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## COMPARISON OF ACADEMIC ACHIEVEMENT FOR COURSE PRACTICE BEFORE PANDEMIC VS DURING PANDEMIC

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### Abstract

The research objective was to compare the academic achievement of practical courses before the pandemic period and after the pandemic period as a consideration for researchers to modify distance learning which is currently still ongoing. The research carried out included the type of Quasi-Experimental Designs using the Nonequivalent Comparison Group Design. The practical subjects studied were Pencak Silat and Volleyball Learning before the pandemic and during the pandemic. Data collection for Pencak Silat group and the Volleyball Group before and during the Pandemic Period, from academic achievements scores for the Mid-Semester Examination and the Final Semester Examination. The group before the pandemic, all assessments of the Midterm Examination and the End of Semester Examination practiced directly in front of the Lecturer, while for the group during the pandemic, students recorded and uploaded to Youtube, then the video link sent to E-learning to be assessed by the Lecturer. Group Pencak Silat and Volleyball before pandemic, there are students of class 2018, while group Pencak Silat and Volleyball during pandemic, there area students of class 2020. Group Pencak Silat before pandemic 20 students, Group Pencak Silat during pandemic 20 students, group Volleyball before pandemic 20 students, and group Volleyball during pandemic 20 students. So, total 80 students were sampled in this research. Based on the results of statistical tests using SPSS with the Independent Sample T-Test, the Sig. (2-tailed)  $0.011 < 0.025$ , so  $H_0$  is rejected, so  $H_1$  is accepted. In other words, there is a significant difference between the academic achievement of the Pencak Silat Subject before and during the Pandemic Period. Based on the results of statistical tests using SPSS with the Independent Sample T-Test, the Sig. (2-tailed) of  $0.000 < 0.025$  then  $H_0$  is rejected so that  $H_1$  is accepted. In other words, there is a significant difference between the academic achievement of volleyball learning subjects before and during the pandemic. The group that took the Pencak Silat Course before the pandemic and during the pandemic showed pre-test data for the group's Mean Value before the pandemic of  $73.75 > 66.75$  during the pandemic, and post-test data for the group's Mean Value before the pandemic

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of 77.80 > 69.80 during the pandemic, thus showing The mean value of the group before the pandemic was higher than the group during pandemic for students who took the Pencak Silat Course. The group that took the Volleyball Learning Course before the pandemic and during the pandemic showed pre-test data for the group's Mean Value before the pandemic of 70.75 > 64.05 during the pandemic, and post-test data for the group's Mean Value before the pandemic of 78.25 > 68.35 during the pandemic, so that shows the Mean value of the group before the pandemic was higher than the group during the pandemic for students who took the Volleyball Learning Course. The conclusion drawn from the description of the data above, shows the difference in the average value where the group before the pandemic has a higher average than during pandemic. Lecturers need to find solutions so that through online lectures students' academic achievement remains the same as academic achievement during face-to-face lectures.

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## INTRODUCTION

Distance learning carried out from the beginning of the second semester of 2019-2020 to be one result of the virus Covid 19. The regulations and government circulars were issued to prevent the transmission of Covid 19 real impact and curb the movement of faculty and students to be able to hold face-to-practice lecture advance. Face-to-face learning, which originally took place up to 16 meetings, turned into distance learning for 16 meetings.

Students experienced drastic changes, especially for practical courses, which were originally able to carry out practical lectures directly in both the outdoor and indoor fields turned into carrying out independently in their respective places and then recorded, and the recordings were sent to the lecturer in charge of the course as material for assessing their practice. Problems also arise, ranging from an inadequate internet network to movement errors made by students due to not being conveyed properly in the practical lecture process.

The researcher who is also a lecturer in practical courses, especially the Pencak Silat and Volleyball Learning courses, experienced these 2 phases, namely before the pandemic and during the pandemic. Before the pandemic period, the Pencak Silat and Volleyball Learning lectures were carried out with direct guidance from researchers and researchers were able to correct movement errors that students made on the spot. During the pandemic, researchers could not immediately correct motion errors at the same time and time, but after the researchers watched and observed the recorded videos given by students.

The lecturers and students both experience difficulties when undergoing practical lectures with the distance learning system. Students who experienced face-to-face learning before the pandemic occurred carried out all practical courses in all facilities owned by the FKIP Undana Penjaskesrek Study Program. Changes occurred 3600 so it was not possible to assemble in the field.

Greve et al (2020) said "One of the most important components of pre-service teacher education programs is practical field experience". Therefore, practical courses are more effective when the student can do some practical things directly. Lee (2020) found that the student performance in online classes has no association with facilitators' educational background or academic achievement. Otherwise, academic achievement hasn't interfered with student performance in online classes. Mridul et al (2021) found that as everything is virtual with no physical movement most of the mental health illnesses were triggered rapidly such as Depression, Anxiety and Stress. These factors may affect academic achievement.

Sarkar et al (2021) found that most students did not feel comfortable in online classes. Still, considering the present pandemic situation, they decided to participate in online classes to continue schooling. In otherwise, with felt uneasy using online classes, student still do it, no matter them comfort or not. In line Vargas et al (2020) found that new environmental conditions can be uncomfortable and have an impact on the students' academic performance. Consequently, the present study aims to determine the impact that the lighting, noise, and temperature levels (independent variables) have on academic performance (dependent variable) in university students during the COVID-19 pandemic. Based on that result, all the factors mentioned before can impact academic achievement.

Yu & Jee (2021) indicate that timely and quality feedback should be provided for the successful execution in PE; the educators should prepare ahead and reduce technical errors and motivate learners continuously. Vikas & Mathur (2021) findings of the study indicate that pedagogy, teaching style and teaching

effectiveness significantly affect student perception towards online classes by first time online teachers. There will be two possibilities; positive perception or negative perception. Park & Kim (2020) found another interesting future research is to employ other types of dependent variables, such as tool adoption and academic performance. It would be worth investigating how different types of learning experiences can be associated with various learning tools.

Finally, this will affect the academic achievement achieved by students. The researchers will compare academic achievements before the pandemic and after the pandemic through this research as consideration for researchers to modify distance learning which is currently still ongoing. So the researcher raised the title "Comparison of Academic Achievement of Practical Courses Before the Pandemic Period vs During the Pandemic Period".

## **METHODS**

Data collection is a process of gathering information from all the relevant sources to find a solution to the research problem. It helps to estimate the outcome of the situation. Group Pencak Silat and Volleyball, both data collection before pandemic, used the academic achievements by comparing the scores for the Mid-Semester Examination and the Final Semester Examination. Assessment of the mastery of pencak silat motion for the grades of the Midterm Examination students perform Pencak Silat Paleredan motion without being accompanied by music based on 3 aspects, namely the accuracy of Pencak Silat's movements, the compactness of the movement, and the suitability of the order of the honor movement, from Beginning until The last movement. Final Semester Exam Score students perform

Pencak Silat Paleredan motion accompanied by music based on 3 aspects, namely the accuracy of Pencak Silat's movements with musical rhythms, the cohesiveness of movement, and the suitability of the order of the honor movement, from Beginning until the last movement For the group before the pandemic, all assessments of the Midterm Examination and the End of Semester Exam practiced the Pencak Silat movement directly in front of the Lecturer, while for the group during the pandemic, students recorded the movement and then uploaded to Youtube, then the video link sent to E-learning to be assessed by the Lecturer.

Assessment of Motion Mastery on Volleyball Courses for Midterm Grades students must practice lower passing skills, upper passing, upper serve and lower serve. Final exam scores of semester students must practice smash, blocking, and mini game skills 3 versus 3. For the group before the pandemic, all assessments of the Midterm Examination and the End of Semester Examination practiced directly in front of the Lecturer, while for the group during the pandemic, students recorded and then uploaded to Youtube, then the video link sent to E-learning to be assessed by the Lecturer.

### Participants

Group Pencak Silat and Volleyball before pandemic, there are students of class 2018, while group Pencak Silat and Volleyball during pandemic, there are students of class 2020. Group Pencak Silat before pandemic 20 students, Group Pencak Silat during pandemic 20 students, group Volleyball before pandemic 20 students, and group Volleyball during pandemic 20 students. So a total 80 students were sampled in this research. These two groups are declared nonequivalent because these two groups are completely

different in terms of; 1) the lecture system, 2) implementation time, 3) the process of repeating the exercise, 4) providing feedback, and 5) supporting facilities and infrastructure.

## RESULT

**Table 1.** Description of Statistical Data

Group		N	Mean	Std. Deviation	Std. Error Mean
Pre-Test Silat	Before Pandemic	20	73.75	6.85	1.53
Pre-Test Silat	During Pandemic	20	66.75	10.98	2.45
Post-Test Silat	Before Pandemic	20	77.80	5.51	1.23
Post-Test Silat	During Pandemic	20	69.80	5.76	1.28
Pre-Test Voli	Before Pandemic	20	70.75	11.15	2.49
Pre-Test Voli	During Pandemic	20	64.05	11.21	2.5
Post-Test Voli	Before Pandemic	20	78.25	7.30	1.63
Post-Test Voli	During Pandemic	20	68.35	4.83	1.08

Based on the results of data processing obtained a description of the data shown in Table 4.1. A total of 20 people in each group were calculated the value of Mean, Standard Deviation and Standard Error Mean.

The group that took the Pencak Silat Course before the pandemic and during the pandemic showed pre-test data for the group's Mean Value before the pandemic of 73.75 > 66.75 during the pandemic, and post-test data for the group's Mean Value before the pandemic of 77.80 > 69.80 during the pandemic, thus showing The mean value of the group before the pandemic was higher than the group during pandemic for

students who took the Pencak Silat Course.

The group that took the Volleyball Learning Course before the pandemic and during the pandemic showed pre-test data for the group's Mean Value before the pandemic of 70.75 > 64.05 during the pandemic, and post-test data for the group's Mean Value before the pandemic of 78.25 > 68.35 during the pandemic, so that shows the Mean value of the group before the pandemic was higher than the group during the pandemic for students who took the Volleyball Learning Course.

The conclusion drawn from the description of the data above, shows the difference in the average value where the group before the pandemic has a higher average than during pandemic.

**Table 2.** Data Validity

Group	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Pre Test Silat	40	100.0%	0	0.0%	40	100.0%
Post Test Silat	40	100.0%	0	0.0%	40	100.0%
Pre Test Voli	40	100.0%	0	0.0%	40	100.0%
Pre Test Voli	40	100.0%	0	0.0%	40	100.0%

Based on the results of the validity test using spss, it shows that all groups, both the pencak silat course group and the volleyball learning course group during the pandemic and before the pandemic period, have valid pre-test and post-test data.

**Table 3.** Data Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.943	40

Based on the results of the reliability test using SPSS, the Cronbach's Alpha value was 0.943. The value of the minimum reliability level of Cronbach's Alpha is 0.60. Then the data reliability value is 0.943 > 0.60 so it can be concluded that the data is reliable (has a level of reliability and consistency).

**Table 4.** Normality Test Results

Tests Of Normality			
	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Pre Test Silat	.145	40	<b>.053</b>
Post Test Silat	.182	40	<b>.062</b>
Pre Test Voli	.155	40	<b>.086</b>
Pre Test Voli	.132	40	<b>.079</b>

Based on the results of the normality test using SPSS with the Kolmogorov-Smirnov test, the Sig value was obtained. of all indicators is greater than 0.005 then Ho is accepted. In other words, Normal Data Distribution. So the next will be continued with the homogeneity test.

**Table 5.** Homogeneity Test Results

Test of Homogeneity of Variances				
	Levene			
	Statistic	df1	df2	Sig.
Pre Test Silat	5.743	1	38	.072
Post Test Silat	1.501	1	38	.228

Pre Test Voli	.293	1	38	.591
Pre Test Voli	.373	1	38	.545

Based on the results of the homogeneity test using SPSS with the Levene test, the Sig value was obtained. of all indicators greater than 0.005 then Ho is accepted which shows homogeneous data. The data has passed all the prerequisite tests and it is stated that the data has a normal and homogeneous distribution, so that for further statistical testing using parametric statistical tests using the Independent Sample T-Test. Comparative Test of Academic Achievement in Pencak Silat Courses Before the Pandemic and during the Pandemic

**Table 6.** Statistical Test Results of Academic Achievement in Pencak Silat Courses Before and During the Pandemic

Group	t	df	Sig. (2-tailed)
<i>Pencak Silat Before vs During Pandemic</i>	-2.664	38	.011

Based on the results of statistical tests using SPSS with Independent Sample T-Test, Sig. (2-tailed) of 0.011 < 0.025 then Ho is rejected so that H1 is accepted. In other words, there is a significant difference between the academic achievement of the Pencak Silat Course before and during the Pandemic Period.

Comparative Test of Academic Achievement in Volleyball Learning Courses Before and during the Pandemic

**Table 7.** Statistical Test Results of Academic Achievement in Volleyball Learning Courses Before and During the Pandemic

Group	t	df	Sig. (2-tailed)
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Voli Before vs During Pandemic	5.054	38	.000
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Based on the results of statistical tests using SPSS with Independent Sample T-Test, Sig. (2-tailed) of 0.000 < 0.025 then Ho is rejected so that H1 is accepted. In other words, there is a significant difference between the academic achievement of the Volleyball Learning Course before and during the Pandemic Period.

## DISCUSSION

The results of the statistical test showed that these two practical courses illustrate that face-to-face methods before pandemic can improve academic achievement than using online learning methods during pandemic. Several factors influenced this result, including:

1. Insufficient facilities and infrastructure.

Volleyball lessons must have a minimum of volleyball. During face-to-face learning, each group already has at least 2 volleyballs. But when learning to be online during the pandemic, not all students can have a ball for themselves. This causes the training activities to improve technical skills are not very satisfying.

2. Difficulty in evaluating motion errors.

Learning during the pandemic is carried out by recording motion practices, then uploaded and sent to the lecturer's email. Movement errors made by students can only be explained virtually during zoom meetings, and through repair videos. In contrast to face-to-face learning that was carried out before the pandemic period, the lecturer can immediately demonstrate the correct

movement and show the location of the mistakes made by students.

### 3. Student activity in carrying out movement tasks.

Online learning is very dependent on the activeness of students to want to practice mastering the movements and doing the given motion tasks. Almost half of students from one class who are not active in doing movement assignments, it can be seen from academic achievement that shows a decline, any motion assignments that are not done will cause academic achievement to not reach the maximum value.

Surprising results were obtained from the Pencak Silat practice course, where the value of academic achievement during the pandemic period increased compared to before the pandemic. Several factors influenced this result, including:

#### 1. No need for supporting facilities and infrastructure.

In contrast to volleyball learning which requires volleyball media so that movement practice activities take place, Pencak Silat learning does not require media or supporting facilities and infrastructure. What is needed is only yourself who is willing to try to memorize the movements of each move and perform the movements correctly. This is one of the positive values, so students do not need to buy media or tools so that the learning of Pencak Silat can take place. They simply prepare themselves and focus on the movement being learned.

#### 2. Submission of Learning Materials

During the pandemic, the delivery of material is through learning videos where every movement learned is uploaded to e-learning in 2 versions, namely the slow motion version and the original motion version, so that students

are able to see the movements better and repeatedly. Prior to the pandemic, the material was delivered directly by demonstrating the movement in front of students. Students could only study movements during lecture hours, unlike during the pandemic, they could learn movements anywhere and anytime.

Based on the explanation above, the opinion of Rasha M (2020) which states that intrinsic motivation and extrinsic motivation affect academic achievement is proven to be in line with the results found in this study. According from observation Based on observations during online lectures, intrinsic motivation, among others, is shown from 1) the activeness of students to carry out movement mastery exercises continuously so that the results of the movement assignments sent get the best score, 2) students' initiative to learn the movements delivered through learning videos uploaded on e-learning. While extrinsic motivation is shown by: 1) supporting facilities and infrastructure when conducting practical lectures, 2) evaluations carried out by supporting lecturers on motion errors made, and 3) delivering material through media that is easily accessible to students.

Nagi & Bojiah (2020) findings implicitly confirm that the students are comfortable with both real classes and online classes as far as the instructor is efficient to use appropriate pedagogies and digital tools to support learning. No matter if this is real classes or online classes, the academic achievement of students is still the same, not different.

In line with the opinion of Peng & Kievit (2020) that two main factors affect academic achievement, namely mastery of basic skills and mastery of thinking skills. This is shown from the results of academic achievement in volleyball learning courses, students experience an increase in mastery of basic skills with a

face-to-face learning system. This is different from the Pencak Silat course where learning occurs when there is an increase in the value of academic achievement when learning is carried out online during the pandemic.

These two practical courses illustrate that face-to-face learning before the pandemic and online learning during the pandemic can both improve academic achievement.

Limitations of this study include, 1) the sample represents only 1 class only, 2) there are no control variables as a comparison.

## CONCLUSION

The conclusion drawn is that there is a significant difference between the academic achievement of Pencak Silat courses and volleyball lessons before and during the pandemic. The results of the statistical test showed that these two practical courses illustrate that face-to-face methods before pandemic can improve academic achievement than using online learning methods during pandemic. Lecturers need to find solutions so that through online lectures students' academic achievement remains the same as academic achievement during face to face lectures.

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