

# The Effectiveness of Videoscribe Media to Increase Student Learning Activity

Yasinta Dwi Rahayu<sup>a</sup>, Siswandari<sup>b</sup>, Sudarno<sup>c</sup>, <sup>a,b,c</sup>Sebelas Maret University, Email: yasintadwi03@gmail.com<sup>a</sup>, siswandari@staff.uns.ac.id<sup>b</sup>, sudarno251168@gmail.com<sup>c</sup>

This study aims to determine the effectiveness of VideoScribe to increase student learning activities. VideoScribe is chosen because it can present audiovisual materials combined into animation according to learning needs, attracting students' attention to be actively involved in learning. The research method is quasi-experimental research with a pretest-posttest control group design. The data collection technique used is a questionnaire. The research samples are class X Accounting 1 and X Accounting 2 at a Vocational High School. The data analysis technique used is independent sample t-test and N-gain. The test results show that the t-test value has a significance of 0.00 ( $< 0.05$ ), meaning that VideoScribe is effective to increase student learning activity, while the increase in learning activity based on the results of the N-gain test obtains a score of 0.63 in the experimental class is categorized in the medium category. Thus, teachers can use VideoScribe in the learning process because it effectively increases student activity.

**Key words:** *Learning, Activity, Videoscribe Media*

## Introduction

Education is a conscious and planned effort to create a learning atmosphere and learning process to develop students' potential (Kurniawan, 2016). In learning activities, teachers must bind students to be active, make learning more relevant and fun, and present learning experiences that can stimulate students' enthusiasm for learning (Hayati & Berlianti, 2016). According to Hayati (2017), learning is an active process, in the sense that students must pursue learning, not only conveying information from teachers to students, but student activity is the most important thing in the learning process, so that teachers are expected to be able to develop students' learning capacity, basic competence and potential.

Sudjana & Rivai (2015) said that students' learning activity could be seen in various ways, including 1) participating in carrying out learning tasks; 2) being involved in problem-solving in the ongoing learning process; 3) asking other peers or the teacher if they cannot understand the problem at hand; 4) being able to try to find various information needed for solving problems on the spot; 5) carrying out discussion groups under teachers' directions and instructions; 6) assessing their abilities and the results they get; 7) being able to train themselves in solving similar problems.

The interview results with productive Accounting teachers at a Vocational High School show that the students were inactive. The issue could be seen from students' lack of attention when the teacher explained the material during learning, lack of courage in asking and answering questions, and lack of participation in doing assignments, individually or in groups. Only a few students could understand the subject matter, while others relied on their friends who had high abilities to complete the tasks. Another finding shows that teachers usually gave lecture and used PowerPoint in learning. In general, the average activeness of students in class X Accounting 1 was 37.68%, in class X Accounting 2 was 34.59%, which was still classified as less active. According to Mulyasa (2003), learning is successful and has good quality if all or at least most (75%) students are actively involved.

Students' low activeness in learning can be caused by a lack of participation in the learning process. Simamora, Sidabutar & Surya (2017) said that in learning, activity is crucial for teachers to pay attention to because it is one of the factors in determining the success of students' learning at school. Helmiati (2012) claimed that student activity in learning is essential because: 1) learning can only occur if students are actively involved in carrying out activities, 2) each student has the potential to be developed, 3) the teacher's role is more as a learning facilitator.

The development of modern science and technology certainly influences the quality of the school learning system, which demands teachers' role to make practical lessons (Kurniawan, 2016). Teachers must have the ability to formulate learning objectives and select attractive models and media to improve student involvement and activities in learning (Purba et al., 2021). Technological developments certainly cannot be applied optimally if learning at schools is still carried out in the old ways (Chai et al., 2019). Thus, teachers need to apply the role of information technology in education to improve the quality of learning at schools because technology can change abstract materials to become more authentic to increase student learning activity (Astuti, Bhakti & Astuti, 2019). One of the examples of integrating technology in learning is the use of VideoScribe.

Buchori & Setyawati (2015) stated that media are among the determinants of student learning success, where learning activity is a process to transfer information from information givers to recipients through media and models. Thus, learning using engaging media and models makes students more receptive. According to Woodrich & Fan (2017); Zubaidillah, Kirana &

Poedjiastoeti (2016), media is a communication tool to make the learning process more effective. Using media can attract students' attention and make it easier to understand the material (Purwanto, Hendri & Susanti, 2016).

Videoscribe is audiovisual media in animation with an attractive and easy-to-understand layout of images, text, and charts. Audiovisual playback in VideoScribe is white background (Prasetyo & Anggraeni, 2020; Pratiwi, Latifah & Mustari, 2019). Bozavlı (2017) said that audiovisual media provide voice messages and images to facilitate understanding of the message. Audiovisual media can stimulate the senses of sight and hear together through sound and images (Marlena, Dwijayanti & Widayati, 2019). If the teacher uses this media, it will be more optimal in presenting teaching materials to students, and it can also replace the role and duties of the teacher (Hasan, Nusantari & Latjompoh, 2017). Research conducted by Drood & Asl (2016); Marlena et al. (2019) stated that audiovisual media makes students active in learning. Aziz & Sulicha (2016) also proved that audiovisual media positively impacts students' cognitive, affective, and psychomotor learning.

Videoscribe is a software application which results are in videos by combining interesting concept maps, pictures, sounds, and music into animations according to learning needs and increasing student involvement to actively observe lessons (Monitasari, W Suprih, & Aristyagama, 2021; Munawwarah, 2019). The selection of audiovisual media using VideoScribe allows one to illustrate complex material concepts to be easy to understand (Sparkol, 2019). Aryuntini, Astuti, & Yuliana (2018) said that VideoScribe is a medium that contains images and text that facilitates and increases student involvement in learning. VideoScribe has the advantage of having multimedia nuances and can be in photos, images, text, music, and backgrounds that can be selected as desired. The learning process can be more lively and not monotonous with various characters in the video because learning is more varied (Bhakti, Astuti & Rahmawati, 2020; Fatimah, 2021). According to Fahmi (2019), VideoScribe has a dubbing feature so that teachers can provide easy, user-friendly explanations and directions. The results of Fahmi's (2019) research stated that VideoScribe can attract students' attention so that students not only play with their devices but can learn well. Thus, the focus of this research is to determine the effectiveness of VideoScribe media in increasing student learning activity, especially in business economics subjects.

## **Literature review**

### ***Learning Activity***

Hunaepi et al. (2014) stated that learning is a process of acquiring knowledge, improving skills, improving behavior, attitudes, and strengthening personality. The intended learning activities are physical activities and students' mental activities (Helmiati., 2012; Mulyono., 2009). According to Nurdyansyah & Fahyuni (2016), students' mental activities are the ability and willingness to understand a concept, principles, and learning skills, while physical

activity is an activity that plays a physical role or only its members. Sunarto (2013) explained that learning activities are actions or aspects carried out by students related to the influence of students in learning in the classroom. The indicators of student activity, according to Ayuningsih (2019) , are 1) problem solving, 2) cooperation, 3) expressing ideas, and 4) paying attention to learning.

### **Videoscribe Media**

Fikri & Madona (2018) declared that media are all forms of intermediaries used by the sender of messages, ideas, or ideas so that the message, idea, or idea reaches the recipient (audience) of the message clearly and thoroughly. Media are determinants of student learning success. Learning media, according to the characteristics of the sensory stimulation generator, can be in the form of audio (sound), visual (image), and audiovisual (Buchori & Setyawati, 2015).

VideoScribe is an application that can design learning media based on animated videos on a white background (Wijayanti, 2018). VideoScribe is software that we can use to create white background animation designs easily (Kurniati, Arief & Gunawan, 2019). A British company developed this application in 2012 (Fahmi, 2019). VideoScribe is a unique way to quickly and easily create engaging video animations. In VideoScribe, we can design media in videos with the concept of a whiteboard using hand drawings and as if we were drawing or writing on board. The VideoScribe/hand drawing concept is commonly used for video presentations, promotions, learning, and others (Dewi, Suprpto & Badriah, 2019).

Kholidin, Hudaidah, & Safitri (2017) said that VideoScribe (board animation) is a medium in which an artist sketches images and text on a blackboard, or paper or canvas, to illustrate a particular script or narrative. VideoScribe is an audio-visual media with animated videos consisting of a series of images arranged into a complete video. VideoScribe has its uniqueness, including creating illustrations that illustrate concept maps such as notes made by the teacher on the blackboard. With unique characteristics, VideoScribe can present learning content by combining images, sounds, and attractive designs so that students can enjoy the learning process (Kurniawan, 2016). VideoScribe is a video medium in the form of animation with an attractive and easy-to-understand layout of images, text, and charts (Prasetyo & Anggraeni, 2020). Sudrajat & Hardinto (2017) said that VideoScribe is a medium that can make it easier for teachers to convey information and enhance student motivation.

### **Research Method**

This type of research is quasi-experimental by comparing the active scores of students in the control class and the experimental class. The research design is a pretest-posttest control group design (Creswell, 2014) which is shown in Table 1.

**Table 1. Research Design**

Class	Pre-test	Treatment	Post-test
Experiment	Q <sub>1</sub>	X	Q <sub>2</sub>
Control	Q <sub>1</sub>	-	Q <sub>2</sub>

Q<sub>1</sub>: pre-test; Q<sub>2</sub>: post-test; X: treatment using videoscribe media

The control class uses PowerPoint, while the control class uses VideoScribe. The data analysis technique used was the independent sample t-test on SPSS and N-gain. The t-test formula used is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

or

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

(Budiyono, 2016)

The criteria for decision making with the t-test with a significance level of 5% are:

if t-count > t-table (p-value < 0.05) then H<sub>0</sub> is rejected,

if t-count < t-table (p-value > 0.05) then H<sub>0</sub> is accepted.

The calculation of N-gain was carried out to see how much the increase in the student learning activity by using the VideoScribe media was carried out so that a pretest and posttest were carried out to determine the effectiveness of the developed learning media.

The gain index can be calculated by the formula:

$$\text{Normalized gain } (g) = \frac{\text{Posttest Score} - \text{Pretest Score}}{\text{Maximum Score} - \text{Pretest Score}}$$

(Hake, 1999)

**Table 2. N-Gain Criteria**

N-gain Score	Interpretation
$0,70 \leq g \leq 100$	High
$0,30 \leq g < 0,70$	Medium
$0,00 < g < 0,30$	Low

Source: (Sundayana, 2014)

The prerequisite tests, normality and homogeneity tests, were carried out before testing the hypothesis. The normality test was carried out using the Shapiro-Wilk formula. The data are normally distributed if the p-value is greater than = 5% or 0.05 ( $p\text{-value} > 0.05$ ). The data from the homogeneity test used Levene's test to determine whether or not the group variance was homogeneous. If the significance value is  $> 0.05$ , it can be concluded that the data come from a group that has a homogeneous variance.

## Results and Discussion

The effectiveness of learning media was determined by comparing the experimental class and the control class. Prior to treatment, a pre-test was conducted to determine the initial ability of the control and experimental classes in a balanced state. The pre-test and post-test data description results are presented in Table 3.

**Table 3. Description of Research Data**

Group		N	Min	Max	Mean	Stand. Dev	Variance
Pre-test	Experiment	36	30	40	35.19	3.178	10.104
	Control	36	30	39	33.94	2.703	7.311
Post-test	Experiment	36	56	62	58.61	1.777	3.159
	Control	36	47	54	50.25	2.195	4.821

Source : Data Process (2021)

Table 3 shows that the average pre-test of the experimental group is 35.19, and the control class is 33.94. It shows that the two groups almost have the same value. A different pre-test score test was carried out to test the equivalence of initial abilities. Prerequisite test results show that the data are normally distributed. This is shown in the Shapiro-Wilk test, the experimental group obtained a significance value of  $0.053 > 0.05$ , while the control group was  $0.087 > 0.05$ . Levene's Test for Equality of Variances test results obtained a significance value of  $0.236 > 0.05$ . Based on the test results criteria, the two-sample groups came from groups with homogeneous variance. An independent sample t-test was conducted to test the difference in the mean of the two groups.

The test results of the pretest value of the independent sample t-test with SPSS obtained a significance of  $0.07 > 0.05$ . Based on the decision-making criteria that  $H_0$  is accepted, it means that the average pretest value of the experimental and control groups has no

difference, so they can be given treatment. After treatment, the average score of student activity in the experimental class was 58.61, while the control class was 50.25. Based on the Shapiro-Wilk normality test, a significance value of 0.054 ( $> 0.05$ ) was obtained in the experimental and control classes. It can be concluded that the data are normally distributed. Levene's test for equality of variances is  $0.183 > 0.05$ , meaning that the variance of the experimental class and control class data is homogeneous. Furthermore, it is known that the significance value (2-tailed) is  $0.00 < 0.05$ , meaning that there is a significant difference between the average score of student learning activity in the experimental class and the control class. The results of data calculations using SPSS are shown in Table 4.

**Table 4. Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed		1.811	.183	17.759	70	.000	8.361	.471
Equal variances not assumed				17.759	67.088	.000	8.361	.471

Source: data process of SPSS (2021)

**Table 5. N-Gain Analysis**

Mean	0.63	0.42
Minimum	0.51	0.30
Maximum	0.76	0.56

Source : data process (2021)

The results of the N-gain calculation in Table 5 show that the average value of the N-gain score in the experimental class using VideoScribe is 0.63, which is included in the quite medium category, with a minimum score of 0.51 and a maximum score of 0.76. While the control class using PowerPoint is 0.42, with a minimum N-gain value of 0.30 and a maximum of 0.56. It can be concluded that VideoScribe is effective in increasing student learning activities. According to research by Bhakti et al., (2020); Prasetyo & Anggraeni (2020), it is easier for students to understand learning concepts by using videos because compared to abstract things, students are more interested in learning concrete or real things. Research by Yusup, Aini & Pertiwi (2016) proved that audiovisual media using VideoScribe could increase students' curiosity in learning because the way the material is delivered is very interesting. Furthermore, Netriwati & Lena, (2017) also emphasized that audiovisual materials are teaching media that activate the eyes and ears of students during the teaching and learning process. Audiovisual aids are important in the education system because they encourage students to understand concepts easier (Kumar, 2019).

According to Fahrurozi, Maryono & Budiyanto (2017), video learning is learning that conveys material at a good speed and helps students to learn anywhere, and prioritizes learning that involves student activities. Fahmi (2019) said that with VideoScribe, students pay more attention to teacher explanations, and they can attract students' attention to be actively involved in class; making it easier for students to master learning concepts (Fatimah, 2021), fun and not monotonous learning (Kristiawan & Aminudin, 2021) and students become more enthusiastic in learning (Kurniati et al., 2019; Monitasari et al., 2021).

The N-gain results show an improvement in student learning activity between the control class and the experimental class, where the experimental class is higher than the control class. It happened because material delivery became more lively and real with VideoScribe, prompting students to actively engage in learning. During learning, students memorize the material and were actively involved in doing learning tasks. With VideoScribe, the learning process could be more varied, not solely dominated by verbal communication through the utterance of words by the teacher so that students were motivated to be actively involved in learning (Pamungkas et al., 2018). Pitriyani, Pamungkas & Alamsyah (2021) claimed that VideoScribe is an interesting application for teaching materials with a whiteboard display and hand animation like writing or drawing. The existence of animation in video is an innovation in learning that can display objects that do not exist physically (Mashami & Gunawan, 2018). Animation can also harmonize student learning styles such as visual, audio, kinesthetic, or other and animation makes it easier for teachers to develop learning activities (Rahmatina et al., 2019).

In the learning process using VideoScribe, the material delivered by the teacher through e-learning becomes more lively. Students become easier to understand the material, more enthusiastic, and active. Students had opportunities to find other ways of learning with videos because they get material in text form and are accepted in video form with visual movements, so students are not bored in learning and become more responsive (Bhakti et al., 2020). VideoScribe is more interesting for students because they are actively involved in learning, so that students will be more enthusiastic than learning with PowerPoint in the control class. It is proven in the experimental class, where more students ask questions than in the control class. Learning with VideoScribe can improve students' imagination, and it can be repeated if necessary to increase clarity so that students can re-learn the material taught by playing VideoScribe at home.

## **Conclusion**

The statistical test results of the independent sample t-test obtained a significance value of  $0.00 < 0.05$ , indicating that VideoScribe can effectively increase student learning activities. The results of the N-gain calculation for the experimental class are 0.63, while the control class is 0.42. This shows that the increase in activity in the experimental class is higher than in the control class. The increase in student activity in the experimental class is higher than





the control class because VideoScribe can combine audio, text, and images into animation, making students enthusiastic and curious about learning. From curiosity, students often ask and answer questions and discuss with each other to foster active student involvement and help students to understand learning.

### **Contributions/Originality**

Effective VideoScribe media can increase student learning activities. Knowledge, attitudes, and skills cannot be transferred directly, but students must be able to process them first. Thus, it is essential to pay attention to student activity in the learning process. Learning activities can stimulate and develop students' talents, can train them to think critically and solve problems in daily life. The improved learning activity can form students' self-confidence and courage to express opinions that are very useful for them in the future.

---

## REFERENCES

- Aryuntini, N., Astuti, I., & Yuliana, Y. G. S. (2018). Development of Learning Media Based on VideoScribe to Improve Writing Skill for Descriptive Text of English Language Study. *Journal of Education, Teaching and Learning*, 3(2), 187–194.
- Astuti, D. P., Bhakti, Y. B., & Astuti, I. A. D. (2019). Developing Adobe Flash-based mathematics learning media for 7th-grade students of junior high school. *Journal of Physics: Conference Series*, 1188(1), 1–13.
- Ayuningsih, D. (2019). Penerapan Model Pembelajaran Problem Based Learning untuk meningkatkan kemampuan berfikir kritis dan hasil belajar matematika siswa kelas 4 SD. *Jurnal Kajian Pendidikan Matematika*, 5(1), 23–32.
- Aziz, Z. A., & Sulicha, R. (2016). The use of cartoon films as audio-visual aids to teach english vocabulary. *English Education Journal (Eej)*, 7(2), 141–154.
- Bhakti, Y. B., Astuti, I. A. D. & Rahmawati, E. Y. (2020). Improving Students' Problem Solving Ability Through Learning Based Videoscribe. *JIPF (Jurnal Ilmu Pendidikan Fisika)*, 5(2), 61–67.
- Bozavlı, E. (2017). Vocabulary Teaching in Foreign Language via Audiovisual Method Technique of Listening and Following Writing Scripts. *International Education Studies*, 10(5), 129–135.
- Buchori, A. & Setyawati, R. D. (2015). Development Learning Model Of Character Education Through E-Comic In Elementary School. *International Journal of Education and Research*, 3(9), 369–386.
- Budiyono. (2016). *Statistika Untuk Penelitian Edisi Kedua*. Surakarta: UNS Press.
- Chai, M. T., Malik, A. S., Saad, M. N. M., & Rahman, M. A. (2019). Application of digital technologies, multimedia, and brain-based strategies: Nurturing adult education and lifelong learning. In *Outcome-based strategies for adult learning*. IGI Global.
- Creswell, J. M. (2014). *Research Design: qualitative, quantitative, and mixed methods approaches 4th ed*. New York: Sage Publication.
- Dewi, C. S., Suprpto, P. K., & Badriah, L. (2019). Peranan Media Sparkol Videoscribe Terhadap Hasil Belajar Kognitif Siswa Lintas Minat Biologi. *JPBIO (Jurnal Pendidikan Biologi)*, 4(2), 93–100.
- Drood, P. & Asl, H. D. (2016). The effects of audio- visual recorded and audio recorded listening tasks on the accuracy of Iranian EFL learners' oral production. *English Language Teaching*, 9(9), 110–115.
- Fahmi, A. N. (2019). Peningkatan Hasil Belajar Siswa Materi Mawaris Menggunakan Sparkol Videoscribe. *Pedagogia Jurnal Ilmu Pendidikan*, 17(03), 229–238.
- Fahrurozi, S.K., Maryono D., & Budiyanto, C. (2017). The development of video learning to deliver a basic algorithm learning. *Indonesian Journal of Informatics Education*, 1(2), 49–56.
- Fatimah. (2021). Pengaruh Media Animasi Sparkol Videoscribe Dalam Pembelajaran Daring Terhadap Penguasaan Konsep Mahasiswa. *Jurnal Fisika Dan Pembelajarannya (PHYDAGOGIC)*, 3(2), 53–60.

- Fikri, H. & Madona, A. S. (2018). *Pengembangan media pembelajaran: Berbasis multimedia interaktif*. Yogyakarta: Samudra Biru.
- Hake, R. R. (1999). *Analyzing Change/Gain Scores*. Woodland Hills: Dept. of Physics, Indiana University.
- Hasan, A. M., Nusantari, E., Latjompoh, M., & N. (2017). *Strategi belajar mengajar Biologi*. Gorontalo: UNG Press.
- Hayati, N. & Berlianti, N. A. (2016). Peningkatan Aktivitas Dan Hasil Belajar Mahasiswa Universitas Hasyim Asy'ari Melalui Pembelajaran Discovery Terbimbing (Improvement Students' Activities and Cognitive Learning Outcomes of Hasyim Asy'ari University through Guided Discovery Learning). *Jurnal Pendidikan Biologi Indonesia*, 2(3), 206–214.
- Hayati, S. (2017). *Belajar & Pembelajaran Berbasis Cooperative Learning*. Magelang: Graha Cendekia.
- Helmiati. (2012). *Model Pembelajaran*. Yogyakarta: Aswaja Pressindo.
- Hunaepi., Samsuri, T., Asy'ari, M., & Sukaisih, R. (2014). *Sains teknologi masyarakat: strategi, pendekatan dan model pembelajaran*. Mataram: Duta Pustaka Ilmu.
- Kholidin, K., Hudaidah, H., & Safitri, S. (2017). Pengembangan Media Pembelajaran Menggunakan Program Video Scribe Sparkol pada Mata Pelajaran Sejarah Kelas XI di Sekolah Menengah Atas. *Criksetra: Jurnal Pendidikan Sejarah*, 6(2), 1–21.
- Kristiawan, M., & Aminudin, N. (2021). Sparkol VideoScribe Application for Instruction. *Advances in Social Science, Education and Humanities Research*, 532, 303–310.
- Kumar, M. A. S. (2019). Use Of Videoscribe Application In Teaching: A Comparative Study. *International Journal of Clinicopathological Correlation*, 3(1), 19–21.
- Kurniati, Arief, Z. A. & Gunawan, A. A. (2019). The Enhancement of Students' Mathematics Critical Thinking Ability Through Videoscribe Learning Multimedia. *Advances in Social Science, Education and Humanities Research*, 467(1), 88–93.
- Kurniawan, T. D. (2016). Pengaruh Penggunaan Media Video Pembelajaran Terhadap Prestasi Belajar Ilmu Pengetahuan Sosial Siswa Kelas V SD Se-Kecamatan Gedangsari Gunungkidul Tahun Ajaran 2015/2016. *Trihayu: Jurnal Pendidikan Ke-SD-An*, 3(1), 21–26.
- Marlena, N., Dwijayanti, R., & Widayati, I. (2019). Is audio visual media effective for learning? *Advances in Social Science, Education and Humanities Research*, 335(1), 260–264.
- Mashami, R. A., & Gunawan, G. (2018). The Influence of Sub-Microscopic Media Animation on Students' Critical Thinking Skills Based on Gender. *Journal of Physics: Conf. Series*, 1108(2018), 1–7.
- Monitasari, L., W Suprih, E., & Aristyagama, Y. H. (2021). Efektivitas Penggunaan Media Pembelajaran Videoscribe Untuk Meningkatkan Motivasi Belajar Dan Hasil Belajar Siswa Pada Mata Pelajaran Dasar Desain Grafis Di SMK Negeri 5 Surakarta. *Jurnal Ilmiah Pendidikan Teknik Kejuruan (JIPTEK)*, 14(2), 99–107.



- Mulyasa, E. (2003). *Menjadi guru profesional menciptakan pembelajaran kreatif dan menyenangkan*. Bandung: Penerbit PT Remaja Rosdakarya.
- Mulyono. (2009). *Pendidikan Bagi Anak Berkesulitan Belajar*. Jakarta: PT Rineka Cipta.
- Munawwarah, R. A. (2019). Sparkol Videoscribe Sebagai Media Pembelajaran. *Jurnal Inspirasi Pendidikan*, 8(2), 430–437.
- Netriwati & Lena, M. S. (2017). *Media pembelajaran Matematika*. Bandar Lampung: Permata Net.
- Nurdyansyah, & Fahyuni, E. F. (2016). *Inovasi Model Pembelajaran: Sesuai Kurikulum 2013*. Sidoarjo: Nizamia Learning Center.
- Pamungkas, A. S., Ihsanudin, I., Novaliyosi, N., & Yandari, I. A. V. (2018). Video Pembelajaran Berbasis Sparkol Videoscribe: Inovasi Pada Perkuliahan Sejarah Matematika. *Prima: Jurnal Pendidikan Matematika*, 2(2), 127–135.
- Pitriyani, P., Pamungkas, A. S., & Alamsyah, T. P. (2021). Developing Science Literacy Based Videoscribe Learning Videos At Elementary Schools. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, 10(4), 982–996.
- Prasetyo, P. E. & Anggraeni, O. (2020). The Effectiveness Of Sparkol Videoscribe And Chart In Improving Students Economics Learning Outcome. *Journal Of Critical Reviews*, 7(12), 2699–2707.
- Pratiwi, E. D., Latifah, S., & Mustari, M. (2019). Pengembangan Media Pembelajaran Fisika Menggunakan Sparkol Videoscribe- Development Of Physical Learning Media Using Videoscribe Sparkol. *Indonesian Journal of Science and Mathematics Education*, 2(3), 303–309.
- Purba, S. E. E., Kristiani., Sangka, K. B., & Hussain, O. K. (2021). An Overview of its Impact on Economics Learning. *Internasional Journal of Pedagogy and Teacher Education*, 5(1), 26–34.
- Purwanto, A. E, Hendri, M., & Susanti, N. (2016). Studi Perbandingan Hasil Belajar Siswa Menggunakan Media Phet Simulations Dengan Alat Peraga Pada Pokok Bahasan Listrik Magnet Di Kelas IX SMPN 12 Kabupaten Tebo. *Jurnal Pendidikan Fisika*, 1(1), 22–27.
- Rahmatina., Kenedi, A. K., Eliyasni, R., & Fransyaigu, R. (2019). Jigsaw using animation media for elementary school. *Journal of Physics: Conference Series*, 1424(2019), 1–6.
- Simamora, R. E., Sidabutar, D, R., & Surya, E. (2017). Improving learning activity and students' problem solving through problem based learning (PBL) in Junior High School. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 33(2), 321–331.
- Sparkol. (2019). *Videoscribe for Education*. Sparkol group.
- Sudjana, N. & Rivai, A. (2015). *Media Pengajaran*. Bandung: Sinar Baru Algensindo.
- Sudrajat, F. B., & Hardinto, P. (2017). The Application Teams Games Tournaments and Media Learning Sparkol Video Scribe to Increase Motivation and Study Results. *Classroom Action Research Journal*, 1(3), 125–132.
- Sunarto. (2013). *Perkembangan Peserta Didik*. Jakarta : PT Rineka Cipta.



- Sundayana, R. (2014). *Statistika Penelitian Pendidikan*. Bandung: Alfabeta.
- Wijayanti, P. S. (2018). Pengembangan Bahan Ajar Digital Bahasa Inggris Matematika Dengan Bantuan Videoscribe Melalui E-Learning. *UNION Jurnal Ilmiah Pendidikan Matematika*, 6(2), 147–156.
- Woodrich, M., & Fan, Y. (2017). Google Docs As A Tool For Collaborative Writing In The Middle School Classroom. *Journal Of Information Technology Education Research*, 16(1), 391–410.
- Yusup, M., Aini, Q., & Pertiwi, K. D. (2016). Media Audio Visual Menggunakan Videoscribe Sebagai Penyajian Informasi Pembelajaran Pada Kelas Sistem Operasi. *Technomedia Journal*, 1(1), 126–138.
- Zubaidillah. M. M., Kirana, T., & Poedjiastoeti, S. (2016). Development Of STAD Cooperative Based Learning Set Assisted With Animation Media To Enhance Student's Learning Outcome In MTS. *Jurnal Pendidikan IPA Indonesia*, 5(2), 247–255.