

## Application of video tutorials as a media for learning front punch of pencak silat to improve students' motivation and skills learning outcomes

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Received: 01/04/2024; Accepted: 19/08/2024; Published: 19/08/2024

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How to write references: Alhuda, M. Y., Dafun JR, P. B., & Yulfadinata, A. (2024). Application of video tutorials as a media for learning front punch of pencak silat to improve students' motivation and skills learning outcomes. *Bima Loka: Journal of Physical Education*, 4(2), 68–76. <https://doi.org/10.26740/bimaloka.v4i2.30769>

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### Abstract

To determine effective learning outcomes in learning activities, motivation and learning outcomes are 2 very important components. The utilization of video instructional exercise learning media is one component of the apparatus to form fruitful instructing and learning exercises. Knowing the impact and how much impact it has on its usage. The aim of this investigation is to supply video instructional exercise learning materials to progress fundamental Pencak Silat front assault development abilities. This inquire about applies a one-group pretest and posttest design. Utilizing information appraisal models, abilities appraisal, and learning inspiration surveys. The tests utilized in this inquire about were 32 tests, and this number was decided based on the number of understudies within the course. The results of the study showed that the media used can affect motivation ( $t = 2.509$ ,  $p = 0.018$ ), knowledge ( $Z = 5.660$ ,  $p = 0.000$ ), and skills (Sitting cross-legged  $Z = 4.967$ ,  $p = 0.000$ ; Stand up straight  $Z = 5.035$ ,  $p = 0.000$ ; Sawhorse  $Z = 4.998$ ,  $p = 0.000$ ; and move  $Z = 5.009$ ,  $p = 0.000$ ). We recommend that teachers can develop teaching materials by utilizing technology so that learning is more motivating and makes it easier for students to learn teaching materials.

**Keywords:** *Motivation to learn; Learning outcomes; Video tutorials; Martial arts.*

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## INTRODUCTION

Education is an important aspect of life which is a conscious and planned effort to create ideal and humane learning conditions (Pristiwanti et al., 2022). There are three levels of educational units, including elementary or elementary level, middle or middle school level and upper or high school level. High School itself can be interpreted as a formal education level that contains general education as a continuation of Junior High School (SMP) education, one of which is Sports Education (Wijaya & Rachman, 2017). Sports education is a vital part of the world of education if it receives correct and optimal treatment and learning.

Physical education is also defined as a tool to fulfill educational criteria through adaptation to physical activities including body organs, intellectual, social, cultural and ethical (Iyakrus, 2019). Apart from that, sport is a means of physical and mental training which aims to increase and maintain the body's immunity after carrying out activities (Salahudin & Rusdin, 2020). Sports are generally done in free time with the aim of improving health, strength,

fitness, and are also not left behind by several other people who aim to make exercise just a hobby or recreation. (Suparyanto dan Rosad (2015, 2020)). Apart from that, recreation is an activity that contains outdoor activities such as white water rafting, hiking, cave climbing, and pencak silat is a sport that applies these various aspects.

Pencak silat is a fighting method with spiritual and physical education to help users of pencak silat martial arts appreciate the moral and meaningful values contained in pencak silat (Ediyono & Widodo, n.d.). Various types of pencak silat styles were formed and became one within the Association Indonesian Pencak Silat (IPSI). Before the Pencak Association Indonesian Silat was born, various styles of pencak silat emerged based on regional scope. The birth of IPSI also gave rise to several protests from various styles of pencak silat that had developed before IPSI appeared (Pratama, Rendra & Trilaksana, 2018). Pencak silat is also starting to enter the world of education, pencak silat in the world of education has a big impact on students' character education and also encourages students to develop their potential, interests, talents, and stay away from negative activities. Apart from that, pencak silat also guides its fans to always be confident and maintain their health (Asdarina et al., 2022). Pencak silat is also starting to make its way into schools, with students learning pencak silat. Pencak silat teaches blows. Attacking and defensive movements performed with the hands are known as punches. A punch is a hand attack used in pencak silat competition (Trisnowiyanto, 2016). There are many types of punches in pencak silat, including front punches, side punches, pendulum punches and circular punches. There are many ways to learn pencak silat in PJOK, adjusted to the needs and circumstances of the class given the Pencak silat material. One of them is by using video tutorials as a tool in learning pencak silat. This research will be in line with several previous studies which have similar theme, but in this research there is novelty as a differentiator, namely in the research instrument section which uses the new questionnaire which has passed validity and reliability test, and the assessment test has also passed the validity test.

SENIOR HIGH SCHOOL Kemala Bhayangkari 1 Surabaya is one of the schools in the Surabaya area. Located in the Ahmad Yani Street, number 30-32, Ketintang, Kec. Gayungan, Surabaya City, Prov. East Java. SMA Kemala Bhayangkari 1 Surabaya is adjacent to Royal Plaza Surabaya. Based on the experience experienced while teaching in Introduction to Schooling Field (PLP) activities at SMA Kemala Bhayangkari 1 Surabaya, there is still minimal use of digital learning media such as video tutorials, audio visuals and posters, thus encouraging the author to raise this theme in research. Apart from that, students seem to lack enthusiasm in participating in PJOK learning and often do not pay attention to the material when the teacher presents it to the students.

## METHOD

In line with the problems studied and previously explained, a pre-experimental type of research was used. Research carried out solely to explore how variables interact with each other is called experimental research. Treatment of research subjects or objects is the main characteristic of experimental research. Our research uses a one-group pretest and posttest design model with a quantitative approach. According to, this design consists of a pre-treatment test and a post-treatment test. This research was conducted in only one class because the research design did not use a control class or other classrooms. One of the advantages of this type of research is that it allows us to know exactly how the sample changes after being given treatment.

The population used in this research model is Class X students of SMA Kemala Bhayangkari 1 Surabaya. The author chose Class X as the research object because Class X contains Pencak Silat material during the school year. The number of class X students at Kemala Bhayangkari High School is 296 students. The research sample belonged to one class in which

there were 32 students consisting of 16 male students and 16 female students. The method chosen and applied for sampling in this research was cluster random sampling. The sampling criteria applied through this research are that the sample must include standard students in class X at Kemala Bhayangkari High School.

At the Pretest stage, students are given a questionnaire as well as an assessment of their knowledge of pencak silat front punch movements to find out how motivated and knowledgeable the students are when following the pencak silat learning process. The follow-up activity in the Pre-Test is a skills assessment carried out by students, the assessment is assessed by 3 people who are experts in the field of pencak silat. The next stage was treatment, which was carried out in 4 meetings after the pretest. The treatment involved material on pencak silat providing front blows using video tutorials in 4 different positions, namely sitting cross-legged, standing upright, stance, and moving. The next stage is the Posttest which is carried out like the Pretest, students are asked to complete a learning motivation questionnaire, knowledge assessment and skills assessment. All activities are directly supervised by researchers and 3 people who are experts in the field of pencak silat.

The important instruments applied through this research are the learning motivation questionnaire, knowledge assessment assessment, skills assessment assessment. Questionnaires and assessments go through validity tests which are tested by thesis examiners. The type of questionnaire applied is a type of questionnaire that has a Likert scale with a total of 36 items. The questionnaire has passed the validity test per item so that it has the following grid form: There is a desire and encouragement to carry out learning regularly (item 1,2,3,4,5,6); There is something to desire in the future (Item 7,8,9,10,11,12,13); There is appreciation in the learning process (Item 14,15,16,17,18,19,20); There are activities that arouse interest in learning (Item 21,22,23,24); There are activities that explore curiosity when learning (Item 25,26,27,28,29,30,31); Students have a conducive learning environment so that it is comfortable for the learning process (Item 32,33,34,35,36). Knowledge assessment is used to measure improvements in student learning outcomes. The knowledge assessment has gone through a validity test from the thesis examining lecturers. In the skills assessment test, the test is carried out by practicing front punches in a sitting cross legged position, standing straight, stance, and moving.

**Table 1.** Knowledge learning outcomes instrument grid

Learning outcomes	Materials	Question indicators	Level
Students can evaluate facts, concepts, principles and procedures by applying motor skills in the form of the pencak silat punch process.	Pencak Silat front punch	Students are required to name several body parts involved in the front blow process	C1
Students can evaluate facts, concepts, principles and procedures by applying motor skills in the form of the pencak silat punch process.	Front punch pencak silat	Students are asked to explain the target of the front blow	C2
	Front punch pencak silat	Students are asked to determine and give reasons for their choices	C2
Students can evaluate facts, concepts, principles and procedures by applying motor skills in the form of the pencak silat punch process.	Front punch pencak silat	Presented with a story text, students are asked to detect errors and correct them in the story text	C3
	Front punch pencak silat	Students are asked to explain and prove the important role of the body parts involved in the front blow	C3

Note: C1, C2, and C3= cognitive level by Bloom Taxonomies

The results of the research will be processed using SPSS software. Using data analysis techniques, descriptive statistical tests, normality tests, paired samples t tests, Wilcoxon tests, N-Gain tests. Furthermore, there are stipulation criteria in the N-Gain results, the criteria are as follows: High $\geq$ 70.0%, 70% $\geq$ Currently $\geq$ 30%; and 30%>Low.

## RESULT

Research conducted at SMA Kemala Bhayangkari 1 Surabaya produced the following results.

**Table 2.** Descriptive statistics data for motivation

Test	N	Minimum	Maximum	Mean	Std. Deviation
Pre	32	82	139	117.09	14,929
Post	32	85	140	122.16	12,347

The results of processing learning motivation data using SPSS with descriptive statistical tests produced results in the pre-test and post-test activities, there were 32 samples with a minimum pre-test result of 82 and a maximum pre-test of 139, then the The mean pre-test was 117.09 and the standard deviation was 14.929. Next on the post test with a minimum result of 85, maximum 140, mean 122.16, and standard deviation of 12.347. 0.96% maximum 0.99%.

**Table 3.** The results of normality test for motivation data

Test	N	Mean	Std. Deviation	P-value	Conclusion
Pre	32	117.09	14,929	0.200	Normal
Post	32	122.16	12,347	0.200	Normal

The normality test using the Kolmogorov Smirnov test produces learning motivation data with a normality test result of 0.200, so the data obtained can be said to be normal. Then in the pre test and post test there is a mean of 117.09 for the pre test and 122.16 for the post test with a standard deviation of 14.929 for the pre test and 12.347 for the post test.

**Table 4.** The results of the paired samples t-test produced learning motivation

Test	N	Mean	Std. Deviation	t	Sig	Conclusion
Pre	32	117.09	14,929	-2,509	0.018	Different
Post	32	122.16	12,347			

The results of the paired samples t test produced learning motivation data with the results of the data analysis above producing a mean pre test of 117.09 then a mean post test of 122.16, then a pre test standard deviation of 14.929 and a post test standard deviation of 12,347. to obtain the t number in the pre-test and post-test, namely -2.509 and concluded with the Sig value of 0.018, it can be concluded that the results of the data processing are different.

**Table 5.** Descriptive statistics for learning outcome

Aspect	N	Minimum	Maximum	Mean	Std. Deviation
<b>Knowledge (range 1-17)</b>					
Pre Test	32	0	9	6.34	1,977
Post Test	32	7	15	11.31	1,975
<b>Skills (range 1-10)</b>					
<b>Sitting cross-legged</b>					
Pre Test	32	1	6	3.59	1,266
Post Test	32	7	9	8.13	0.492
<b>Stand up straight</b>					
Pre-test	32	1	5	3.69	0.965

Aspect	N	Minimum	Maximum	Mean	Std. Deviation
<b>Post test</b>	32	8	10	8.66	0.653
<b>Sawhorse</b>					
<b>Pre Test</b>	32	2	5	3.19	1,030
<b>Post Test</b>	32	8	10	9.16	0.448
<b>Move</b>					
<b>Pre Test</b>	32	1	5	3.25	0.984
<b>Post Test</b>	32	7	10	8.03	0.647

The results of the descriptive test on learning outcomes produced detailed results with a minimum pre test result of 82 and a maximum of 139 with a mean of 117.09 and a standard deviation of 14.929. then on the knowledge post test with a minimum of 85, a maximum of 140, a mean of 122.16, and a standard deviation of 12.347. Furthermore, in the aspect of skills in a cross-legged sitting position, the results of the pre-test were a minimum of 1, a maximum of 6, a mean of 3.59, and a standard deviation of 1.266. The results of the post test are with a minimum score of 7, maximum 9, mean 8.13, and standard deviation 0.492. Furthermore, in the skill aspect of standing upright, the minimum score was 1, maximum 5, mean 3.69, and standard deviation 0.965 in the pre-test. Then in the post test, you get a minimum score of 8, a maximum of 10, a mean of 8.66, and a standard deviation of 0.653. In the skill aspect with stance position, the pre-test section got a minimum score of 2, maximum 5, mean 3.19, and standard deviation 1.030. then the post test produced a minimum score of 8, maximum 10, mean 9.16, and standard deviation 0.448.

In the skill aspect with moving positions, the pre-test activity produced a minimum score of 1, maximum 5, mean 3.25, and standard deviation 0.984. then the post test produced several scores, namely minimum 7, maximum 10, mean 8.03, and standard deviation 0.647.

**Table 6.** The results of processing the normality test on learning outcomes

Aspect	N	Mean	Std. Deviation	P-value	Conclusion
<b>Knowledge</b>					
<b>Pre Test</b>	32	6,343	1,977	0.04	Non normal
<b>Post Test</b>	32	11,312	1,974	0.54	Non normal
<b>Skills</b>					
<b>Cross-legged sitting</b>					
<b>Pre Test</b>	32	3,593	1,266	0.10	Non normal
<b>Post Test</b>	32	8.125	0.491	0.00	Non normal
<b>Stand up straight</b>					
<b>Pre-test</b>	32	3,687	0.965	0.02	Non normal
<b>Post test</b>	32	8,656	0.653	0.00	Non normal
<b>Sawhorse</b>					
<b>Pre Test</b>	32	3,187	1,029	0.00	Non normal
<b>Post Test</b>	32	9,156	0.447	0.00	Non normal
<b>Move</b>					
<b>Pre Test</b>	32	3,250	0.983	0.04	Non normal
<b>Post Test</b>	32	8,031	0.646	0.00	Non normal

The results of processing the normality test on learning outcomes produced data that contained 7 aspects that were not normally distributed, namely the post test aspects of sitting cross-legged, pre test-post test standing upright, pre test-post test stance, and pre test-post test moving. To follow up, in accordance with the statement (Quraissy, 2022). If the data is not normally distributed then it cannot be analyzed using parametric statistics. Therefore, it is necessary to carry out non-parametric statistics. Among the scores obtained above, only aspects

of pre-test knowledge, post-test knowledge, and sitting cross-legged before the test achieved normal distribution results.

**Table 7.** Differences in pre-posttest learning outcomes with Wilcoxon analysis

Aspect		Negative ranks	Positive ranks	Ties	Z	p-value
<b>Knowledge</b>	PreTest-	1	31	0	5.660	0,000
	PostTest					
<b>Skills</b>						
<b>Sitting cross-legged</b>	PreTest-	0	32	0	4.967	0,000
	PostTest					
<b>Stand up straight</b>	PreTest-	0	32	0	5.035	0,000
	PostTest					
<b>Sawhorse</b>	PreTest-	0	32	0	4.998	0,000
	PostTest					
<b>Move</b>	PreTest-	0	32	0	5.009	0,000
	PostTest					

From the results of the data processing above, it can be explained that all aspects reach a value of 0 in the Negative ranks leaving the knowledge aspect with a value of 1.32 in the Positive ranks leaving the knowledge aspect with a value of 31, 0 in Ties, and 0.000 in the p-value. In other words, there is an increase in the results of data processing and H1 is accepted.

**Table 8.** N-Gain of learning outcomes

Aspect	N	N-Gain percent
<b>Knowledge</b>	32	45.70%
<b>Skills</b>		
<b>sitting cross-legged</b>	32	33.12%
<b>Stand up straight</b>	32	37.13%
<b>Sawhorse</b>	32	42.96%
<b>Move</b>	32	34.46%

From the results of the N-Gain obtained in processing this data, it can be explained that the N-Gain percent value from the knowledge aspect is 45.70%, the skill aspect in the cross-legged sitting position is 33.12%, the standing upright position is 37.13%, the stance is 42.96%, and the moving position amounts to 34.46%.

## DISCUSSION

Based on the research results obtained, it shows that research at SMA Kemala Bhayangkari 1 Surabaya which examined increasing student motivation and learning outcomes using video tutorial learning media increased with the results of increasing learning motivation by 1.72%. Based on the results of the analysis of PJOK learning problems at SMA Kemala Bhayangkari 1 Surabaya, there is still very little PJOK learning that uses learning media such as audio-visual and the like. The results of this research can be said to be in accordance with previous research which stated that learning videos can increase students' learning motivation (Bustanil S et al., 2019). In this research, students are invited to learn pencak silat front blows using learning media. Learning media is one of the teaching materials that makes it easier for students to learn. Students will carry out learning using video tutorials first in class, then immediately practice it in the field. It is hoped that by using this video tutorial learning media, students will more easily absorb the material, use their imagination more when learning, and be able to apply it optimally.

During the pretest, it was seen that students were still making front punch movements carelessly and not optimally, quite a few complained to the researchers that they felt pain in their hands due to the wrong way of hitting. This proves that the problem really exists. During treatment, students begin to learn how to hit correctly, position their hands when they collide with the target, and position other body parts such as the shoulders and waist. Video learning media helps in the students' learning process, then when in the field it is reviewed by the teacher. Produce results during the posttest, students no longer feel pain when hitting the target, the position of the hand when hitting is correct and the power given is appropriate, apart from other body parts Those who took part in the movement have contributed to the maximum so that the resulting blow is more optimal than before.

The increase in student learning outcomes can be seen from the N-Gain test results which amounted to 45.70% in the knowledge aspect. These results represent that students' knowledge increased after participating in learning using video tutorial learning media. Then continued with the results of front punch skills in a sitting cross-legged position of 33.12%, results of front punch skills in an upright standing position of 37.13%, results of front punch skills in a stance position of 42.96%, and in a moving position the results 34.46%. In the learning outcomes, students are asked to work on a description of 5 questions to determine students' knowledge about pencak silat front blows. Questions will be done during the pretest and posttest. Regarding student skills, treatment will be given in 4 meetings with different positions in each meeting. Students will be asked to watch a video tutorial first before field learning begins. After watching the video tutorial, students will go to the field and practice with direction from the PJOK teacher. The results of the research will be input into SPSS and processed using descriptive statistical tests, normality tests, parametric or non-parametric tests adjusting the results of normality tests, and the N-Gain test. The normality test produces results that are not normally distributed in most of the results. So the next non-parametric Wilcoxon test will be carried out as a substitute for the paired samples t test.

The Wilcoxon test produces similar data in all aspects tested, namely with a value of 0 in the negative ranks and 1 in the knowledge aspect, 32 in the positive ranks and 31 in the knowledge aspect, 0 in ties, and 0.000 in the p- value. With these results, there is an increase in data processing results and H1 can be accepted. The data can be said to be significant because the Wilcoxon test results are below 0.05. The Wilcoxon test was carried out because the results of the normality test were not normally distributed so that a parametric test could not be carried out. With this, video tutorials can increase motivation and learning outcomes because video tutorials tend to be more detailed in discussing the material and directly refer to the core of the discussion and the appearance can be seen at any time, thus awakening students' imagination when watching them. The results of this research can be said to be consistent with previous research which stated that video learning media can create an interesting learning environment for students. Video learning media can encourage students to master pencak silat movement skills. Thus, learning materials including learning videos can make students more enthusiastic about learning so that they can improve their learning outcomes. Video learning media makes a significant difference to student learning outcomes in PJOK subjects because student videos can provide a new color to classroom learning, and videos can help teachers when reviewing material for students (Agung, 2017). Learning media can encourage and motivate students to continue watching learning video material, this makes learning in class more comfortable and easier for students (Aryanata et al., 2020). Video tutorial learning media can increase students' learning motivation in learning, students easily understand the material, learning is more interesting so that it influences students' learning outcomes to increase (Arham, 2023).

Learning videos have several advantages, students can formulate and solve problems, think analytically, experiment, and practice their learning, so that this can improve student learning outcomes (Winasa, 2021). The use of video learning media can improve learning outcomes and learning effectiveness if done appropriately and effectively (Murtado et al.,

2023). Video learning media has the effect of increasing skills in PJOK learning because the attractiveness of the displays displayed makes students interested in learning (Ishom et al., 2022). Video learning media can facilitate students to think abstractly and logically, so that this can enable students to practice movements directly in learning, this is a driver for improving students' skills (Ishom et al., 2022).

## CONCLUSION

From these results it can be said that there is an increase in student learning motivation in the process of learning pencak silat front blows using video tutorials as a learning medium. The increase in students' learning motivation can be seen from the difference in the PreTest score which increased to a certain percentage during the Posttest, answering that video tutorials can increase learning motivation in students who previously received learning material conventionally and then received material using video tutorials so that there was an increase in learning motivation. to students.

The results of the knowledge assessment work and also the skills practice tests that had been carried out by the students were processed back into the N-Gain test with results of 45.70% in the knowledge aspect, 33.12% in the skill aspect of sitting cross- legged, 37.13% in the standing upright aspect, 42.96% in the aspect of stance skills, and 34.46% in the aspect of movement skills. In this way, the learning outcomes from the video tutorial learning media have increased with a moderate classification. It is concluded again that the video tutorial learning media can provide a stimulus to students to be more enthusiastic, active, expressive and focused in the process of learning pencak silat front blows, which can be achieved. influence learning outcomes.

## ACKNOWLEDGMENT

Thank you to the thesis supervisors, thesis examiners, school principals, PJOK teachers, and students who have taken part in this research so that we can all know that learning media plays an important role in student motivation and learning outcomes.

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