



The Effect of Word Wall Media on the Class Counting Operation Skills

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Abstract: This research aimed to investigate the effect of word wall learning media on students' multiplication calculation skills. A quantitative research approach was employed using a Pre-Experimental Design, specifically a One-Group Pretest-Posttest Design. The instrument's validity and reliability were tested using the Statistical Package for the Social Sciences (SPSS) software. The analysis technique used was the t-test, with the null hypothesis (H_0) being rejected and the alternative hypothesis (H_a) being accepted. The t-test results showed a calculated t-value of 21.570, while the critical t_{value} (t_{table}) had a significance level of 0.000 and 27 degrees of freedom was 2.051. At a 5% significance level ($21.570 > 2.051$) and a p-value of less than 0.05 ($p=0.000 < 0.05$), it was concluded that H_a was accepted and H_0 was rejected. This indicates a significant difference between pre-test and post-test scores, demonstrating that the word wall media positively influences the multiplication calculation skills of fifth-grade students at UPT SPF SDN 105308 Namu Bintang.

Abstrak: Penelitian ini bertujuan untuk mengetahui pengaruh media pembelajaran word wall terhadap keterampilan operasi hitung perkalian siswa. Penelitian ini menggunakan jenis penelitian kuantitatif dengan desain Pre Experimental Design berupa One Group Pretest-Posttest Design. Validitas dan reliabilitas instrumen diuji menggunakan Software Statistical Package for the Social Sciences (SPSS). Teknik analisis yang digunakan adalah uji t dengan hipotesis H_0 ditolak dan H_a diterima. Berdasarkan hasil perhitungan statistik uji t, diketahui bahwa thitung sebesar 21,570 dan t_{tabel} ($\text{sign}= 0,000$) dengan df 27 adalah 2,051. Pada taraf signifikansi 5% ($21,570 > 2,051$) dan dengan nilai signifikansi kurang dari 0,05 ($p=0,000 < 0,05$), dapat disimpulkan bahwa H_a diterima dan H_0 ditolak. Hal ini berarti terdapat pengaruh dari pretest sebelum diberikan perlakuan ke posttest setelah diberikan perlakuan. Jadi, dapat disimpulkan bahwa media word wall berpengaruh terhadap keterampilan operasi hitung perkalian siswa kelas V UPT SPF SDN 105308 Namu Bintang.

A. Introduction

Education is a vital effort by society to advance civilization and develop scientific knowledge. According to the Law of the Republic of Indonesia Number 20 of 2003 on the National Education System, education is defined as a conscious and planned endeavor to create a learning environment and process that enables students to develop their potential actively. This includes fostering spiritual strength, self-control, personality, noble character, and skills necessary for themselves, society, the nation, and the state.

Ki Hajar Dewantara, regarded as the Father of Indonesian National Education, described education as essential for children's growth. He stated that education should nurture all children's natural abilities so they can achieve the highest levels of safety and happiness both as individuals and as members of society (Zuriatin et al., 2021).

Education is a continuous and never-ending process aimed at producing sustainable quality and realizing the nation's cultural values and Pancasila. It should develop the nation's philosophical and cultural values comprehensively. Therefore, an in-depth study of education is needed, beginning with a philosophical perspective that clarifies the foundation of education itself (Sujana, 2019).

Education is an effort to develop a person's personality in line with societal values and to help students improve their knowledge, skills, values, attitudes, and behaviors beneficial for life. Education humanizes young people, enhancing their quality and dignity rather than diminishing it. It influences individuals positively by addressing negative traits and maximizing positive potential (Nasution, 2022).

In summary, drawing from the expert opinions mentioned, education can be defined in simple and general terms as a conscious and planned effort to create a learning environment and process that enables students to develop their potential actively. This includes cultivating religious and spiritual strength, self-control, personality, noble morals, and necessary skills for themselves, society, the nation, and the state. Education is integral to children's growth, aiming to nurture all their natural abilities so that they, as individuals and members of society, can achieve safety and happiness. This continuous, never-ending process strives to produce sustainable quality that reflects the nation's cultural values. Educators are tasked with preparing students to become competent and beneficial successors who can advance civilization and enhance societal well-being. Teachers, therefore, play a crucial role in shaping the desired future generation through engaging and innovative teaching methods.

According to Anggraeni (2022), mathematics is a structured discipline where concepts are systematically interconnected. It supports the development of science and technology and equips students with the ability to think logically, analytically, systematically, critically, and creatively. A fundamental aspect of mathematics education is teaching number operations, which include addition, subtraction, multiplication, and division. Mastery of multiplication is essential for students from early grades onwards; without this foundational skill, students may struggle with more advanced mathematical concepts.

Hasratuddin (2015) states that mathematics is one of the subjects taught in schools from the low to high levels. Mathematics is mandatory for students to learn because it is very useful in everyday life. Students can master mathematics and solve mathematical problems in everyday life if they understand mathematics lessons well because mathematics is an exact science. In principle, multiplication is the same as repeated addition.

Therefore, the ability that students must have before mastering or learning multiplication is mastery of addition because multiplication is an arithmetic operation in mathematics learning, which is difficult for some students to understand. This can be seen from the large number of students who have not yet mastered arithmetic operations. Multiplication. So many students experience difficulty in solving questions about multiplication.

Teachers or educators play a big role in realizing the goals of education, namely creating a quality generation. Of course, teachers as educators must also facilitate students' learning process with creative, innovative, and fun learning. Teachers need to pay attention to several things when planning learning so that it becomes more interesting and enjoyable and the class is lively. One is choosing appropriate and innovative approaches, methods, models, and learning media to teach material to students so that they are more interested in learning. Learning using the right approaches, media, methods, and models will certainly have a big influence on the success of the learning objectives that will be achieved.

The above statement is in accordance with the facts found by the author during observations in October-November 2023 in class V UPT SPF SDN 105308 Namo Bintang, which was carried out in November 2023. Mastery of mathematics subjects, especially in multiplication calculation operations, is classified as very low. This can be seen from the formative and summative test scores for class V students on multiplication material in semester 1 of the 2023/2024 academic year, and there are still many students who have not reached the minimum completion criteria (KKM) score, namely a score of 70, of which six students have completed. Or 20.68%, and 23 students, or 79.31%, did not complete it. It cannot be denied that apart from students having difficulty in calculating multiplication operations, there are not many tools to assist them in operating multiplication. Apart from that, students are also less involved in learning, so the class atmosphere tends to be boring. There are still many students who are engrossed in their own world, such as: chatting with friends, there are still many who play during learning, walk around in class while learning is taking place, disturb other friends, and have difficulty answering questions about multiplication.

Seeing these problems, the author uses media, which is expected to influence students' skills and abilities in multiplication calculation operations. One of these media is the Word Wall learning media. Word Wall is a medium that can help solve problems related to multiplication calculation operations. Elementary school (SD) students are students who like new, unique, and strange things.

The term "media" originates from the Latin word "medium," which means "intermediary" or "distributor." Thus, media serve as channels for disseminating learning

information or messages (Munir, 2015). According to Purnamasari et al. (2019), media encompass various components within a student's environment that can stimulate learning, acting as intermediaries that convey information between the source and the recipient. Nurrita (2018) defines learning media as tools that facilitate the teaching and learning process by making the conveyed messages clearer and ensuring that educational objectives are achieved effectively and efficiently.

Anshori (2018) describes learning media as instruments that aid the teaching and learning process by stimulating thoughts, emotions, attention, and abilities, thereby promoting learning. These media can take various forms, such as pictures, modules, books, technological tools, and more. Khairun & Al Hakim (2019) add that learning media are components of learning resources that contain instructional material and can stimulate students to learn, whether used inside or outside the classroom.

From these expert definitions, it can be concluded that learning media are essential tools for teachers, aiding in the effective delivery of information and fostering student enthusiasm for learning. One specific type of learning media is the Word Wall, which can be either a physical display like a subject wall magazine attached to a classroom wall or a digital tool focused on core learning concepts with additional visual aids (Maghfiroh, 2018).

Word Wall as a digital gamification-based application featuring various games and quizzes, suitable for creating learning assessments and usable offline (Yasa & Trimurtini, 2024). Pradani (2022) highlights that the Word Wall application serves as an engaging learning medium and assessment tool, enhancing the learning experience. Emphasize that the Word Wall is a web application designed to create enjoyable, quiz-based games that improve learning performance (Aprilia et al., 2023).

Sukma & Handayani (2022) further elaborates that Word Wall media is a web-based digital application that helps teachers design interactive and engaging learning resources. This fosters a lively classroom atmosphere and enhances students' enthusiasm and scientific attitude towards learning. This is particularly beneficial for elementary school students, who often have high curiosity and get bored easily, especially when learning subjects like mathematics. The Word Wall helps students effectively tackle multiplication problems, creating a more dynamic and enjoyable learning environment.

In summary, learning media are crucial for creating an engaging classroom atmosphere, encouraging student enthusiasm, and facilitating effective learning. This research aims to examine the impact of Word Wall learning media on fifth-grade students' proficiency in multiplication, focusing on how this tool influences their mathematical skills and overall learning experience.

B. Method

The research conducted with fifth-grade students at UPT SPF SDN 105308 Namo Bintang utilized a quantitative approach with a quasi-experimental design. Specifically, the research followed a one-group pre-test and post-test design. In this design, a pre-test was administered to assess students' skills and learning outcomes before any intervention.

Following this, the students received treatment using Word Wall learning media. After the intervention, a post-test was given to measure any changes in skills and learning outcomes.

The study population consisted of all 30 fifth-grade students at UPT SPF SDN 105308 Namo Bintang. According to Maharani et al (2021), saturated sampling involves using the entire population as the sample when the population size is relatively small.

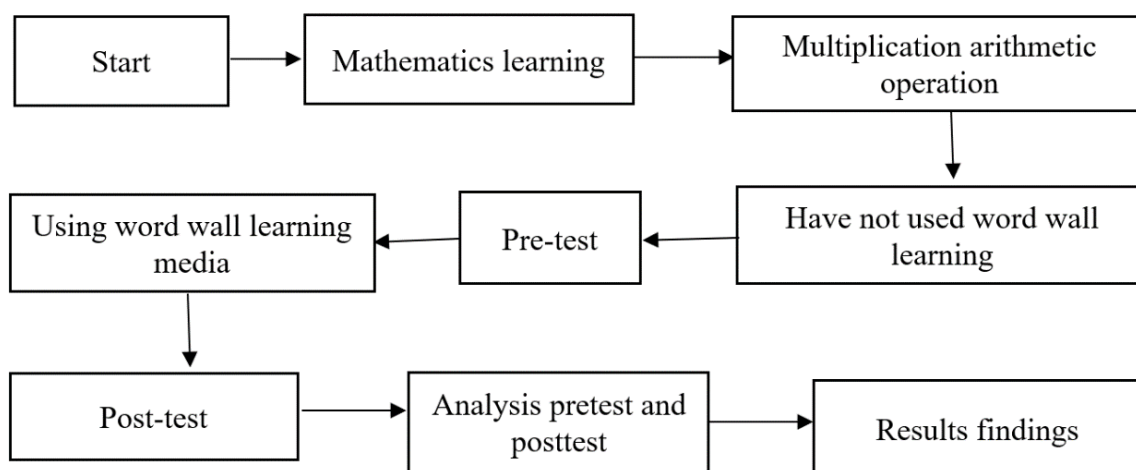


Figure 1. Research Flow

Research variables are often referred to as research objects. According to (Dhaifi et al, 2020), a variable is anything in the form of anything that is determined by the researcher to be studied so that information about it is obtained, and then conclusions are drawn. Variables can also be said to be concepts that have variations in scores, or have more than one value, condition, group, or situation. Quantitative research problems often contain two or more variables, but it cannot always be determined which is the independent variable and which is the dependent variable. In the research that the researcher will write, this research uses variables:

1. Independent variable (variable X): Media Word Wall
2. Dependent variable (variable Y): Multiplication calculation operation

The data analysis techniques in this research are as follows: Data analysis is an activity after data from respondents or other data sources have been collected.

1. Validity Test

A validity test is used to determine whether a measuring instrument, such as a questionnaire, is valid or not. A questionnaire is considered valid if its questions accurately measure the intended variables. According to the Introduction (n.d.), the indicators in the questionnaire are deemed valid if the calculated r value is greater than the r_{table} value (calculated $r > r_{table}$). Validity serves as an index that indicates whether the measuring instrument genuinely measures what it is supposed to measure.

In this study, validity was tested using the Statistical Package For The Social Sciences (SPSS) 16.0 software, here are the steps for using SPSS, namely:

- a) Open the SPSS program and open the saved research data.
- b) Select the menu option in the toolbars and click Analyze.
- c) Select Correlate, then select Bivariate.
- d) Then the Bivariate Correlations display appears.
- e) Select the Respondent's answer for variable "X" from the answer to item 1 to the last item and also enter the total for variable "X," then move it into the "Variables" column by clicking the arrow.
- f) In the Correlation Coefficients column, select Person.
- g) In the Test of Significance column, select Two-tailed.
- h) Then also check the Flag significant correlations.
- i) Next, click OK.

2. Reliability Test

Reliability testing aims to assess the consistency of collected data (Yesita, 2021, p. 134). It examines the extent to which repeated measurements using the same instrument yield similar results. Reliability testing is conducted collectively on all statements, and each variable is considered reliable if the Cronbach alpha value exceeds 0.60 (Ningsih & Wahyuni, 2020, p. 4).

In this research, the author conducted reliability testing using Statistical Package for the Social Sciences (SPSS) 16.0 software. The steps for testing reliability are as follows:

- a) Open the SPSS program and open the research data that was previously saved.
- b) In the menu options in the toolbars, click Analyze.
- c) Select Scale.
- d) Select Reliability Analysis.
- e) Then the Reliability analysis display appears.
- f) Move the respondent's answer for Variable "X" item 1 to the last item into the "items" column sequentially. Next, pay attention to the "Statistics" button at the top right.
- g) Click Statistics, and then the Reliability Analysis Statistics display will appear.
- h) Check the information that you think is necessary.
- i) Next, click Continue and OK.

3. Hypothesis Testing

Testing the hypothesis in this research uses the t-test. The t-test is used to prove the hypothesis in the previous chapter. The hypothesis test used is a test of the average difference in test results, with the hypothesis test formula being as follows:

- a) If the $t_{\text{count}} > t_{\text{table}}$, then H_0 is rejected, and H_a is accepted.
- b) If the value of $t_{\text{count}} < t_{\text{table}}$ then H_0 is accepted, and H_a is rejected.

C. Result and Discussion

Result

In this research, researchers conducted a trial at UPT SPF SDN 105308 Namo Bintang on class V students for the 2023/2024 academic year. The instrument in this research includes a multiple choice question test to measure students' skills that are in accordance with Bloom's Taxonomy indicators with levels C3-C4. The researcher conducted a trial of 30 questions in class V at UPT SPF SDN 105308 Namo Bintang. After carrying out the trial, the researcher tested the validity of the questions that had been asked by class V students of UPT SPF SDN 105308 Namo Bintang. After carrying out the validity test, there were 14 valid questions and 16 invalid questions, so the researchers used ten valid questions as questions to compile the test instrument. The results of trials carried out using SPSS are as follows:

Table 1. Validity Test

Test	R_{xy}	Category
1	0.039	valid
2	0.003	Valid
3	0.050	valid
4	0.004	valid
5	0.023	valid
6	0.072	Invalid
7	0.000	Valid
8	0.037	Valid
9	0.383	Invalid
10	0.130	Invalid
11	0.030	Valid
12	0.029	Valid
13	0.601	Invalid
14	0.251	Invalid
15	0.199	Invalid
16	0.043	Valid
17	0.755	Invalid
18	0.990	Invalid
19	0.034	Valid
20	0.046	Valid
21	0.137	Invalid
22	0.409	Invalid
23	0.035	Valid
24	0.703	Invalid
25	0.706	Invalid
26	0.462	Invalid
27	0.656	Invalid
28	0.380	Invalid
29	0.088	Valid
30	0.182	Invalid

After testing the validity of the question items, the researcher then carried out a reliability test using the Statistical Package For The Social Sciences (SPSS) 16.0 software and obtained reliability results, which can be seen from the following table

Table 2. Reliable Test

R	Category
0.993	Reliable

From the table data above, it can be seen that the questions used for the research instrument are reliable because the Alpha value obtained is 0.993, which is greater than 0.60. Thus, it instrument that will be used in this research has met the requirements, namely, valvalidity and reliability.

After the trial is carried out and the results are known, proceed with taking the initial results data by giving valid questions (pre-test) to be worked on. Then, they were given treatment using the Word Wall learning media. After being given the treatment, the students were given the same questions (post-test). This was done to determine the student's final abilities after the treatment.

Table 3. Each Student's Pre-test Score

No	Name	Gender	Score
1	Aditiya Putra Ginting	L	20
2	Rija Sanjaya	L	20
3	Aira May Faleria	P	53
4	Alexander Tarigan	L	57
5	Alicia Moniwa	P	73
6	Arisa Adelia	P	33
7	Asmarani	P	30
8	Defanan Rasyid	L	70
9	Dewi Tania	P	23
10	Erlangga Wijaya	L	20
11	Gerald Alfeno	L	30
12	Hervina Rahmadhani	P	40
13	Kasih Violence	P	50
14	Kristian Tarigan	L	63
15	Luis Ramadani	L	53
16	Michael Justin	L	37
17	Raisya Kartini	P	67
18	Rivaldi Sebastian	L	30
19	Rivaldo Sebastian	L	60
20	Sakura Putri	P	20
21	Salsabila Putri	P	37
22	Siti Nuraini	P	73
23	Syafa Nur Azahra	P	27
24	Vino Virdinion	L	27
25	Wafika Nuraini	P	43

No	Name	Gender	Score
26	Zhain Zevano	L	33
27	Vebry Sagita	P	10
28	Micelle Asyera	P	33
29	Ivantara Aldiano	L	30
Average			10,17

The table above shows that the number of students is 29, while the total number is from the pre-test results.

Table 4. Pre-test Result

Pre-test Result	
N	29
Mean	10.1724
Medium	10.0000
Std.Deviation	3.07140
Minimum	5.00
Maximum	16.00

The results of calculations using SPSS 16.0 on data before treatment (pre-test) in class V obtained a valid sample size of 29, an average score of 10.17, a median value of 10.00, a standard deviation of 3.07, a minimum value of 5, and a maximum value of 16.

Table 5. Pre-test Percentage

Values	Frequency	Percentage (%)	Category
80-100	-	-	Very Good
66-79	4	13,79	Good
55-65	3	10,34	Medium
40-55	5	17,24	Bad
0-39	17	58,62	Very Bad
	29	100	

Based on the table above, it can be seen that in class V, four students, or 13.79%, have good qualifications, and three students, or 10.34%, have medium qualifications. Five students, or 17.24%, have bad qualifications, and 17 students, or 58.62%, fall into very bad qualifications. The overall average score is 5.23 and falls within the fail/fail qualification.

Meanwhile, the post-test is given after completing the treatment using the Word Wall learning media. The data obtained will later be used as a reference to see whether there is a difference in the results of the pre-test assessment after being given treatment using the Word Wall learning media.

Table 6. Each Student's Post-test Score

No	Name	Gender	Post-test Score
1	Aditiya Putra Ginting	L	60
2	Rija Sanjaya	L	60
3	Aira May Faleria	P	83
4	Alexander Tarigan	L	83
5	Alicia Moniwa	P	93
6	Arisa Adelia	P	57
7	Asmarani	P	70
8	Defanan Rasyid	L	80
9	Dewi Tania	P	73
10	Erlangga Wijaya	L	63
11	Gerald Alfero	L	67
12	Hervina Rahmadhani	P	87
13	Kasih Violence	P	80
14	Kristian Tarigan	L	87
15	Luis Ramadani	L	83
16	Michael Justin	L	50
17	Raisya Kartini	P	80
18	Rivaldi Sebastian	L	67
19	Rivaldo Sebastian	L	87
20	Sakura Putri	P	73
21	Salsabila Putri	P	83
22	Siti Nuraini	P	87
23	Syafa Nur Azahra	P	70
24	Vino Virdinon	L	63
25	Wafika Nuraini	P	83
26	Zhain Zevano	L	73
27	Veby Sagita	P	53
28	Micelle Asyera	P	67
29	Ivantara Aldiano	L	63
Average			22.00

Table 7. Posttest Score

	Post-test Score
N _{Valid}	29
Mean	22.0000
Medium	22.0000
Std.Deviation	3.48466
Minimum	15.00
Maximum	28.00

The results of calculations using the Statistical Package For The Social Sciences (SPSS) 16.0 software on data after treatment (post-test) in class V obtained a valid sample size of 29, an average score of 22.00, a median value of 22.00, a standard deviation of 3.48, a minimum value of 15, and a maximum value of 28.

Table 8. Posttest Percentage

Values	Frequency	Percentage (%)	Category
80-100	13	44,82	Very Good
66-79	8	27,58	Good
55-65	6	20,68	Medium
40-55	2	6,89	Bad
0-39	0	0	Very Bad
	29	100	

Based on the table above, it can be seen that in class V, after being given treatment (post-test), there were 13 students, or 44.82%, who had very good qualifications, eight students, or 27.58%, who had good qualifications, six students, or 20.68%, including medium qualifications, two students, or 6.89%, including bad qualifications, and no students who were very bad and did not pass.

The pre-test and post-test results in the cognitive domain of students can be compared to see how much the students' ability to understand the lesson has increased. The increase in students' abilities can be seen from the pre-test and post-test scores. To find out the extent of the significance of the increase, the t-test is carried out.

In general, class V students at UPT SPF SDN 105308 Namo Bintang who were given treatment experienced an increase in their multiplication calculation operation skills. The lowest score for class V students during the pre-test was 25 students, and the highest score for class V students on the pre-test was four students. After being given treatment, the post-test scores of class V students had the lowest score of 8 students and the highest score of 21 students.

Based on the analysis of pre-test and post-test data totaling 29 students, a recapitulation was obtained, namely:

Table 9. Pretest and Posttest Analysis

	Pre-test	Post-test
N _{Valid}	29	29
Missing	0	0
Mean	10.1724	22.0000
Median	10.0000	22.0000
Std.Deviation	3.07140	3.48466
Minimum	5.00	15.00
Maximum	16.00	28.00

Based on the table above, looking at the pre-test and post-test results of the students, it can be concluded that the average pre-test score before being treated using Word Wall

learning media was 10.17, and the average post-test score after being treated using Word Wall learning media was 22.00 and can be explained with the following diagram:

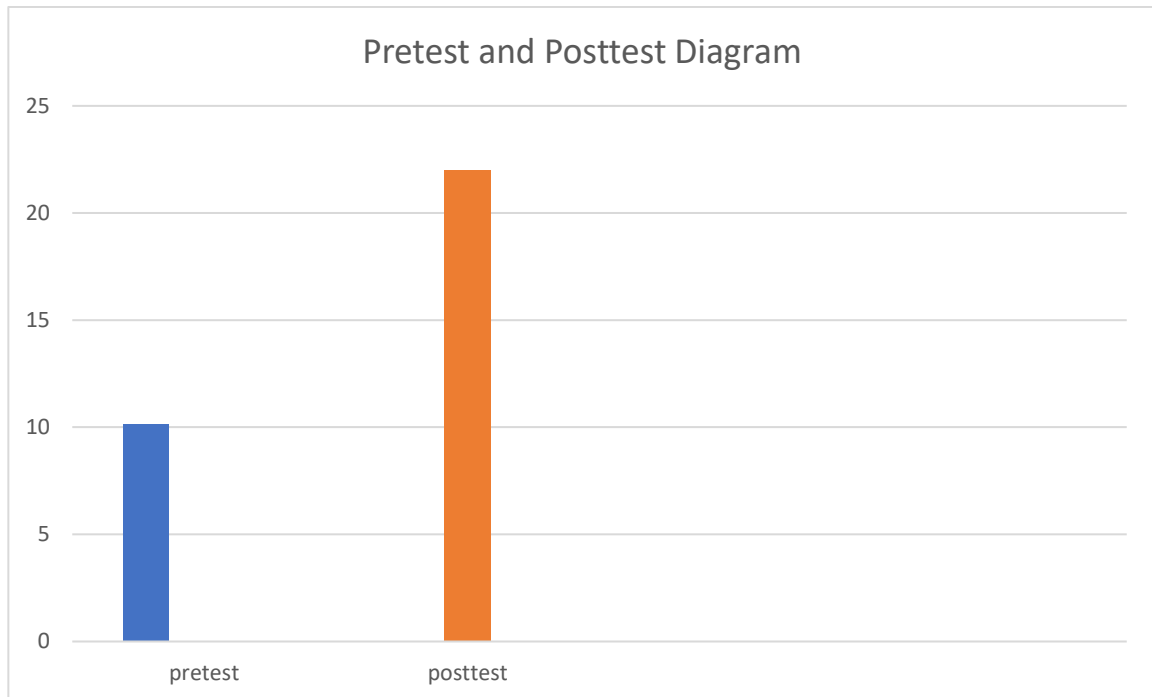


Figure 1. Pretest and Posttest Diagram

This research aims to determine the effect of Word Wall learning media on multiplication calculation operation skills in class V UPT SPF SDN 105308 Namo Bintang. The analysis used is the t-test with the Statistical Package For The Social Sciences (SPSS) 16.0 software which can be explained in detail as follows:

Table 10. Pretest-Posttest

Class	Average	t_{count}	t_{table}	P
Presets	10,17	21,570	2,051	0,000
Posttest	22,00			

Based on the table above, the average pre-test value is 10.17, and the average post-test value is 22.00, increasing to 11.83. Also obtained is $t_{\text{count}} > t_{\text{table}}$ at a significance level of 5% ($21.570 > 2.051$) and has a significance value less than 0.05 ($p = 0.000 < 0.05$). Therefore, H_0 is rejected, and H_a is accepted, which means that word wall media has a significant influence on the multiplication nose operation skills of class V students.

Discussion

The research aimed to investigate the impact of Word Wall learning media on the multiplication skills of fifth-grade students at UPT SPF SDN 105308 Namo Bintang. Hypothesis testing was conducted according to the initial hypotheses: H_a , indicating the

presence of an influence of Word Wall learning media on students' multiplication skills, and H_0 , suggesting no such influence. The results of the t-test revealed that the average pre-test score was 10.17, while the average post-test score was 22.00, indicating an increase of 11.83. The calculated t-value was 21.570, exceeding the critical t-value of 2.051 at the 5% significance level. Hence, it was concluded that there was a significant improvement, affirming the influence of Word Wall learning media on students' multiplication skills.

In a study by Savira & Gunawan (2022), it was concluded that the Word Wall application positively impacted science learning outcomes for fourth-grade students at SDN Rambutan 02, particularly during the pandemic, as it enhanced students' enthusiasm for online learning and provided teachers with an innovative tool for online instruction.

Launin et al (2022) found differences in pre-test and post-test scores using SPSS Version 25, indicating increased interest in learning among fourth-grade students at SDN 1 Sukorame when using the Word Wall online game media. Gustina & Nurhastuti (2024) concluded from their research at Bundo Kandang SLB that the Word Wall educational game effectively improved subtraction skills in students with cerebral palsy, as evidenced by their increased abilities after using the game over 16 sessions.

Akbar & Hadi (2023) analyzed data on learning interest and outcomes, finding that Word Wall learning media significantly influenced both factors, as supported by Effect Size calculations. Nadia (2022) observed that the use of Word Wall learning media enhanced learning outcomes among fifth-grade students at SDN 14 Simpangampek, with students exhibiting greater confidence in expressing opinions and engaging in group discussions, leading to improved understanding of the material. Nisa & Susanto (2022) concluded from their analysis that educational games based on Word Wall positively impacted students' motivation to study.

D. Conclusion

Learning media is a crucial tool in education, facilitating educators' delivery of lessons effectively and ensuring students grasp the material easily. Word Wall media, a technology-based tool, aids educators in teaching and prevents monotony in learning, thereby keeping students engaged. The present study aimed to examine the impact of Word Wall media on the multiplication skills of fifth-grade students. Given the increase in scores compared to the pre-test, it can be inferred that Word Wall media positively influences students' multiplication skills.

This research underscores the significance of learning media in fostering an active classroom environment and preventing student boredom. The findings highlight the role of Word Wall media in enhancing student enthusiasm for learning, particularly in mathematics.

Future researchers are encouraged to expand the scope and duration of their studies to yield more precise results. Delving deeper into the research topic and employing comprehensive research methods can enhance understanding and ensure the validity of

findings. Utilizing references from literature or previous studies with similar variables can enrich the research process and analysis.

References

- Akbar, H. F., & Hadi, M. S. (2023). Pengaruh Penggunaan Media Pembelajaran Wordwall terhadap Minat dan Hasil Belajar Siswa. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 1653-1660. <https://doi.org/10.31004/cdj.v4i2.13143>
- Anggraeni, R. (2022). Pentingnya Legalitas Usaha bagi Usaha Mikro Kecil dan Menengah. *Eksaminasi: Jurnal Hukum*, 1(2), 77-83.
- Anshori, S. (2018). Pemanfaatan Teknologi Informasi dan Komunikasi sebagai Media Pembelajaran. *Civic-Culture: Jurnal Ilmu Pendidikan PKn dan Sosial Budaya*, 2(1), 88-100.
- Aprilia, W., Jamhuri, M., Yusuf, A., & Hadi, M. N. (2023). Penerapan Media Web Wordwall untuk Meningkatkan Motivasi dan Hasil Belajar Siswa pada Pembelajaran Sejarah Kebudayaan Islam di SMA Ma'arif NU Pandaan. *Risalah, Jurnal Pendidikan dan Studi Islam*, 9(4), 1441-1448. https://doi.org/10.31943/jurnal_risalah.v9i4.553
- Dhaifi, I., Setyosari, P., Widiati, U., & Ulfa, S. (2020). Optimizing Online Learning Resource to Improve Students' Autonomous Learning and Vocabulary Mastery through Word Wall Activities. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 8247-8266.
- Gustina, M., & Nurhastuti, N. (2024). Efektivitas Game Edukasi Wordwall untuk Meningkatkan Kemampuan Operasi Hitung Pengurangan pada Siswa Cerebral Palsy. *Jurnal Pendidikan Tambusai*, 8(1), 6675-6681. <https://doi.org/10.31004/jptam.v8i1.13429>
- Hasratuddin. (2015). *Mengapa Harus Belajar Matematik*. Medan: Perdana Mulya Sarana.
- Khairun, D. Y., & Al Hakim, I. (2019). Profil Tugas Perkembangan Mahasiswa Prodi Pendidikan Kimia Universitas Sultan Ageng Tirtayasa. *Jurnal Penelitian Bimbingan dan Konseling*, 4(2), 105-111. <https://doi.org/10.30870/jpbk.v4i2.6550>
- Launin, S., Nugroho, W., & Setiawan, A. (2022). Pengaruh Media Game Online Wordwall untuk Meningkatkan Minat Belajar Siswa Kelas IV. *JUPEIS: Jurnal Pendidikan dan Ilmu Sosial*, 1(3), 216-223. <https://doi.org/10.55784/jupeis.Vol1.Iss3.176>
- Maghfiroh, K. (2018). Penggunaan Media Word Wall untuk Meningkatkan Hasil Belajar Matematika pada Siswa Kelas IV MI Roudlotul Huda. *Jurnal Profesi Keguruan*, 4(1), 64-70.
- Maharani, P. A., Azizah, E. N. N., & Susdarwati, S. (2021). Pengaruh Video Animasi Pembelajaran Jarak Jauh terhadap Kemampuan Berpikir Logis Anak Usia Dini. *JCE (Journal of Childhood Education)*, 5(1), 159-173. <https://doi.org/10.30736/jce.v5i1.505>
- Munir, M. (2015). *Multimedia Konsep & Aplikasi dalam Pendidikan*. Bandung: Alfabeta.

- Nadia, D. O. (2022). Pengaruh Media Pembelajaran Wordwall terhadap Hasil Belajar Siswa Sekolah Dasar. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 8(2), 1924-1933. <https://doi.org/10.36989/didaktik.v8i2.497>
- Nasution, F., Anggraini, L. Y., & Putri, K. (2022). Pengertian Pendidikan, Sistem Pendidikan Sekolah Luar Biasa, dan Jenis-Jenis Sekolah Luar Biasa. *Jurnal Edukasi Nonformal*, 3(2), 422-427.
- Nisa, M. A., & Susanto, R. (2022). Pengaruh Penggunaan Game Edukasi Berbasis Wordwall dalam Pembelajaran Matematika terhadap Motivasi Belajar. *JPGI (Jurnal Penelitian Guru Indonesia)*, 7(1), 140-147. <https://doi.org/10.29210/022035jpgi0005>
- Nurrita, T. (2018). Pengembangan Media Pembelajaran untuk Meningkatkan Hasil Belajar Siswa. *Jurnal Misykat*, 3(1), 171-187.
- Pradani, T. G. (2022). Penggunaan Media Pembelajaran Wordwall untuk Meningkatkan Minat dan Motivasi Belajar Siswa pada Pembelajaran IPA di Sekolah Dasar. *Educenter: Jurnal Ilmiah Pendidikan*, 1(5), 452-457. <https://doi.org/10.55904/educenter.v1i11.162>
- 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), 5453-5460.
- Sujana, I. W. C. (2019). Fungsi dan Tujuan Pendidikan Indonesia. *Adi Widya: Jurnal Pendidikan Dasar*, 4(1), 29-39. <https://doi.org/10.25078/aw.v4i1.927>
- Sukma, K. I., & Handayani, T. (2022). Pengaruh Penggunaan Media Interaktif Berbasis Wordwall Quiz terhadap Hasil Belajar IPA di Sekolah Dasar. *Jurnal Cakrawala Pendas*, 8(4), 1020-1028. <https://doi.org/10.31949/jcp.v8i4.2767>
- Yasa, P., & Trimurtini, T. (2024). Analisis Penggunaan Wordwall sebagai Peran Teknologi dalam Pembelajaran di Sekolah Dasar. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 1(10), 252-257. <https://doi.org/10.5281/zenodo.11219299>
- Zuriatin, Z., Nurhasanah, N., & Nurlaila, N. (2021). Pandangan dan Perjuangan Ki Hadjar Dewantara dalam Memajukan Pendidikan Nasional. *Jurnal Pendidikan IPS*, 11(1), 48-56. <https://doi.org/10.37630/jpi.v11i1.442>