conference Proceedings*, 2330(March). https://doi.org/10.1063/5.0043767.
- Wulandari, I. G. A. A. M., Sudatha, I. G. W., & Simamora, A. H. (2020). Pengembangan Pembelajaran Blended Pada Mata Kuliah Ahara Yoga Semester II di IHDN Denpasar. *Jurnal Edutech Undiksha*, 8(1), 1. https://doi.org/10.23887/jeu.v8i1.26459.
- Wulandari, Y., Ruhiat, Y., & Nulhakim, L. (2020). Pengembangan Media Video Berbasis Powtoon pada Mata Pelajaran IPA di Kelas V. *Jurnal Pendidikan Sains Indonesia*, 8(2), 269–279.

### https://doi.org/10.24815/jpsi.v8i2.16835.

- Yamini. (2018). Peningkatan Hasil Belajar Bahasa Indoneia melalui Metode DRTA (Directed Reading Thingking Activity). *Jurnal Riest dan Konseptual*, *3*(1). https://doi.org/10.28926/briliant.v3i1.149.
- Yuliantika, N. P., Kristiantari, M. G. R., & Putra, M. (2018). Pengaruh Strategi Directed Reading Thinking Activity (DRTA) terhadap Kemampuan Membaca Pemahaman. *Jurnal Pedagogi dan Pembelajaran*, 3(1). https://doi.org/10.23887/jp2.v1i3.19345.
- Yuniarni, Sari, & Atiq. (2020). Pengembangan Multimedia Interaktif Video Senam Animasi Berbasis Budaya Khas Kalimantan Barat. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 4(1). https://doi.org/10.31004/obsesi.v4i1.331.