

THE EFFECTIVENESS OF USING WORD WALL-BASED LEARNING MEDIA IN INCREASING STUDENTS' LEARNING ACTIVITIES ON ECONOMY LEARNING SUBJECTS AT SMA PGRI PEKANBARU

Vanessa Marensi¹, Suarman², Almasdi Syahza³

^{1,2,3} Economics Education FKIP Riau University, Pekanbaru, Indonesia

¹vanessa.marensi1337@student.unri.ac.id, ²suarman@lecturer.unri.ac.id, ³almasdi.syahza@lecturer.unri.ac.id

ABSTRACT

This paper analyzes students' learning activities using word wall-based learning media. The research was conducted at SMA PGRI Pekanbaru in class X of Social Science. The research used an experimental approach with the One Group Pretest Posttest Design model. Data collection techniques used questionnaires and observation sheets. Students' learning activity data were obtained through questionnaires. Meanwhile, based on the use of word wall learning media, data were obtained through observation. Data analysis techniques used t-test and Normality Gain (N-gain). The results indicate that the use of word wall learning media was effective in increasing students' learning activities. It can be seen from the improvement of students' learning activities from medium to high. Thus, it is expected for teachers, in order to achieve better results in students' learning activities, this learning media can be used, especially in Economy learning subjects in Senior High School. In addition, further researchers can conduct the same study based on different learning subjects. Because, in addition to increasing students' learning activities, word wall learning media can improve students' learning outcomes and motivation.

Keywords: learning activities, learning media, word wall, economy learning subject

EFEKTIVITAS PENGGUNAAN MEDIA PEMBELAJARAN BERBASIS WORDWALL DALAM MENINGKATKAN AKTIVITAS BELAJAR SISWA MATA PELAJARAN EKONOMI DI SMA PGRI PEKANBARU

ABSTRAK

Tulisan ini menganalisis aktivitas belajar siswa menggunakan media pembelajaran berbasis *wordwall*. Penelitian dilaksanakan di SMA PGRI Pekanbaru pada kelas X IPS. Penelitian menggunakan pendekatan eksperimen dengan model *One Group Pretest Posttest Design*. Teknik pengumpulan data menggunakan angket dan lembar observasi. Angket aktivitas belajar siswa diperoleh melalui angket aktivitas belajar. Sedangkan penggunaan media pembelajaran *wordwall* datanya diperoleh melalui observasi. Teknik analisis data menggunakan uji-t dan Normalitas Gain (N-gain). Hasil penelitian menunjukkan bahwa penggunaan media pembelajaran *wordwall* efektif dalam meningkatkan aktivitas belajar siswa. Hal ini dapat dilihat dari peningkatan aktivitas belajar siswa dari sedang ke tinggi. Dengan demikian, diharapkan kepada guru agar aktifitas belajar siswa lebih baik maka dapat menggunakan media pembelajaran ini khususnya pada mata pelajaran ekonomi di SMA. Dan kepada peneliti selanjutnya juga dapat melakukan kajian yang sama dengan mata pelajaran yang berbeda. Karena, selain dapat meningkatkan aktivitas belajar siswa, media pembelajaran *wordwall* juga mampu meningkatkan hasil belajar serta motivasi belajar siswa.

Kata Kunci: aktivitas belajar, media pembelajaran, word wall, mata pelajaran ekonomi

Submitted	Accepted	Published
07 February 2023	26 March 2023	29 March 2023

Citation	:	Marensi, V., Suarman, S., & Syahza, A. (2023). The Effectiveness Of Using Word Wall-Based Learning Media In Increasing Student Learning Activities On Economy Learning Subjects At SMA PGRI Pekanbaru. <i>Jurnal PAJAR (Pendidikan dan Pengajaran)</i> , 7(2), 407-415. DOI: http://dx.doi.org/10.33578/pjr.v7i2.9165 .
-----------------	---	--

INTRODUCTION

Education is an effort to produce a quality generation, through human education it is hoped that they can socialize with their environment. According to Safitri, et al (2022) education is a complex activity, and includes various parts that are closely related to one

another. Therefore, if education is to be carried out in a directed and orderly manner, then the various factors that participate in education must be understood first.

Based on a pre-survey conducted at SMA PGRI Pekanbaru through interviews with several

teachers and students, it is known that there are several things such as students are less able to express opinions, students are less involved in learning, resulting in low student activity in learning from some students also stating that the low activity in learning is caused by the teacher's monotonous way of teaching without being equipped with learning media. This is in line with the opinion of Irianti, et al (2021) a teacher must be able to produce quality education, this can be achieved by creating a pleasant learning atmosphere. The opinion of Kristin & Rahayu (2016) states that low learning activities can be caused by teachers, students, and infrastructure, inadequate infrastructure will cause learning to be less effective.

In today's all-digital era, teachers are required to be able to give direction to students to be more active in learning and direct students to be able to use technology. In order for this to be realized, the use of learning media that utilizes technology can help. Nurfadhillah, et al (2021) argue that learning media that involves a student or interactive media in learning will make it interesting for students and make it easier for teachers to deliver material. An example of a learning media that utilizes technology is the *Wordwall* application.

To access *Wordwall*, you don't need to download the application on the playstore or Appstore, but it can be accessed using [the https://wordwall.net](https://wordwall.net) website. *Wordwall* provides 33 templates designed in the form of games. The advantage of *wordwall* compared to other media is that *wordwall* is easily accessible without the need to download an application, *results* or answers from students can be recapitulated automatically. Another advantage is that *wordwall* provides 18 free templates that can be used, the appearance of the available templates is able to attract the attention of students in order to increase their learning activities. However *Wordwall* only gives 5 times the opportunity for users to use the templates that are available for free, if they exceed it will be charged. This is a drawback in the use of *wordwall* applications.

Some previous studies have proven that *wordwall* can improve student learning activities. According to Sari (2021), the use of *Wordwall*

media can make students more active and understand the material provided, *wordwall* media can improve student activities and learning outcomes. According to Purnamasari (2022), *wordwall* is one of the alternative choices from various kinds of interactive learning media that can make the learning process fun and not boring for students and teachers. Because, this *Wordwall* application emphasizes learning styles that involve the role of student learning activities through participation with peers competitively against the learning they are currently learning. The results of Hatari, et al's (2016) research also stated that the use of learning media can increase teacher activity, with increasing teacher activity, student activity will also increase. Other studies also mention that this *wordwall* learning media can improve learning outcomes and student motivation, because student learning activities at SMA PGRI Pekanbaru are still low, research is needed on "The Effectiveness of Using *Wordwall*-Based Learning Media in Improving Student Learning Activities".

LITERATURE REVIEW

In learning, activities are needed, related to this, Sardiman (2013) stated that the principle of learning is to do, "*learning by doing*". To do what is intended here is to do to change behavior or to do an activity. Sadirman (2013) also revealed that learning activities are activities related to the physical or mental. The more active students are in learning, the better the learning process. Ningtyas and Wuryani (2017) said that learning activities are student involvement in learning actively so that learning achieves learning success. Learning activities are student involvement in the form of attitudes, thoughts, attention, and activities in learning activities to support the success of the teaching and learning process and obtain benefits from these activities. According to Hapsari (2017) children who learn always do activities. Student activity during the learning process is one of the indicators of students' desire to learn.

Based on the explanations of several research experts, it is concluded that learning activities are the entire learning process activities carried out by teachers and students in the sense

that every student learning process is required to be active in the way students are involved in the learning process, where learning activities can be seen from the indicators of learning activities, namely student enthusiasm in following learning, the ability to present tasks, ability to express opinions, ability to cooperate with classmates, ability to ask questions, and ability to answer questions. According to Rosmawati (2017) the factors that affect learning are: 1) Internal factors, including intelligence, perception barriers, interests, aptitudes, physiological conditions; 2) External factors, physical condition/building, facilities and infrastructure and teachers. Meanwhile, according to Rois, et al (2016) the factors of learning difficulties can be classified into two, namely: 1) F internal actors who come from within, and 2) Fak external actors who come from outside, one of these external factors is learning media.

Indicators of learning activities in this study are:

- a) Have enthusiasm in following learning.
- b) Ability to discuss with groups
- c) Students' ability to express opinions
- d) Ability to present the results of discussions
- e) Courage to ask questions during the lecture
- f) Courage, courage, courage to answer questions

According to Zelfiani, et al (2016) learning media is a learning component that has an important role during the learning process. The use of media should be a part that should receive the attention of teachers/facilitators in the learning process. Therefore, teachers need to learn how to establish learning media so that the learning process becomes effective. According to Chandra, et al, (2021) learning media is used as a liaison between teachers and students, where not always in the classroom, students can learn anywhere using their cellphones, in addition to being useful for making learning materials delivered well, learning media can also make students more interested and respond more positively, so it is expected to increase student motivation in the learning process. Simanjuntak, et al (2019) multimedia are used by teachers to deliver teaching materials and build a conducive atmosphere and motivate students to learn.

Interactive multimedia can take the form of online or offline. Online interactive multimedia includes the web, blogs, and other social media; Explored material without the requirement to install the application. Offline interactive multimedia is material that is accessed through a computer or mobile phone by first installing the application on the device.

Surjono (2017) Multimedia which is used to make it easier for students to understand learning material so as to achieve certain learning goals is often referred to as multimedia learning. In using multimedia applications, students certainly do activities or interact with them, for example by clicking navigation buttons (*next, back, home*), clicking menus, choosing alternative answers, writing text, shifting objects, and others. Sanjaya (2020) stated the advantages of multimedia in learning, including: 1) Overcoming the limitations of experience that students have; 2) Media can overcome classroom boundaries. This is mainly to provide learning materials that are difficult for students to understand directly; 3) Media allows direct interaction between participants and the environment; 4) The media can produce uniformity of observation; 5) The media can instill the basic concepts that are true, real and precise; 5) Media can generate motivation and stimulate students to learn well; 6) Media can generate new desires and interests; 7) Media can control the speed of student learning; 8) Media can provide a thorough experience from concrete things to abstract ones.

According to Ramdani (2021) in choosing media, you should pay attention to several criteria, namely: 1) The suitability of the media with the teaching objectives, meaning that the teaching media is selected on the basis of the learning objectives that have been set from each material; 2) Support for the content of the subject matter, meaning that the existence of the learning material media that are facts, concepts and generalizations are easier to understand; 3) Ease of obtaining media, meaning that the necessary media is easily obtained at least made by the teacher at the time of study; 4) The teacher's skill in using it, meaning that whatever type of media is needed, the main requirement is that the teacher can use it in the teaching process; 5) There is time

to use it, so that the media can be useful to students during teaching; 6) In accordance with the level of thinking of students, choosing media for education and teaching must be in accordance with the level of thinking of students so that the meaning contained in it can be understood by students.

According to Fikriansyah & Idzi'Layyinnati (2021) *wordwall* is an interesting application in the browser. This app specifically aims to be a fun learning resource, medium, and assessment tool for students. In the *wordwall* page, examples of teacher creations are also provided so that new users can get an idea of what kind of creation will be like. *Wordwall* can be interpreted as a web application that we use to make quiz-based games fun. This web application is suitable for designing and reviewing a learner assessment. According to Sari and Yarza (2021) explained that *wordwall* is an application that can be used as a learning medium, learning resource or online-based assessment tool that is interesting for students.

Based on the explanation of expert opinions, it can be concluded that *Wordwall* is one of the interactive learning media applications that can be accessed through the website, where *Wordwall* provides fun quiz-based game features, so as to increase students' interest in learning so that learning becomes more interactive. *Wordwall* can be used as a forum that helps teachers to conduct learning assessments.

Menurut Savira & Gunawan (2022) the advantages of *wordwall* applications are: 1) Can provide a meaningful learning system for students and in its use can be easily used both at the basic and high levels; 2) In accessing the *wordwall* application can be accessed anywhere only by using a mobile phone; 3) Creative application with many templates so that it can attract the attention of students in carrying out learning. Meanwhile, the *wordwall* application is the following: 1) In making this *wordwall* application takes quite a long time; 2) In its use the font size is sometimes too small and cannot be changed; 3) If you don't have internet access / quota, you can't open the *wordwall* application.

Effectiveness can be achieved, one of which is by using learning media in the learning

process that is in accordance with the situation and conditions, both from the material content and the state of the student environment. The delivery of a concept to students will be conveyed well if the concept requires students to be directly involved in it when compared to a concept that only involves students to observe (Wibawanto, Wandah.2017). Learning media in online learning is used as a tool to increase the efficiency and effectiveness of learning. Learning media is used to achieve goals such as making the message clear visually so that it is not too verbal. Overcoming the limitations of space, time and five indara. Accelerating the learning and teaching process, generating enthusiasm in learning, providing opportunities for students to interact directly with their environment and reality in the field, and providing opportunities for students to learn independently based on their abilities and interests (Ni Nyoman Padmadewi, et al. 2017). So that it can be concluded that the effectiveness of learning can be achieved using *wordwall* learning media, the use of learning media can help the learning process become more effective and can help improve student understanding so that learning objectives will be achieved.

REASERCH METHOD

This research was carried out at SMA PGRI Pekanbaru for the 2022/2023 academic year. This research uses a type of experimental research. The research design used was *One Group Pretest-posttest Design*. Subjects in class X research of SMA PGRI Pekanbaru. The data collection method in this study used 1) Questionnaire. The questionnaire was prepared based on indicators of learning activities, researchers used questionnaires that would be distributed before giving treatment (*pretest*) to see student learning activities before using *wordwall* media and redistributing the questionnaire after giving treatment (*posttest*) to see the final results of student learning activities after using *wordwall* media and 2) Observation. Observation sheets are arranged based on indicators of learning activities, observations are used to collect data on the implementation of learning using *wordwalls* through observation sheets of teacher and student activities. The data

analysis techniques used are descriptive analysis and Gain Normality test(N-Gain).

RESULTS AND DISCUSSION

To see an increase in student learning activities before and after the use of *wordwall*-

based learning media, descriptive analysis is used. The results of the descriptive analysis of the level of student learning activities can be seen in Table 1:

Table 1. Average Level of Student Learning Activity Before Using *Wordwall*-Based Learning Media

Interval	Frequency	Percentage
≥ 22	8	26 %
14 – 21	18	58 %
< 14	5	16 %

Based on Table 1, it is known that most respondents on average have a level of learning activity before the use of *wordwall*-based learning media, namely as many as 18 people (58%) are in the moderate category, even 5 people (16%) are in the low category. Thus, it can be seen that the

level of student learning activities so far is still not optimal and needs to be improved by using *wordwall* learning media. Next, student learning activities after using *wordwall*-based learning media can be seen in Table 2:

Table 2. Average Level of Student Learning Activity After Use of *Wordwall*-Based Learning Media

Interval	Frequency	Percentage
≥ 22	23	74 %
14 – 21	7	23 %
< 14	1	3 %

Based on Table 2, it is known that after the use of *wordwall*-based learning media, student learning activities in the high category were 23 people (74%) and only 1 person (3%) was in the low category. So it can be concluded that after the use of *wordwall*-based learning media there is an increase in learning activities of class X social studies students on average, namely from the medium category to the high category. This is in accordance with the results of research by Aidah and Nurafni (2022) which states that *wordwall* media is able to increase student learning activities.

To determine the effectiveness of the use of *wordwall*-based learning media in increasing

student learning activities, it is carried out to find out the effectiveness of using a *treatment* in one group pretest posttest design research with the help of *SPSS for windows ver calculations*. 22. In this study, the effectiveness category based on Hake, R.R (1999), a treatment is said to be effective if the N-Gain score meets the following criteria:

- > 76: Effective
- 56 – 75: Quite Effective
- 40 – 55: Less Effective
- < 40: Ineffective

N-Gain results can be seen through the following T abel 3 :

Table 3. N-Gain Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
Ngain_score		.11	1.00	.5660	.29005
Ngain_score		10.53	100.00	56.5998	29.00527
ValidN (listwise)					

Based on Table 3, the mean of 56.5998 was obtained, so it can be concluded that the use of *wordwall*-based learning media is "quite effective" in increasing the learning activities of students of economics class X social studies subjects at PGRI Pekanbaru High School.

Furthermore, a t-test was carried out to determine the difference between student learning activities without using *wordwall* learning media and student learning activities using *wordwall* learning media assuming normal distributed data. The test results can be seen in Table 4 below:

Table 4. Data Normality Results

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	Df	Sig.
Ngain_persen	.094	31	.200*	.939	31	.079

Based on Table 4, it is known that the significance value (Sig.) in the Shapiro-Wilk test for the NGain_persen value is 0.079, because the value (Sig.) is greater than 0.05, it can be concluded that the data in this study are normally

distributed. Furthermore, to see the difference between student learning activities without using *wordwall* learning media and student learning activities using *wordwall* learning media can be seen in Table 5 below:

Table 5. Paired Sample Test

Paired Differences						t	Df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper			
Pair 1 Pre test Post test	-5.387	2.642	.474	-6.356	-4.418	-11.354	30	.000

Based on Table 5, it can be seen that Sig.(2-tailed) $0.000 < 0.05$, meaning that there is a significant difference between student learning activities without using *wordwall* learning media and student learning activities using *wordwall* learning media with an average score difference of 5,387.

The Effectiveness of Using Wordwall-Based Learning Media in Increasing Student Learning Activities

The hypothesis in this study is that the use of *wordwall*-based learning media is effective in increasing student learning activities in economics subjects class X social studies SMA PGRI Pekanbaru. Based on the results of the N-Gain

test, the results were obtained that the use of wordwal media was "quite effective" in increasing student learning activities with a mean value of 56.5998. In addition, a descriptive analysis was carried out to see student learning activities before the use of *wordwall* learning media and after the use of *wordwall* learning media. Based on the results of descriptive analysis after the use of *wordwall* learning media, there was an increase in student learning activities.

Before learning using *wordwall* learning media, only 29% of students stated that their learning activities were in the high category, and the average student learning activity before the use of *wordwall* learning media was in the moderate category of 55%. After learning the use

of *wordwall* media in learning, the average student learning activity is in the high category of 74%, it can be interpreted that there is an increase in student learning activities from the medium category to the high category. So it can be concluded that the use of *wordwall*-based learning media can increase student learning activities in economics class X social studies subjects at PGRI Pekanbaru High School. This is in line with the research of Kristin & Rahayu (2022) which shows that *wordwall* media can increase student learning activities. Sari (2021) in her research also concluded that the use of *Wordwall* media can make students more active and understand the material provided and *wordwall* media can increase student learning activities.

Based on the results of the t-paired sample t-test, it is known that there is a significant difference between student learning activities without using *wordwall* learning media and student learning activities using *wordwall* learning media with an average score difference of 5,387. On the other hand, *wordwall* learning media can also improve student learning outcomes. Minarta, et al (2022) also stated that *wordwall* media is effective in improving economic learning outcomes, after the implementation of experiments *wordwall* learning media can improve economic learning outcomes, especially taxation materials. So it can be concluded that *wordwall* learning media is able to increase student learning activities, as well as learning motivation, interest in learning and even able to improve student learning outcomes.

So in this case the teacher has an important role to increase learning activities in students. As stated by Lianisari (2022) that the task of a teacher in general is not only limited to providing material in class, but also being a role model for students in attitude. One way a teacher behaves is to pay attention to the physical and spiritual health of students. As stated by Malistuti (2022) students who have good physical and spiritual conditions mean that they have a healthy state that can make the student able to act concretely to learn optimally in achieving the expected learning goals.

CONCLUSIONS AND RECOMMENDATION

1. Before the use of *wordwall*-based learning media, the average student learning activity was in the moderate category of 54%, after the use of *wordwall*-based learning media, the average student learning activity was in the high category of 74%. So it can be concluded that there is an increase in student learning activities from the medium category to the high category. When viewed from the indicators of learning activities, the answers on the questionnaire given by respondents to the questionnaire can be stated that the use of *wordwall* learning media can increase student learning activities in economics subjects of students X social studies at PGRI Pekanbaru High School.
2. The use of *wordwall*-based learning media is effective in increasing student learning activities in economics subjects of students X social studies at PGRI Pekanbaru High School.

It is hoped that teachers can increase student learning activities, one of which is by using learning media, for example *wordwall* media.

1. For students. It is hoped that with this research, students should always maintain and improve learning activities in order to obtain good results from learning.
2. For teachers. It is hoped that teachers can increase student learning activities, one of which is by using learning media, for example *wordwall* media.
3. For subsequent researchers, the results of this study can be used as information material in developing further research. And researchers can further develop regarding the factors that influence student learning activities from indicators of student learning activities.

REFERENCES

- Aidah, N., & Nurafni, N. (2022). Analisis Penggunaan Aplikasi Wordwall Pada Pembelajaran Ipa Kelas Iv Di Sdn Ciracas 05 Pagi. *Pionir: Jurnal Pendidikan*, 11(2).
- Chandra, A., Nasir, M., & Fakhruddin, Z. (2021). Pengembangan Video Pembelajaran Fisika Berbasis Powtoon pada Materi

- Gerak Lurus untuk SMA Kelas X. *Jurnal Geliga Sains: Jurnal Pendidikan Fisika*, 9(1)
- Fikriansyah, M & Idzi'Layinnati. (2021). "Pengaruh Media Pembelajaran Berbasis Website (Wordwall) Terhadap Hasil Belajar Peserta Didik Pada Mata Pelajaran Fiqih Kelas VII Di Sekolah Menengah Pertama Muhammadiyah 07 Paciran". *Jurnal Mahasiswa Pendidikan*, 1(1)
- Hapsari, A. E. (2017). "Penerapan Model Pembelajaran Kooperatif Tipe Numbered Heads Together Berbantuan Media Interaktif Untuk Meningkatkan Aktivitas dan Prestasi Belajar Siswa". *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 7(1)
- Hatari, I., Gimin, G., & Haryana, G. (2016). "Penggunaan Media Gambar Melalui Multimedia Spectra Untuk Meningkatkan Motivasi Belajar Siswa Pada Pelajaran IPS Di SMK Negeri 3 Tanah Putih Tahun Pelajaran 2015/2016". *Jurnal Online Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Universitas Riau*, 3(2)
- Irianti, M., Syahza, A., Suarman. (2021). *Is it true that educator certification guarantees professional teachers. Ilkogretim Online*, 20 (1)
- Kristin, F., & Rahayu, D. (2016). Pengaruh Penerapan Model Pembelajaran Discovery Learning Terhadap Hasil Belajar IPS Pada Siswa Kelas 4 SD. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 6(1).
- Lianisari, D., Syahza, A., & Sumardi, S. (2022). Supervisi Akademik Kepala Sekolah Dalam Upaya Menanamkan Nilai Sikap Nasionalisme Melalui Pembelajaran PPKN di SMA Darma Yudha. *Jurnal Manajemen Pendidikan Penelitian Kualitatif*, 6(2).
- Malistuti, E., Syahza, A., & Suarman, S. (2022). Faktor Penentu Motivasi Belajar Siswa Pada Mata Pelajaran Ekonomi di SMA Negeri Kecamatan Tambang. *JURNAL PAJAR (Pendidikan dan Pengajaran)*, 6(2).
- Minarta, S., M & Pamungkas, H., P. (2022). "Efektivitas Media Wordwall untuk Meningkatkan Hasil Belajar Ekonomi Siswa MAN 1 Lamongan". *Oikos: Jurnal Kajian Pendidikan Ekonomi dan Ilmu Ekonomi*, 6(2).
- Ningtyas, E. S., & Wuryani, E. (2017). Penerapan Model Pembelajaran Kooperatif (Cooperative Learning) Tipe Make-A Match Berbantuan Media Komik Interaktif Untuk Meningkatkan Aktivitas Belajar Dan Hasil Belajar IPS. *Jurnal Pendidikan Surya Edukasi*, 1(3).
- Nurfadhillah, S., Tantular, L. D., Syafitri, H. A., Fauzan, M. I., & Haq, A. S. (2021). "Analisis Pengembangan Media Interaktif Berbasis Power Point Pada Pembelajaran". *Pensa : Jurnal Pendidikan Dan Ilmu Sosial*, 3(2).
- Purnamasari, S., Rahmanita, F., Soffiatun, S., Kurniawan, W., & Afriliani, F. (2022). Bermain Bersama Pengetahuan Peserta Didik Melalui Media Pembelajaran Berbasis Game Online Word Wall. *Abdi Laksana: Jurnal Pengabdian Kepada Masyarakat*, no. 1: 70-77.
- Ramdani, P. (2021). *Media Pembelajaran Animasi (Studi tentang Analisis Dampak terhadap Prestasi dan Motivasi Belajar*. Bandung : Farha Pustaka. Google Play.
- Rois, J., Sumarno, Gimin. (2016). Faktor Penyebab Kesulitan Belajar Siswa pada Mata Pelajaran Ekonomi di SMA Negeri 11 Pekanbaru." *Jurnal Online Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Universitas Riau*, 3(1).
- Rosmawati. (2017). *Bimbingan Konseling Belajar*. Pekanbaru : UR Press.
- Safitri, M., & Rasyid, M. N. (2022). "Penerapan Media Web Wordwall untuk Meningkatkan Hasil Belajar PAI Siswa di SMP Negeri 2 Langsa". *Al-fikhtibar: Jurnal Ilmu Pendidikan*, 9(1).
- Sanjaya, H. (2020). Strategi Pembelajaran Berorientasi Standar Proses Pendidikan. Jakarta: Kencana.
- Sardiman. (2013). *Interaksi dan Motivasi Belajar mengajar*. Jakarta : PT Raja Grafindo Persada.

- Sari, P. M., & Yarza, H. N. (2021). "Pelatihan Penggunaan Aplikasi Quizizz dan Wordwall pada pembelajaran IPA bagi guru-Guru Sdit Al-kahfi". *Selaparang Jurnal Pengabdian Masyarakat Berkemajuan FKIP Uhamka*, 4(2).
- Sari, W. I. Y. (2021). Wordwall sebagai Media Belajar Interaktif Daring dalam Meningkatkan Aktifitas dan Hasil Belajar Mahasiswa Geografi Pada Mata Kuliah Geografi Desa Kota di Masa Pandemi. *Akademika*, 10(1).
- Savira, A., & Gunawan, R. (2022). "Pengaruh Media Aplikasi Wordwall dalam Meningkatkan Hasil Belajar Mata Pelajaran IPA di Sekolah Dasar". *Edukatif: Jurnal Ilmu Pendidikan*, 4(4).
- Simanjuntak, S. F., Suarman., Indrawati, H. (2019). Development of Interactive Multimedia Towards Economic Problems on Economic Subjects for Social Science Class X Students At Darma Yudha High School. *International Journal of Educational Best Practices*, 3(2).
- Surjono, H, D. (2017). *Multimedia Pembelajaran Interaktif , Konsep dan Pengembangan*. Yogyakarta : UNY Press. Google Play.
- Syahza, A. (2021). *Metodologi Penelitian*. Pekanbaru : UR Press.
- Wibawanto, W. (2017). *Desain dan Program Multimedia Pembelajaran Interaktif*. Jember: Cerdas Ulet Kreatif.
- Zelfiani, W, O., Indrawati, H., Haryana, G. (2016). Pengaruh Penggunaan Media Pembelajaran Power Point dan Audiovisual terhadap Hasil Belajar Ipsekonomi Siswa Kelas VII SMPN 6 Siak Hulu Kabupaten Kampar. *Jurnal Online Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Universitas Riau*, 3(2).