IJOEM

Indonesian Journal of Elearning and Multimedia
https://ejournal.1001tutorial.com/index.php/ijoem

OPEN ACCESS

Improving the Learning Achievement of Floor Gymnastics with GIF Animation Media

Hotlider H Simamora

SMP Negeri 1 Rejang Lebong
Bengkulu, Indonesia
✉ hotiderhsimamora@gmail.com *

Article Information:
Received June 12, 2023
Revised October 29, 2023
Accepted October 29, 2023

Keywords:
Floor Gymnastics; GIF Animation; Learning Achievement

Abstract

The purpose of this research was to analyze the effectiveness of GIF animation media in enhancing students' learning outcomes in Floor Gymnastics. The research methodology used was quantitative and involved collaborative and participatory quasi-experiments. The study comprised two groups, Class VIII-D with 30 participants as the experimental group and Class VIII-B with 30 participants as the control group. The independent variable was GIF animation media, while the dependent variable was learning success. Data collection techniques included observation, testing, and documentation. The results of the t-test analysis revealed that GIF Animation Media significantly improved students' learning achievement in Floor Gymnastics. The experimental group (Class VIII-D) had a higher average score of 82 compared to the control group (Class VIII-B) with an average score of 71. The hypothesis testing using the "t" test on both groups indicated a t-count of 4.843187. By comparing the t-count with t-table with df 58 at a significant level of 5%, namely 1.672, it was found that t-count > t-table (4.843187>1.672). Therefore, Ha was accepted, and Ho was rejected. In conclusion, GIF Animation Media has a positive impact on the Floor Gymnastics learning achievement of Class VIII students at SMPN 1 Rejang Lebong.

A. Introduction

The advancement of science and technology can affect various facets of existence. The alterations that have transpired have propelled mankind into an epoch of mounting worldwide rivalry. Given this circumstance, we should contribute to this global competition, given the expanse of our country, so that we can persist in advancing and enhancing the caliber of our human resources. Education is deemed to have a pivotal function in human development, encompassing all aspects of an individual's character. Education is intimately linked to the shaping of an individual. The achievement of human education is inextricably linked to the milieu as a social actuality.

Laws of The Republic Indonesia Number 20 of 2003 states that education is a deliberate and premeditated endeavor to establish an environment for learning and a process of learning that enables students to actively cultivate their potential for possessing religious spirituality, self-restraint, individuality, intellect, virtuous character, and the skills required by society, the nation, and the country. Additionally, it is elucidated that the aim of education is to unleash the potential of students to become individuals who have faith in and reverence for the Almighty God, possess an honorable character, are physically fit, knowledgeable, proficient, imaginative, self-sufficient, and become a democratic and responsible member of society (Suprihatin, 2017).

To achieve this objective, it is essential to encourage students to develop all their potential based on their interests and aptitudes. Furthermore, there is a necessity for novelty in the learning process, such as innovative methods, media, strategies, and learning materials employed.

How to Cite : Simamora, H. H. (2023). Improving the Learning Achievement of Floor Gymnastics with GIF Animation Media. Indonesian Journal of Elearning and Multimedia (IJOEM), 2(3), 116–123. https://doi.org/10.58723/ijoem.v2i3.192
ISSN : 2830-2885
Published by : Asosiasi Profesi Multimedia Indonesia

The topic of floor exercise equipment is a significant aspect of the PJOK (Physical Education, Sports, and Health) curriculum for eighth-grade SMP students. The syllabus includes the following points of discussion:

3.6	Comprehending the amalgamation of proficiencies through a sequence of uncomplicated actions with uniformity, exactitude, and regulation in distinct physical routines performed on the floor.	3.6.1	Identify the combinations of floor gymnastic movements.
		3.6.2	Explain the combination of floor gymnastic movements.
		3.6.3	Explain how to do a combination of floor gymnastic movements.
4.6	Execute a fusion of abilities through a sequence of uncomplicated actions in a uniform, exact, and managed fashion in particular floor routines.	4.6.1	Perform a combination of floor gymnastic movements.
		4.6.2	Using a combination of floor gymnastic movements in the form of competitions and modified rules.

The teaching and learning process in PJOK requires a favorable ambiance that fosters active, efficient, and pleasurable learning. Therefore, creating a suitable learning environment entails the teacher's role in selecting appropriate media to support the learning process. Optimal learning objectives can be achieved by selecting the right media, which subsequently affects the student's learning achievement. The current technological advancements have led to a variety of learning media that can be utilized in the learning process.

The term "media" is derived from Latin and refers to the plural form of "medium," which means an agent of communication or introduction. The media serves as an intermediary for delivering messages from the sender to the receiver (Khulsum et al., 2018; Kurniawan & Dewi, 2017; Raharjo & Karimah, 2021; Setyowati et al., 2020). Media is a tool that spreads messages and has the potential to stimulate students' thoughts, emotions, and willpower, thereby fueling the learning process within them.

An animated sequence comprises a collection of moving pictures. It imitates movement by displaying a sequence of frames on the screen (Faryanti, 2016; Permatasari et al., 2019; Punusingon et al., 2017). A frame is a solitary picture in a series of pictures that forms animation.

Corroborating the above-mentioned statement, it is further explained that animated media is a medium for audiovisual-based learning because it can present information that can be both seen and heard simultaneously. This audiovisual-based learning medium can present learning material that is more captivating, not tedious and facilitates material delivery (Anggraeni & Kustijono, 2013; Khomaidah & Harjono, 2019; Sari & Samawi, 2014; Sukiyasa & Sukoco, 2013).

The most commonly used graphic format for website design purposes is the Graphic Interchange Format (GIF). Although GIF has fewer color combinations than JPEG, it can store graphics with a transparent background or as a simple animation (Fauriski et al., 2023; Zamiir et al., 2023).

On the other hand, the purpose or function of educational media is defined as follows: (a). To clarify the message presentation without overwhelming visuals; (b). To overcome limitations of space, time, and senses; (c). Appropriate and diverse educational media can encourage students to be more active and motivated in learning; (d). By providing the same stimulus, students' experiences and perceptions of lesson content can be equalized; (e). Providing students with similar experiences to those in their environment and allowing for direct interaction with teachers, community, and environment.

Animated media serves the following purposes: (1) Enhancing the clarity and interest level of learning for children; (2) Enabling teachers to engage in a more interactive teaching process; (3) Saving time and effort; (5) Enhancing learning outcomes; (6) Cultivating a positive attitude towards learning materials and processes among children; (7) Shifting the teacher's role towards a more positive and productive direction. With the primary media, the maintenance of various learning types is possible in the form of floor gymnastics. GIF Animation Media offers numerous advantages, including the combination of multiple images to create a cohesive presentation, which makes the learning process more interesting, enjoyable, and not tedious, thus facilitating material delivery to students.

An individual is motivated by their longing to cultivate conduct that is productive and proficient in accomplishing objectives. Therefore, a person or scholar acquires knowledge due to diverse types of stimuli from their surrounding milieu, leading to interaction with their environment. Through learning, an individual can transform their demeanor and accomplish things that were previously unattainable. Learning

enables a person to acquire certain knowledge, competencies, principles, and attitudes. Alterations in behavior that arise from the learning process in an individual is referred to as learning results. Therefore, learning results can solely be expressed as capabilities or proficiencies that an individual gains from learning.

Based on the findings of the preliminary survey conducted in September 2022 at SMPN 1 Rejang Lebong, it was revealed that during the instructional sessions, students predominantly rely on the PJOK teacher's verbal explanations and demonstrations, while also making use of textbooks to take notes and consolidate the material. As a result, the collective assessment of the student's academic performance at SMPN 1 Rejang Lebong, which is set at 70, indicates that the Minimum Mastery Criteria has yet to be achieved.

Animated GIFs are known to consistently offer excellent information to students, explaining processes, overcoming time constraints, and allowing for repetition and pausing as necessary. In other words, animated GIF media assists students in comprehending abstract information. Additionally, GIF animation media also provides entertainment for students. The messages conveyed in animated GIF media can impact student learning results.

Given the explanation above, it is necessary to further examine the question of how to enhance the performance of floor exercise learning through the use of GIF animation media in Class VIII SMPN 1 Rejang Lebong.

B. Research Method

This study uses a control group and an experimental group, but the control group is completely incapable of controlling for external variables that affect the conduct of the experiment. This form of experimental design is an evolution of true experimental design, which is difficult to implement. Quasi-experimental designs come in two forms. time series and non-equivalent control group designs. As stated in [10], a non-equivalent control group design has two groups, the group k control group, and the experimental group. The control group received no treatment, and the experimental group received the treatment of learning using GIF-animated media.

Surveys were conducted from August 15th to September 15th, 2022 at SMPN 1 Rejang Lebong. The study design used can be found in the following table:

Table 1 Control Group Design (Gusmania & Wulandari, 2018)

Group	Preliminary Test	Treatment	Final Test
Experimental class (VIII-D)	Q_1	X	Q_2
Control class (VIII-B)	Q_3	-	Q4 _

Details:
A = experimental group
B = control group
O1 = experimental group pretest
O2 = experimental group final test
O3 = control group pretest
O4 = control group final test
X = by GIF animation therapeutic learning media

The data collection method of this study utilizes the learning results of floor exercises to increase motivation and seriousness in learning, and because it is supported by the results of each phase, it is possible to perform floor exercises well. The relevant phases of the process are the initial movement, advanced movement, and final movement for each floor exercise. The floor movements in the learning materials provided are forward rolls, backward rolls, the tiger jumps, and elastic arms for his VIII-D grade and VIII.F grade students in SMPN 1 Rejang Lebong Academic Year 2022/2023. A questionnaire was used to determine students' opinions on the floor exercise learning processing GIF-animated media.

One of the benchmarks for teaching success is to use the results achieved by students in learning, even though up to now the tools used The way to measure learning success is not yet known, the level of objectivity, the level of accuracy or the level of reliability. Thus, the indicators of behavioral success identified by researchers are (1) the success of the learning process: when a student's attitude toward learning changes from frustrated to happy and enthusiastic, the student will want to repeat the move;

(detail). (2) Indicators of better learning outcomes are Increased numbers of students who are brave and perform floor exercises well.

In this study, there are two variables, the independent variable (X) and the dependent variable (Y), as sources of information for analysis and decision-making. This is expressed as a variable being something that a researcher needs to explore to obtain information and draw conclusions from it. The independent variable (X) is the influencing variable, also called the causal variable or the independent variable. The independent variable in this study is animation media. The dependent variable (Y), on the other hand, is the affected variable, also called the effect variable or dependent variable. The dependent variable in this study is learning outcomes.

The techniques used to collect the data are: (A). Observation or Observation is the direct or indirect observation of a research subject to obtain the data that the research needs to collect. The observations of this study were used to obtain initial research data on the effect of GIF animation media on learning performance in floor gymnastics class VIII-D and class VIII-B of SMPN 1 Rejang Lebong. (B). This test is a series of hands-on exercises designed to measure an individual's or a group's ability, knowledge, intelligence, ability, or talent. The testing approach in this study was to administer learning achievement tests twice, before treatment (pre-test) and after treatment (post-test). Tests performed in the pre-test and post-test are floor motor skills: forward roll, back roll, tiger jump, and stretch arm ability test. and C). Documents for collecting data on student numbers and documents needed to complete the data in research.

Data analysis techniques use data from observation sheets such as student attitudes, questionnaire responses, and performance tests in gymnastics learning. Data is obtained through observation or observation at each activity that takes place. The data are in the form of quantitative and qualitative data. Quantitative data is data that expresses the student's learning outcomes (evaluation) numerically, and qualitative data is the attitude value (motivation and seriousness) of students participating in learning. This is revealed in pre-, on-site, and post-site data analysis. (1) Data analysis before entering the field In qualitative research, data analysis is performed before entering the field. The analysis was based on a preliminary survey designed to define the research focus. (2) Field analysis. The on-site analysis will be conducted, such as observation of the learning process of big balls and basketball, observation of teachers who teach, physical observation of college students' tests, and ability tests to throw a ball into a basketball hoop. (3) Post-field analysis. Post-field assignment analysis is carried out by processing the learning outcome data.

C. Results and Discussion

After conducting the survey, the floor exercise learning outcomes of SMPN 1 Rejang Lebong students in classes VIII-D, VIII- and VIII-B were as follows:

a. Description of Class D and Preliminary Test Results Class VIII-D Preliminary Test

Table 2. Calculation of the Mean in Class VIII-D Pretest

No	X	F	X^2	FX	FX^2
1	55	8	3025	440	193600
2	60	9	3600	540	291600
3	65	6	4225	390	152100
4	70	5	4900	350	122500
5	80	2	6400	160	25600
Amount	**330**	**30**	**108900**	**9900**	**98010000**

X variable interval value

Table 3. X Variable Interval Value

No	Intervals	Frequency	Percentage
1	50-56	5	17
2	57-63	15	50
3	64-70	5	17
4	71-77	3	10
5	78-84	2	7
Amount		**30**	**100**

Preliminary Test for Class VIII-B

Table 4. Table of Mean Calculations in Class VIII-D Preliminary Tests

No	X	F	X^2	FX	FX^2
1	50	8	2500	400	160000
2	60	9	3600	540	291600
3	65	6	4225	390	152100
4	70	5	4900	350	122500
5	75	2	5625	150	22500
Amount	**320**	**30**	**102400**	**9600**	**92160000**

Y variable interval value

Table 5. Y Variable Interval Value

No	intervals	Frequency	Percentage
1	45-51	10	33
2	52-58	13	43
3	59-65	4	13
4	66-71	2	7
5	75	1	3
Amount		**30**	**100**

b. Description of **Final Test Results for Classes** D and B

Class VIII-D Final Test

Table 6. Mean Calculation Table in Class VIII-D Posttest

No	Y	F	Y^2	FY	FY2 -
1	65	4	4225	260	67600
2	75	9	5625	675	455625
3	85	8	7225	680	462400
4	90	5	8100	450	202500
5	95	2	9025	190	36100
6	100	2	10000	200	40000
Amount	**510**	**30**	**44200**	**2455**	**1264225**

Table 7. Y Variable Interval Value

No	intervals	Frequency	Percentage
1	65-71	4	13
2	72-77	9	30
3	78-83	0	0
4	84-89	8	27
5	90-95	7	23
Amount		**30**	**100**

Class VIII-B Final Test

Table 8. Mean Calculation Table in Class VIII-B Posttest

No	X	F	X^2	FX	FX^2
1	60	3	3600	180	32400
2	65	8	4225	520	270400
3	70	8	4900	560	313600
4	75	5	5625	375	140625
5	80	3	6400	240	57600
6	85	3	7225	255	65025
Amount	**435**	**30**	**31975**	**2130**	**879650**

Table 9. Y Variable Interval Value

No	Intervals	Frequency	Percentage
1	60-65	11	37
2	66-71	8	27
3	72-77	5	17
4	78-83	3	10
5	85	3	10
Amount		**30**	**100**

c. Improve student performance in floor exercises for grades VIII-D and VIII-B using GIF animated media.

Table 10. Data on the Use of GIF Animation Media to Improve the Learning Achievement of Class VIII-D and VIII-B Floor Gymnastics

No	Final Test X_1 D	Final Test X_1 B
1	90	60
2	75	75
3	9 0	85
4	85	70
5	75	85
6	100	65
7	75	75
8	75	70
9	85	85
10	75	70
11	65	80
12	85	60
13	90	75
14	75	65
15	85	65
16	90	75
17	75	60
18	85	70
19	75	65
20	85	70
21	65	80
22	95	65
23	65	80
24	90	65
25	65	75
26	95	70
27	75	65
28	85	70
29	100	65
30	85	70
Σ	2455	**2130**
	$N1 = 30$	$N1 = 30$
	$\bar{X}_1 = 82$	$\bar{X}_2 = 71$
	$S_1 = 10.64$	$S_2 = 6.457$
	$S_1^2 = 113, 209$	$S_2^2 = 41.692$

The interpretation of $t_{arithmetic}$ is: The price of "t" is calculated relative to the price of the t_{-table} and the t_{-table} is given by dk or df = (n1 + n2 – 2) 30 + 30 – 2. = 58 is calculated. Based on the above calculation, when looking at the t table with dk 58 at the 5% significance level, i.e. 1,672.

Based on these calculations, arithmetic t_{-test} > tabular t_{-test} (4.843187 > 1.672). Therefore, in this study, Ha was accepted and Ho was rejected. It can be said that the experimental class with GIF-animated media improved learning outcomes more than the control class without media-animated GIF. Therefore, we

conclude that the use of GIF animation media has a significant impact on the success of learning his PJOK floor exercise material in SMPN 1 Rejang Lebong students.

Based on the above research data, using animated GIF media can enhance the learning success of PJOK gymnastics flooring for Class VIII students of SMPN 1 Rejang Lebong Tahun Teachings in 2022/2023. The results of this study are also supported by the results of post-tests on learning outcomes for students in grades 8 through her D. The average score for the experimental group was 82. The average score for the group was 71.

This can be confirmed using the 't-test and hypothesizing that the t-table for dk or df 58 is at the significance level of 5% > 1.672 while t count = 4.843187. Therefore, t count > t table (4.843187 > 1.672). Therefore, in this study, Ha was accepted and Ho was rejected. The results of this study demonstrate that the support of GIF animation media improves learning success.

Using these learning media is believed to increase student engagement, motivation, activity, and enjoyment. Moreover, it not only makes the learning process more efficient but also helps students absorb the learning materials better.

D. Conclusion

Based on the results of the research conducted, it can be concluded that GIF animation media can improve the PJOK learning performance of SMPN 1 Rejang Lebong Class VIII students in floor exercise materials. The hypothesis by the 't-test gives t count = 4.843187, but the t_{table} for dk or df 58 is at the 5% significance level, or > 1.672. Therefore, $t_{count} > t_{table}$ (4.843187 > 1.672), indicates that Ha is accepted and Ho is rejected in this study. Therefore, the results of this study indicate that GIF animation media can improve learning performance.

E. Acknowledgement

I would like to express my sincere gratitude to Mr. Dr. Eko Risdianto, a lecturer in her FKIP study program in the field of Educational Technology, who provided guidance and guidance in the publication of her research on the scientific research of teachers. In addition, we would like to thank SMP Negeri 1 Rejang Lebong, Mr.Alamsyah, S.Pd, Mr.Dermawansyah, S.Pd, Mrs. Elvi Sukaisih, S.Pd. Director of SMPN 1 Rejang Lebong, for giving his approval and support to the implementation of his PTK in Physical Education, Sport and Health (PJOK) as a vehicle for developing innovation and learning models, he also thanks Eka Susanti, S. Pd.

References

Anggraeni, R. D., & Kustijono, R. (2013). Pengembangan Media Animasi Fisika Pada Materi Cahaya Dengan Aplikasi Flash Berbasis Android. *Jurnal Penelitian Fisika Dan Aplikasinya (JPFA)*, *3*(1), 11–18. https://doi.org/10.26740/jpfa.v3n1.p11-18

Faryanti, H. (2016). Respon Siswa terhadap Film Animasi Zat Aditif. *Jurnal Pendidikan Dan Pembelajaran Khatulistiwa (JPPK)*, *1*(1), 1–14. https://doi.org/10.26418/jppk.v5i3.14225

Fauriski, M. I., Wulandari, A. Y. R., Tamam, B., Putera, D. B. R. A., & Sutarja, M. C. (2023). Kelayakan Media Komik Gif Sains Berbasis Hypertext Markup Language 5 Pada Materi Pesawat Sederhana. *Jurnal Natural Science Educational Research*, *6*(2), 129–142. https://doi.org/10.21107/nser.v6i2.16629

Gusmania, Y., & Wulandari, T. (2018). Efektivitas penggunaan media pembelajaran berbasis video terhadap pemahaman konsep matematis siswa. *Pythagoras*, *7*(1), 61–67. https://doi.org/10.33373/PYTHAGORAS.V7I1.1196

Khomaidah, S., & Harjono, N. (2019). Meta-Analisis Efektivitas Penggunaan Media Animasi Dalam Meningkatkan Hasil Belajar Ipa. *Indonesian Journal Of Educational Research and Review*, *2*(2), 143–148. https://doi.org/10.23887/ijerr.v2i2.17335

Khulsum, U., Hudiyono, Y., & Sulistyowati, E. D. (2018). Pengembangan Bahan Ajar Menulis Cerpen dengan Media Storyboard pada Siswa Kelas X SMA. *Diglosia: Jurnal Kajian Bahasa, Sastra, Dan Pengajarannya*, *1*(1), 1–12. https://doi.org/10.30872/diglosia.v1i1.4

Kurniawan, D., & Dewi, S. V. (2017). Pengembangan Perangkat Pembelajaran Dengan Media Screencast-O-Matic Mata Kuliah Kalkulus 2 Menggunakan Model 4-D Thiagarajan. *Jurnal Siliwangi*, *3*(1), 214–219. https://doi.org/10.37058/jspendidikan.v3i1.193

Permatasari, I. S., Hendracipta, N., & Pamungkas, A. S. (2019). Pengembangan Media Pembelajaran Video

Animasi Hands Move Dengan Konteks Lingkungan Pada Mapel Ips. *Terampil : Jurnal Pendidikan Dan Pembelajaran Dasar*, *6*(1), 34–48. https://doi.org/10.24042/terampil.v6i1.4100

Punusingon, R. R., Lumenta, A. S. M., & Rindengan, Y. D. Y. (2017). Animasi Sosialisasi Undang-Undang Informasi dan Transaksi Elektronik. *Jurnal Teknik Informatika*, *12*(1), 8. https://doi.org/10.35793/jti.12.1.2017.17796

Raharjo, J. F., & Karimah, N. I. (2021). Pelatihan E-learning Dan Pembuatan Buku Ajar Digital Bagi Peningkatan Peran Guru Millenial. *JAMU : Jurnal Abdi Masyarakat UMUS*, *1*(02), 113–121. https://doi.org/10.46772/jamu.v1i02.368

Sari, N. W., & Samawi, A. (2014). Pengaruh Penggunaan Media Animasi Terhadap Hasil Belajar Ipa Siswa Slow Learner. *Jurnal Penelitian Dan Pengembangan Pendidikan Luar Biasa*, *1*(2), 140–144. https://doi.org/10.17977/um029v1i22014p140-144

Setyowati, E., Hidayati, I. S., & Hermawan, T. (2020). Pengaruh Penggunaan Multimedia Interaktif Terhadap Pemahaman Konsep Dalam Pembelajaran Matematika Di Mts Darul Ulum Muhammadiyah Galur. *Jurnal Intersections*, *5*(2), 26–37. https://doi.org/10.47200/intersections.v5i2.553

Sukiyasa, K., & Sukoco, S. (2013). Pengaruh media animasi terhadap hasil belajar dan motivasi belajar siswa materi sistem kelistrikan otomotif. *Jurnal Pendidikan Vokasi*, *3*(1), 126–137. https://doi.org/10.21831/jpv.v3i1.1588

Suprihatin, S. (2017). Penggaruh Model Pembelajaran Jigsaw Terhadap Hasil Belajar Studi Masyarakat Indonesia Mahasiswa. *Jurnal Promosi: Pendidikan Ekonomi UM Metro*, *5*(1), 84–94. https://doi.org/10.24127/ja.v5i1.849

Zamiir, A., Pramana, I. M. B., & Octaviano, A. L. (2023). Operasional Photobooth Di Anitaphoto Bali. *Retina Jurnal Fotografi*, *3*(1), 97–105. https://doi.org/10.59997/rjf.v3i1.2066