



Contribution of Motor Educability, Coordination, and Confidence to the Ability to Perform Flic-Flac Artistic Gymnastics Extracurricular at SDN Kayen I Bandarkedungmulyo, Jombang

Hadi Purwanto^{1*}, Budiman Agung Pratama², Atrup³

^{1,2,3}Postgraduate Program / Universitas Nusantara PGRI Kediri / East Java / Indonesia

¹Street. KH. Ahmad Dahlan No. 76 Mojoroto, District Mojoroto, Kediri City, East Java, 64112

¹hadipurwantopenjas@gmail.com, ²agung10@unpkediri.ac.id, ³atrup@unpkediri.ac.id

Received: August 28, 2021 ; **Reviewed:** September 9, 2021; **Accepted:** September 16, 2021;

Published: October 29, 2021

ABSTRACT

This research is based on the observations and experiences of researchers, that not all elementary schools in the district know or do gymnastics in general, specifically artistic gymnastics. The problems in this problem are: 1) How big is the contribution of Motor Educability to the ability to do the flic-flac movement? 2) How big is Eye-Hand-Foot Coordination to the ability to do the flic-flac movement? 3) How much do you contribute and are confident in doing the flic-flac movement? 4) Is there a joint contribution of motor educability, coordination, and self-confidence to the ability to perform flic-flac movements? 5) Among the contributions of motor educability, coordination, and self-confidence, which one has the biggest role in the ability to perform artistic gymnastics flic-flac movements? Scientific work, as material to be studied, by further researchers. The type of research used in this study is a quantitative research study whose data is in the form of numbers. Using independent and dependent variables. Instruments that have been tested for validity and reliability. Based on the results that have been obtained, it shows that the contribution of motor educability, coordination, and self-confidence, the ability to perform flic-flac movements of students will increase. A teacher can explain motor educability clearly so that students can understand it. The ability to perform the student's flic-flac movement will decrease if the student's eye-hand and foot coordination are not balanced so that it can be at risk of causing injury. The maturity level of motor educability and self-confidence is high, it will be easier for you to do the flic-flac movement. The lower eye-hand-foot coordination will affect increasing the possibility of injury to students. Based on the conclusions of the research, it is suggested that there is a relationship between the contribution of motor educability, coordination, and self-confidence to the ability to perform extracurricular artistic gymnastics flic-flac at SDN Kayen I Bandarkedungmulyo, Jombang.

Keywords: Motor Educability; Coordination; Self-Confidence; Flick-Flac Movement; Artistic Gymnastics.

INTRODUCTION

Gymnastics is a translation of the word gymnastiek (Dutch) or gymnastic (English) (Gunawan, 2016). Gymnastiek comes from the word gynmos (Greek), which means naked, or half-naked. The word has the meaning that the movement is carried out without interference so that it becomes a perfect movement (Yuliyanto, 2018).

Gymnastics can also be interpreted as physical activity that is carried out either as a separate sport or as a branch of other sports (Utomo et al., 2012). That is why gymnastics is called a basic sport (Adriyani, 2012). Gymnastics has been in Indonesia since the Dutch colonial era, precisely in 1912 (Suherman, 2019). At that time it was known as Taiso. The use of the word "gymnastics" itself is probably almost the same as the use of the word sport as a substitute for the word sport (Prestianto, 2017). Gymnastics from ancient Greece until now, gymnastics has developed very rapidly, along with advances in the field of Science and Technology (Widowati & Rasyono, 2013). This development can be seen in the form of movement, systematic training, and goals. This causes the scope of gymnastics now to be so broad (Reza et al., 2013).

Gymnastics is a physical activity that can help optimize children's development (Ulfah et al., 2021). Gymnastic movements are very suitable for emphasis in physical education programs, especially because of the required physical demands, such as muscle strength and endurance of body parts (Sari, 2018). There are many types of gymnastics. One of the types of gymnastics is artistic gymnastics. Artistic gymnastics is one of the disciplines of gymnastics and is a very popular sport (Iswanto, 2018). Artistic gymnastics is a sport whose movements contain acrobatic elements and have a high aesthetic value, due to the movement of jumping, rolling, rotating, bouncing, rotating speed in the air (Perdana, 2019).

Movements in artistic gymnastics are quite complicated and complex (Hadjarati & Haryanto, 2020). Gymnastics movements require cognitive, innovative, high dedication courage from each individual having movement skills (Hammado & Sahabuddin, 2019), gymnastics can be classified into discrete and serial skills (Maulana et al., 2020). Gymnastics is a physical activity that is rich in movement structures (Arifin, 2018). The complexity of the movements in artistic gymnastics requires a long time and repeated exercises continuously (Morni et al., 2019) to master it or be able to perform the movements they want (Prestianto, 2017). Therefore, the training and learning process must be able to provide opportunities for students (Kadek Yogi Parta, 2016) to learn to master movement skills in gymnastics (Mabrur et al., 2021).

Movements in artistic gymnastics that require a high level of confidence (Wahyu Heny Kartika Sari, Tatok Sugiarto, 2016) are flic-flac movements or commonly referred to as backflips. Flick-flak is a form of movement in floor gymnastics that begins by standing, then bending the knees. After that, rejecting the legs and throwing both hands back until they land, the hands are used as a support for the next movement, the body is

bowed with throwing both feet back until it stands straight. The axis of rotation is the same as the forward somersault. The flic-flac movement is very risky, therefore confidence is needed to carry out the movement (Widowati & Rasyono, 2013).

The flic-flac learning process so far still uses a conventional approach or method, namely the lecture method. The lecture method cannot train students' skills. This is because learning with the lecture method can cause students to be bored, sleepy, and tend to prefer chatting with friends, so students are only passive and cannot receive the material in its entirety (Kurniasih, 2017). In addition, the fear of injury is always felt by students in performing flic-flac movements. This is because students do not have sufficient training skills so that students' confidence to perform flic-flac movements is low. For this reason, it is necessary to take action to increase students' self-confidence. Ways to increase students' self-confidence include: 1) generating motivation; 2) having a strong foundation; 3) freeing oneself from the shackles of inferiority; 4) maintaining & fostering self-confidence that begins to emerge; 5) strengthening self-confidence; 6) applicative development. Self-confidence is a person's mental or psychological condition, where the individual can evaluate the whole of himself to give strong belief in his ability to take action in achieving various goals in his life (Sahabuddin et al., 2020). People who have good self-confidence are not people who only feel capable (therapy is not capable) but are people who know that they are capable based on experience and calculations (Reza et al., 2013)

In addition to self-confidence, what plays a role in the success of learning, especially the flic-flac movement, is the student's motor educability. Motor educability is a potential ability that shows whether or not someone quickly masters a new movement skill (Siroj, 2017). Mahardika (2016), in his research, argues that a person's motor educability must be maintained. This is because motor educability has a major influence on the development of skills, intellectuals, and thinking abilities (Kurniawan et al., 2020). After all, when a person's motor educability is low, their movement ability will be limited. Based on research conducted by Haqiyah & Riyadi (2018), students' motor educability will make it easier to learn new movements and develop their abilities in the field of sports. The ability of motor educability is one of the many internal factors that can affect the results of learning/practicing movement in students (Wahidi, 2017).

Understanding motor educability in a sport itself (Pratama, 2017) is the potential for students to change or develop basic movements into directed movements (Shakty, 2019). Several studies on the contribution of motor educability conclude that to improve

motor educability in elementary school students can be done with sports (Lesmana, 2018). A person's ability to master new skills is related to their motor educability (Pane & Saragih, 2016). Understanding motor educability is very important. This is because this understanding is part of the learning process. The learning process is a very appropriate place for students to develop their potential (Pane & Saragih, 2016). Based on research conducted by Haqiyah & Riyadi (2018), students' motor educability will make it easier to learn new movements and develop their abilities in the field of sports (Aryanti, 2019). The motor educability of each student is different. The potential or ability of this motor educability can be divided into two categories, namely a high level of motor educability and a low level of motor educability (Syahrial, et al, 2020). During the learning process, the teacher is faced with various situations. There are situations where there are students who can adapt quickly to mastering the material (Candra et al., 2015), there are also students who are very slow to master the material. Mastery of student material depends on aspects of the movement experience that students have had since childhood (Ulfah et al., 2021). In addition, it depends on the cognitive abilities of students in perceiving what is given by the teacher (Semarayasa et al., 2013). This is also influenced by the training processes that have been taken by students. Various factors determine a student can master the material well (Rustiawan & Rohendi, 2021).

The selection of the right teaching method is the key to the success of a teacher in providing learning for students. The motor educability possessed by students will be better if it is combined with the right teacher teaching method or method (Semarayasa, 2010), so the selection of teaching methods or styles is very important to consider considering the diversity of characteristics possessed by students (Sumantri, 2016).

METHOD

The type of research used in this research is explanatory research. This research approach uses a quantitative data approach. In this study, what will be studied are Motor Educability, Coordination, Confidence as the independent variable and the Ability to Do Flicks as the dependent variable. The location of this research is at SDN Kayen I Bandarkedungmulyo Regency, Jombang. The population in this study was from SDN Kayen 1 Bandarkedungmulyo, Jombang Regency, totaling 100 students, while the sample of this study was 20-25% of the total population of 25 sons. In research, data collection aims to obtain data or information according to the phenomena that exist in

the data standards set (Sugiono, 2014). The techniques used by researchers in collecting data are interviews, observation, documentation, and questionnaires. To perform multiple regression analysis, use the following equation:

$$Y = \alpha + b_1X_1 + b_2X_2 + e$$

The t-test was performed on ordinal data to test the correlation of the two samples analyzed. This test is used to determine whether each independent variable independently significantly influences the dependent variable. How to know if the hypothesis is accepted if sig < (0.05), and vice versa if sig > (0.05), then the hypothesis is rejected (Ferdinand, 2014). Determinant coefficient analysis was used to determine the close relationship between the independent variable and the dependent variable. The value of R2 is from 0 to 1 (0 R2 1). A small R-value means that the ability of the independent variables (motor educability, eye-foot coordination, and self-confidence) in explaining the dependent variable (the ability to do flick-flac) is very limited. Vice versa, if the value is close to one, it means that the independent variable provides almost all the information needed to predict the variation of the dependent variable (Ghozali I., 2018).

RESULTS AND DISCUSSION

The results of descriptive data analysis of motor educability, coordination, and confidence in the ability to do artistic gymnastics flic-flac at SDN 1 Kayen Bandarkedungmulyo students, Jombang.

Tabel 1.
Description of Motor Educability

| | N | Range | Min. | Max. | Sum | Mean | |
|-------------------|----------------|-----------|-----------|------------|-----------|------------|------------|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error |
| Motor Educability | 25 | 19 | 50 | 69 | 1470 | 58.80 | 1.165 |
| | Std. Deviation | Variance | Skewness | | Kurtosis | | |
| | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error | |
| Motor Educability | 5.824 | 33.917 | 0.656 | 0.464 | -0.573 | 0.902 | |

Tabel 2.
Description of Eye-Hand-Foot Coordination

| | N | Range | Minimum | Maximum | Sum | Mean | |
|------|----------------|-----------|-----------|------------|-----------|------------|------------|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error |
| KMTK | 25 | 7 | 8 | 15 | 277 | 11.08 | 0.270 |
| | Std. Deviation | Variance | Skewness | | Kurtosis | | |
| | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error | |
| KMTK | 1.352 | 1.827 | 0.504 | 0.464 | 2.128 | 0.902 | |

Tabel 3.
 Description of self-confident

| | N Statistic | Range Statistic | Min Statistic | Max Statistic | Sum Statistic | Mean Statistic | Std. Error |
|----------------|--------------------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------|------------|
| Self-confident | 25 | 3 | 1 | 4 | 68 | 2.72 | 0.235 |
| | Std. Deviation Statistic | Variance Statistic | Skewness Statistic | Std. Error | Kurtosis Statistic | Std. Error | |
| Self-confident | 1.173 | 1.377 | -0.412 | 0.464 | -1.301 | 0.902 | |

Tabel 4.
 Description of ability to do flick-flac

| | N Statistic | Range Statistic | Min Statistic | Max Statistic | Sum Statistic | Mean Statistic | Std. Error |
|-------------------|-----------------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------|------------|
| Flic-flac Ability | 25 | 2.3 | 7.6 | 9.9 | 231.9 | 9.276 | 0.1405 |
| | Std. Deviation Statistic | Variance Statistic | Skewness Statistic | Std. Error | Kurtosis Statistic | Std. Error | |
| Flic-flac Ability | 0.7025 | 0.494 | -0.925 | 0.464 | 0.500 | 0.902 | |

Recapitulation of motor educability contribution score calculation results in coordination and confidence in the ability to perform artistic gymnastics flic-flac.

Tabel 5.
 Recapitulation of the calculation results of motor educability scores, coordination, and confidence in the ability to perform artistic gymnastics conflicts

| Statistik | Variable | | | |
|--------------------|----------|-------|-------|--------|
| | KME | KMTK | PD | KMF |
| Mean | 58.80 | 11.08 | 2.72 | 9.276 |
| Standard Deviation | 5.824 | 1.352 | 1.173 | 0.7025 |
| Minimum Score | 50 | 8 | 1 | 7.6 |
| Maximum Score | 69 | 15 | 4 | 9,90 |
| Range | 19 | 7 | 6 | 2.3 |

Tabel 6.
 Motor educability normality test results

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-------------------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Motor Educability | .275 | 25 | .157 | .861 | 25 | .625 |

The significance value (p) in the Komogrof-Smirnov test is 0.157 ($p > 0.05$) so that based on the normality test the data is normally distributed. The significance value (p) in the Shapiro-Wilk test is 0.625 ($p > 0.05$) so that based on the normality test the data is normally distributed. The normality test shows that the motor educability variable is normally distributed because it has a significance of more than 0.05 (sig. > 0.05).

Tabel 7.

Motor educability simple linear test results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | 95.0% Confidence Interval for B | | |
|-------|-------------------|-----------------------------|------------|---------------------------|-------|---------------------------------|-------------|-------------|
| | | B | Std. Error | Beta | t | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 8.187 | 1.468 | | 5.575 | <.001 | 5.149 | 11.224 |
| | Motor Educability | .019 | .025 | .154 | .745 | .464 | -.033 | .070 |

Based on the table above, we get the equation $Y = 8.187 + 0.19X_1$. The equation shows that students' ability to do flic-flac will increase if the teacher can explain clearly about motor education so that students can understand it.

From the output table, it is known that Cronbach's alpha is $0.878 > 0.60$, so the motor educability of students' ability to perform reliable or consistent flicks.

Tabel 8.
Homogeneity test results

| | | Levene Statistic | df1 | df2 | Sig. |
|-------------------|--------------------------------------|------------------|-----|--------|------|
| Motor Educability | Based on Mean | 1.375 | 2 | 22 | .274 |
| | Based on Median | .562 | 2 | 22 | .578 |
| | Based on Median and with adjusted df | .562 | 2 | 20.970 | .579 |
| | Based on trimmed mean | 1.329 | 2 | 22 | .285 |

The significance of homogeneity was $0.285 (\geq 0.05)$ indicating that the treatment and control were homogeneous, with a lavender statistic of 1.329.

Tabel 9.
Simple correlation test results

| | | Motor.1 | Motor.2 | Motor.3 | Percaya diri |
|-------------------|---------------------|---------|---------|---------|--------------|
| Motor.1 | Pearson Correlation | 1 | .759** | .724** | .381 |
| | Sig. (2-tailed) | | <.001 | <.001 | .060 |
| | N | 25 | 25 | 25 | 25 |
| Motor.2 | Pearson Correlation | .759** | 1 | .635** | .320 |
| | Sig. (2-tailed) | <.001 | | <.001 | .119 |
| | N | 25 | 25 | 25 | 25 |
| Motor.3 | Pearson Correlation | .724** | .635** | 1 | .190 |
| | Sig. (2-tailed) | <.001 | <.001 | | .364 |
| | N | 25 | 25 | 25 | 25 |
| Flic-Flac Ability | Pearson Correlation | .381 | .320 | .190 | 1 |
| | Sig. (2-tailed) | .060 | .119 | .364 | |
| | N | 25 | 25 | 25 | 25 |

From the table, it can be seen the value of sig. (2-tailed) between the motor educability and the ability to do flic-flac is greater than 0.05, which means that the variable motor educability affects the ability to flic-flac but is not significant.

Tabel 10.

Motor educability simple regression test results

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | Change Statistics | | | Durbin-Watson | |
|-------|-------------------|----------|-------------------|----------------------------|-----------------|-------------------|-----|-----|---------------|-------|
| | | | | | | F Change | df1 | df2 | | |
| 1 | .270 ^a | 0.073 | -0.060 | 0.7232 | 0.073 | 0.549 | 3 | 21 | 0.654 | 0.882 |

Based on the table model summary, the probability value (sig. F change) = 0.654. Due to the value of sig. F change $0.654 < 0.05$ then motor educability has a simultaneous and significant correlation with the ability to perform extracurricular artistic gymnastics flic-flac of students at SDN Kayen1 Bandarkedungmulyo, Jombang.

Tabel 11.
 Eye-hand-foot coordination normality test results

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| KMTK | .208 | 25 | .007 | .855 | 25 | .010 |

The significance value (p) in the Komogrof-Smirnov test is 0.007 ($p > 0.05$) so that based on the normality test the data is normally distributed. The significance value (p) in the Shapiro-Wilk test is 0.010 ($p > 0.05$) so that based on the normality test the data is normally distributed. Based on the above normality test, eye-hand-foot coordination is normally distributed because it has a significance value of more than 0.05.

Tabel 12.
 Simple linear test results of eye-hand-foot coordination

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | 95.0% Confidence Interval for B | | |
|-------|------------|-----------------------------|------------|---------------------------|--------|---------------------------------|-------------|-------------|
| | | B | Std. Error | Beta | t | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 10.629 | 1.176 | | 9.041 | <.001 | 8.197 | 13.061 |
| | KMTK | -.122 | .105 | -.235 | -1.159 | .258 | -.340 | .096 |

Based on the table above, we get the equation $Y = 10.629 - 0.122X_2$. The equation shows that students' ability to do flic-flac will decrease if students' hand-eye coordination is not balanced so that it can increase the risk of injury.

Tabel 13.
 Result of homogeneity test of eye hand foot coordination

| | | Levene | | | |
|------|--------------------------------------|-----------|-----|--------|------|
| | | Statistic | df1 | df2 | Sig. |
| KMTK | Based on Mean | 1.632 | 2 | 22 | .218 |
| | Based on Median | 1.061 | 2 | 22 | .363 |
| | Based on Median and with adjusted df | 1.061 | 2 | 20.031 | .365 |
| | Based on trimmed mean | 1.623 | 2 | 22 | .220 |

The significance of homogeneity was 0.220 (≥ 0.05) indicating that the treatment and control were homogeneous, with a lavender statistic of 1.623.

Tabel 14.
 Simple eye-hand-foot coordination correlation test results

| | | Throw | Kick | Flic-Flac Ability |
|-------------------|---------------------|-------|-------|-------------------|
| Throw | Pearson Correlation | 1 | .161 | -.138 |
| | Sig. (2-tailed) | | .441 | .510 |
| | N | 25 | 25 | 25 |
| Kick | Pearson Correlation | .161 | 1 | -.234 |
| | Sig. (2-tailed) | .441 | | .259 |
| | N | 25 | 25 | 25 |
| Flic-Flac Ability | Pearson Correlation | -.138 | -.234 | 1 |
| | Sig. (2-tailed) | .510 | .259 | |
| | N | 25 | 25 | 25 |

From the table, it can be seen the value of sig. (2-tailed) between eye-hand-foot coordination and the ability to do flic-flac is greater than 0.05, with a sig. a throw of 0.510 is equal to and the value of sig. kick of 0.259 which means that the eye-hand-foot coordination variable affects the flic-flac ability but not significantly.

Tabel 15.
 Simple regression test results for eye-foot coordination

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | Change Statistics | | | Sig. F Change | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|-----------------|-------------------|-----|-----|---------------|---------------|
| | | | | | | F Change | df1 | df2 | | |
| 1 | .047 ^a | 0.002 | -0.041 | 0.7169 | 0.002 | 0.051 | 1 | 23 | 0.823 | 0.542 |

Based on the table model summary, the probability value (sig. F change) = 0.823. Due to the value of sig. F change $0.823 < 0.05$ then motor educability has a simultaneous and significant relationship with the ability to do extracurricular artistic gymnastics flic-flac students of SDN 1 Kayen Bandarkedungmulyo Jombang.

Tabel 16.
 Self-confident normality test results

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------------|---------------------------------|----|------|--------------|----|-------|
| | Statistic | Df | Sig. | Statistic | df | Sig. |
| Self-confident | .234 | 25 | .008 | .827 | 25 | <.011 |

The significance value (p) in the Komogrof-Smirnov test is 0.008 ($p > 0.05$) so that based on the normality test the data is normally distributed. The significance value (p) in the Shapiro-Wilk test is 0.011 ($p > 0.05$) so that based on the normality test the data is normally distributed. The normality test shows that the confidence variable is normally distributed because it has a significance of more than 0.05 (sig. > 0.05).

Tabel 17.
 Simple linear test results in confidence in ability to do flic-flac

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | 95.0% Confidence Interval for B | | |
|-------|----------------|-----------------------------|------------|---------------------------|--------|---------------------------------|-------------|-------------|
| | | B | Std. Error | Beta | T | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 9.199 | .368 | | 24.979 | <.001 | 8.437 | 9.961 |
| | Self-confident | .028 | .125 | .047 | .226 | .823 | -.230 | .286 |

Based on the table above, we get the equation $Y = 9,199 + 0,028 X_3$. The equation shows that the students' ability to do flic-flac will increase if students' self-confidence also increases.

Tabel 18.
 Results of the homogeneity test of confidence in the ability to do flic-flac

| | | Levene Statistic | df1 | df2 | Sig. |
|----------------|--------------------------------------|------------------|-----|--------|------|
| Self-confident | Based on Mean | .897 | 2 | 22 | .422 |
| | Based on Median | .690 | 2 | 22 | .512 |
| | Based on Median and with adjusted df | .690 | 2 | 20.938 | .513 |
| | Based on trimmed mean | .875 | 2 | 22 | .431 |

Tabel 19.
 Normality test results of ability to flick –flak

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-------------------|---------------------------------|----|------|--------------|----|-------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Flic-Flac Ability | .293 | 25 | .006 | .747 | 25 | <.008 |

Tabel 20.
 Multiple linear test results of ability to do flic –flac

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | 95.0% Confidence Interval for B | | |
|-------|-------------------|-----------------------------|------------|---------------------------|--------|---------------------------------|-------------|-------------|
| | | B | Std. Error | Beta | t | Sig. | Lower Bound | Upper Bound |
| 1 | (Constant) | 9.654 | 2.209 | | 4.370 | .001 | 5.060 | 14.249 |
| | Motor Educability | .013 | .026 | .107 | .495 | .426 | -.041 | .067 |
| | KMTK | -.116 | .113 | -.222 | -1.019 | .320 | -.351 | .120 |
| | Self-confident | .052 | .127 | .087 | .409 | .486 | -.213 | .317 |

Tabel 21.
 Multiple correlation test results ability to do flic-flac

| | | Motor Educability | KMTK | Percaya Diri | Flic-Flac Ability |
|-------------------|---------------------|-------------------|-------|--------------|-------------------|
| Motor Educability | Pearson Correlation | 1 | -.236 | -.070 | .154 |
| | Sig. (2-tailed) | | .256 | .741 | .464 |
| | N | 25 | 25 | 25 | 25 |
| KMTK | Pearson Correlation | -.236 | 1 | .146 | -.235 |
| | Sig. (2-tailed) | .256 | | .486 | .258 |
| | N | 25 | 25 | 25 | 25 |
| Self-confident | Pearson Correlation | -.070 | .146 | 1 | .047 |
| | Sig. (2-tailed) | .741 | .486 | | .823 |
| | N | 25 | 25 | 25 | 25 |
| Flic-Flac Ability | Pearson Correlation | .154 | -.235 | .047 | 1 |
| | Sig. (2-tailed) | .464 | .258 | .823 | |
| | N | 25 | 25 | 25 | 25 |

Judging from the table above, it can be seen the value of sig. (2-tailed) between motor educability, eye-hand-foot coordination, and confidence in the ability to do flick-flac is greater than 0.05, with a sig value. motor educability of 0.464, the value of sig. hand-foot coordination of 0.258 and the value of sig. the self-confidence of 0.823 which means variable motor educability, eye-hand-foot coordination, and self-confidence affect the ability of flic-flac.

Tabel 22.
F-test Results

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|------|-------------------|
| 1 | Regression | .862 | 3 | .287 | .549 | .654 ^b |
| | Residual | 10.984 | 21 | .523 | | |
| | Total | 11.846 | 24 | | | |

Based on the value of sig. is equal to 0.654. because of the value of sig. $0.654 < 0.05$ then according to the basis for taking the F test, it can be concluded that motor educability, eye-hand-foot coordination, and self-confidence simultaneously do not affect the ability to flicflac students at SDN 1 Kayen Bandarkedungmulyo, Jombang.

Tabel 23.
Multiple linear test results of ability to do flic –flac

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | |
|-------|-----------------------------|------------|---------------------------|-------|--------|---------------------------------|-------------|--------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | |
| 1 | (Constant) | 9.654 | 2.209 | | 4.370 | .001 | 5.060 | 14.249 |
| | <i>Motor Educability</i> | .013 | .026 | .107 | .495 | .426 | -.041 | .067 |
| | KMTK | -.116 | .113 | -.222 | -1.019 | .320 | -.351 | .120 |
| | Self-confident | .052 | .127 | .087 | .409 | .486 | -.213 | .317 |

In general, the definition or understanding of hypothesis, epistemologically, is a word that comes from the Greek language, namely from the word hypo which means under, and the word thesis which means opinion, opinion, or certainty. From this understanding, we can make an illustration that the hypothesis is a temporary answer to a problem that is still presumption or guesswork because it must first be proven true through research or research. Therefore, referring to the explanation above and also to the problems raised by the researcher, the hypothesis is raised:

Tabel 24.
t-test data results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|-------|--------------------------|-----------------------------|------------|---------------------------|--------|------|---------------------------------|-------------|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| 1 | (Constant) | 9.654 | 2.209 | | 4.370 | .001 | 5.060 | 14.249 |
| | <i>Motor Educability</i> | .013 | .026 | .107 | .495 | .426 | -.041 | .067 |
| | KMTK | -.116 | .113 | -.222 | -1.019 | .320 | -.351 | .120 |
| | Self-confident | .052 | .127 | .087 | .409 | .486 | -.213 | .317 |

The t-test was performed on ordinal data to test the correlation of the two samples analyzed. This test is used to determine whether each independent variable independently significantly influences the dependent variable. How to know if the hypothesis is accepted if $\text{sig} < (0.05)$, and vice versa if $\text{sig} > (0.05)$, then the hypothesis is rejected (Ferdinand, 2014).

Discussion

Motor educability contribution

As for motor educability, from the results of the Hypothesis test, $F \text{ change} = 0.654$. Due to the value of $\text{sig. } F \text{ change } 0.654 < 0.05$ means that motor educability has a simultaneous and significant correlation with the ability to perform extracurricular artistic gymnastics flic-flac of students at SDN Kayen1 Bandarkedungmulyo, Jombang. Motor Educability In learning motion, two potential motor skills are influenced by hereditary factors, namely motor abilities, and motor educability. The level of movement ability is related to the acquisition of skills and accelerates the process of acquisition of motion. Skill (movement skills) indicates a special purpose, while the ability (movement ability) is a general ability that facilitates skills in an appearance. So the ability to move is an ability that can contribute to the mastery of movement skills.

Motor educability is the basis for the movement of each individual in daily activities, but in developing the ability or skill of a sport it is the basis for a directed movement. This research reveals that motor educability can affect learning abilities because motor educability is related to the ability to think in performing skills. In addition to this research, it reveals that poor motor educability can affect physical skills. Rusli Lutan, (1988), suggests that motor educability cannot be separated from intelligence to learn one's skills. Motor educability is defined as the general ability to learn tasks carefully and quickly, often also termed general motor intelligence. According to Cratty and Rusli Lutan, motor educability is defined as a general skill to learn tasks quickly and carefully, also analogous to the concept in psychology, namely intelligence. The term motor educability is also often referred to in other terms, namely general motor, intelligence.

The contribution of motor educability is the ability for someone to master or accept movement. Motor educability is a person's ability to learn a new motor skill. Based on the first hypothesis testing, it turns out that there is a significant difference in the effect

between students who get the basis of the contribution of motor educability, self-confidence, coordination on the ability to do artistic gymnastics flic-flac movements. Data on motor educability results, mean 11.08, the standard deviation of 1.352, a minimum score of 8, maximum score of 15, range of 7 out of 3 classes. For students of Class 5a, 5b, 6 Girls and Boys at SDN Kayen 1 Bandarkedungmulyo, Jombang. When viewed from each grade, students who get a high motor educability contribution have better results than students who do not have a motor educability contribution movement.

Eye-Hand-Foot Coordination

Eye-hand-foot coordination on the ability to do extracurricular artistic gymnastics at SDN Kayen 1 Bandarkedungmulyo Kab. Jombang. Eye-hand-foot coordination on the ability to do flic-flac, the results of the t-test (-1.029) with a significance of 0.320 < 0.05 which means that eye-hand-foot coordination has a negative and significant effect on the ability to do flic-flac and eye-hand coordination. hand-foot is the need for the physical component.

Especially eye-hand-foot coordination almost every sport relies on eye-hand-foot movements. Coordination is the ability to integrate motor and sensory systems into an efficient movement pattern. You need eye-hand-foot movements and good rhythmic movements. This coordination is critical to the success of most movement activities including those performed as part of daily functioning. Based on the description above, coordination is closely related to the level of difficulty of movement that is raised in the hands and feet, so it is natural that almost every sport that relies on the hands and feet as a fast movement requires this physical component. Coordination is the ability to unite or separate in a complex work task, provided that the coordination movement includes the perfection of time between the muscles and the nervous system. The results obtained from the table show that eye coordination is very dominant in moving the hands and feet so that without coordination it will not produce good movements. Eye and hand coordination is the cognitive ability to perform activities that involve eye and handwork at the same time. Your little one will receive visual information through his eyes as a guide for his hands to make certain movements.

According to Larson (1974) quoted by Cholik and Gusril (2004) that coordination is the ability to unite or separate in a complex work task, provided that the coordination movement includes the perfection of time between the muscles and the nervous system. Eye-hand-foot coordination is the ability of the

vision system to coordinate information received through the eyes to control, guide, and direct the hands and feet in the fulfillment of a given task, in this case throwing and kicking the ball. Eye-hand-foot coordination uses the eyes for direct attention of the hands, feet for throwing and kicking the ball. Thus the level of coordination of students will make throws and kicks related to the good and bad of the throws and kicks produced. With good eye-hand-foot coordination, the throws and kicks that will be made will produce good throws and kicks as well.

According to Ismaryati (2006) coordination is defined as a harmonious relationship of mutual influence between muscle groups during work that is indicated by various skill levels. From the several definitions of coordination, it can be concluded that coordination is the ability of body organs or muscle groups that can create harmonious, complex, and harmonious movements into a complete and dynamic motion. Eye-hand and foot coordination is a person's ability to coordinate the eyes, hands, and feet into one comprehensive movement and can move easily, smoothly, in a controlled series and rhythm of movements. According to Suharno (1981) coordination is a person's ability to assemble several elements of motion into a movement that is in harmony with the goal. Data on eye-hand-foot results, mean 11.08, standard deviation 1.352, minimum score 8, maximum score 15, range 7 of 3 samplings 25 children from 3 classes and randomized.

Self-confident

Confidence in the ability to do extracurricular artistic gymnastics at SDN Kayen 1 Bandarkedungmulyo, Kab. Jombang, The test results obtained t count (0.486) with a significance of $0.409 < 0.05$, which means that self-confidence has a positive and significant effect on the ability to do flic-flac because the ability to do flic-flac without any self-confidence from someone will cause injury. Confidence for someone is an important thing that must be owned by every individual. With high self-confidence, the opportunity and hope to achieve something will be easier.

Reddy, (2014) also explains that self-confidence is believing in their abilities, having a stand-in managing their lives, and believing that their thoughts will be able to realize what they want, plan, and hope. Lauster (2008) adds that self-confident people are empathetic, optimistic, unselfish, ambitious, tolerant of others, understand each other, have a sense of prudence, not being shy, and are able to face life's problems.

Self Confidence is convincing in one's ability and judgment (judgment) in performing tasks and choosing an effective approach (Monty, 2000). Self-confidence

contains beliefs related to strength, self-ability to do and achieve success, and is responsible for what has been set by him. The best performance is a direct correlation between high self-confidence and successful sports performance. This includes confidence in their ability to cope with an increasingly challenging environment and trust in their decisions or opinions. Singer (1980) suggests that without having self-confidence, athletes will not achieve high performance. This is because there is a mutual relationship between achievement motives and self-confidence. Confidence is believing that he is capable and capable of achieving certain achievements: if his achievements are already high, the individual or athlete concerned will have more confidence. In sports, self-confidence is one of the determining factors for the success of an athlete. The problem of lack of or loss of confidence in their abilities will result in athletes performing below their abilities. Therefore, athletes do not need to doubt their abilities, as long as they have been practicing seriously and have sufficient competitive experience. Self-confidence is one of the psychological aspects that must be possessed by an athlete and this aspect includes a lot to determine the athlete's appearance on the field. Sudiby (1993) suggests that to be able to achieve high, athletes must have self-confidence, believe that he is capable, and able to achieve the desired achievement. Confidence is the main capital for every athlete to achieve the highest achievement. The level of self-confidence of athletes varies from one to another, so this needs attention from the coach. Beginner athletes need to be given more opportunities to increase their confidence by participating in many matches. According to Angelis (2002) the factors that influence self-confidence are (1) personal ability, self-confidence only arises when someone is doing something that is indeed capable of being done, (2) a person's success when he gets what he has expected and aspired to will strengthen the emergence of self-confidence, (3) Desire when someone wants something then that person will learn from the mistakes that have been made to get it, and (4) Strong determination, confidence that comes when someone has a strong determination to achieve the desired goal.

Based on the description above, it can be concluded that the factors that influence the formation of a person's self-confidence begin with education in the family. Education in the family has an important role in shaping the good or bad of an individual's personality. The school and community environment becomes the next factor, this is because the environment plays an important role in socializing with other individuals. Especially in the school environment, there is a teaching and learning process that can foster self-confidence in students, the teacher's role is very important as a model for students to act. In addition, a

strong will from oneself will foster self-confidence in individuals. Data on the results of a person's self-confidence assessment is very dominant. The data we get is unsatisfactory. The data has a mean of 2.72, a standard deviation of 1.173, a minimum score of 1, a maximum score of 4, a range of 3 out of 3 Looking at 3 classes of 100 students or children who have unsatisfactory self-confidence, only 25 children out of 100 students have self-confidence.

Ability to perform flick-flac

The contribution of motor educability, coordination, and self-confidence to the ability to perform extracurricular artistic gymnastics flic-flac at SDN Kayen 1 Bandarkedungmulyo, Kab. Jombang, very influential. Because according to the results of the hypothesis test, the contribution of motor educability, coordination, and self-confidence to the ability to do extracurricular artistic gymnastics at SDN Kayen 1 Bandarkedungmulyo, Kab. Jombang, each collaborated so that it was very influential. According to Eli Maryani, / Husdarta Jaja Suharja, (2010), the ability to perform the flic-flac movement is a form of movement in floor gymnastics that begins withstanding, then bending the knees. After that, rejecting the legs and throwing both hands back until they land, the hands are used as a support for the next movement, the body is bowed with throwing both feet back until it stands straight. The axis of rotation is the same as the forward somersault. How to do the flic - flac movement is as follows: (a) Beginning: Stand with feet together, arms straight in front, (b) Rejection: Lower arms and swing back, knees bent to half squat. Swing back both arms forward and up, together with strong leg repulsion, head upright folded back, (c) Kite: Bouncing body, both legs straight, body flying before both hands support on the mat. After reaching the handstand position, both legs snap (snap), the pelvis is bent accompanied by a push of the hands, and (d) Landing: Both feet land, chest and head raised, arms straight forward.

For beginners, this movement is quite difficult and high risk. For safety, prepare adequate equipment and guidance or assistance. Exercises for beginners can be done as follows: (a) Do it in pairs, (b) Pairs back to back. (c) Both hands are straight up, one holding the wrist. Then bend down so that the palm of your friend's hand touches the floor. Some common mistakes when doing a back somersault include (1) Swinging the arms up and back is not strong enough, (2) The head is not upright, folded back, (3) Repelling the legs is not strong, too fast, or too slow to resist. (4) bent arm support, hand

support too fast or too slow, (5) quick repulsion stomping feet before handstand stance, and (6) hand repulsion is not strong.

Data on the results of the ability to do flic-flac for an average of 9.2, standard deviation, the standard deviation of 0.70, a minimum score of 7.60, a maximum score of 9.90, a range of 2.30, while from 3 classes 5a, 5b and 6 of the total 100 students, children who can do flic-flac only 25 children. The results obtained are not good according to the percentage of existing data.

Among the contributing factors of motor educability, eye-hand-foot coordination, and self-confidence, which one has the biggest role in the ability to perform the artistic gymnastics flic-flac movement at SDN Kayen 1 Bandarkedungmulyo, Jombang. The results of the regression hypothesis obtained t count (0.495) with a significance of 0.426 <0.05, which means that motor educability has a positive and significant effect on the ability to do flic-flac. The contribution of motor educability, coordination, and confidence to the ability to do artistic gymnastics flic-flac, Ability to do flic-flac, it is necessary to have a collaboration of several elements of 3 movements, namely, motor educability, coordination, and confidence, the most dominant of which is motor educability. Before performing the flic-flac movement, each individual has the basic technical process of artistic gymnastics (front roll, back roll, somersault, wheeling, handstand, hanbalance, a round of, tiger jump) as a whole starting from the initial stage to the final stage which becomes one Unity of a series of units and combinations of various movements, where the series of movements are not interrupted, without separating the series of movements or components of motion.

The basic technical skills of artistic gymnastics such as front roll, back roll, somersault, wheeling, handstand, hanbalance, round of, tiger jump and back somersault must be learned as a whole because the basic technical skills of artistic gymnastics are one of the basic forms of gymnastics that must be mastered. by athletes, so that athletes can perform high movement parts. A movement skill that has a complex level of relationship between the parts of the movement, or what is called a high level of movement organization, is more suitable to use the overall practice method, whereas if a movement skill has a diverse level of movement elements that make up the overall movement, it is called a high level of movement complexity.

The potential quality of motor educability will provide an overview of a person's ability to learn new movements easily. The higher the potential level of motor educability, so that if someone has a high level of motor educability (ME), then they can

easily and quickly master the basic technical skills of artistic gymnastics (front roll, back roll, somersault, wheeling, handstand, hanbalance, a round of, tiger jump and backward somersault), with good quantity and quality of movement than people who have a level of motor educability (ME) educability, mastery of basic artistic gymnastics skills the group of students who follow the overall practice method is better than the group of students who follow the section practice method. Meanwhile, in the group of students who have a level of motor educability, when viewed from the mastery of the basic skills of artistic gymnastics, the group of students who follow the part practice method is better than the group of students who follow the overall practice method.

In the activity of contributing to motor educability, coordination, and confidence in the ability to do artistic gymnastics flic-flac, the important things are teachers (teachers) and students. These two factors greatly affect the results of the ability to perform good flic-flac movements. For learning to be meaningful, the teacher must be aware of the true relationship between goals, learning experiences, methods, and even ways of measuring changes or progress achieved by students (Rusli Lutan, 1988). One of the teacher's roles is to choose and apply learning methods that are following the abilities and characteristics of students. The characteristics of students are that each student has a different motor educability. This level of motor educability will affect the results of performing artistic gymnastics flic-flac movements.

CONCLUSIONS AND SUGGESTIONS

Conclusion; Based on the results of data management that have been obtained in the study, it can be concluded that: (1) The ability to do flic-flac students will increase if the teacher can explain clearly about motor educability so that students can understand them, (2) The ability to do flic-flac students will decreases if the student's hand-eye coordination is not balanced so that it can increase the risk of injury, (3) the ability to do flic-flac students will increase if students' self-confidence also increases, (4) the higher the level of motor educability and self-confidence will further develop a willingness to learn to do flic-flac, and the lower eye-hand-foot coordination will have an effect on increasing the possibility of injury to students, and (5) There is a relationship between the contribution of motor educability, coordination, and confidence to the ability to perform artistic gymnastics flic-flac movements.

Suggestion; Based on the results of the research concluded above, it is recommended to (1) Sports coaches and coaches so that in choosing artistic gymnastics athletes who want to be developed, they must pay attention to the elements of motor educability, eye-foot coordination, self-confidence, as a support in carrying out movements Artitiq gymnastics flic-flac, (2) For athletes, to achieve good performance in performing artistic gymnastic flic-flac movements requires hard work and continuous training and is related to the basic techniques of artistic gymnastics, (3) Extracurricular activities are a place to gain science related to artistic gymnastics, so that the results of this research can be used as useful knowledge as input, and (4) by having a higher contribution to motor educability, coordination, and self-confidence. Together, it will affect the ability to do flic-flac gymnastics artistic.

REFERENCES

- Arifin, Z. (2018). Pengaruh Latihan Senam Kebugaran Jasmani (Skj) Terhadap tingkat Kebugaran Siswa Kelas V Di Min Donomulyo Kabupaten Malang. *Journal AL-MUDARRIS*, 1(1), 22. <https://doi.org/10.32478/al-mudarris.v1i1.96>
- Aryanti, N. E. (2019). Studi Korelasional Antara Motor Educability, Feedback, Dan Percaya Diri Dengan Keterampilan Dribbling Instep of the Foot Siswa Putra Ekstrakurikuler Sepakbola Smpn 29 Jakarta Tahun 2013. *Jurnal Ilmiah Sport Coaching and Education*, 3(1), 51–64. <https://doi.org/10.21009/jsce.03106>
- Candra, Ra. D., Sulaiman, & Hidayah, T. (2015). Pengaruh Metode Latihan Dan Kemampuan Motor Educability Terhadap Hasil Latihan Teknik Dasar Sepakbola. *Journal of Physical Education and Sports*, 4(2), 159–164. <https://journal.unnes.ac.id/sju/index.php/jpes/article/view/9888>
- Gunawan, W. S. (2016). Hubungan Percaya Diri Terhadap Hasil Belajar Senam Lantai Guling Depan Pada Siswa Kelas X MA. Syafi'iyah Terpadu Jombang Tahun Pembelajaran 2015/2016. *Artikel Skripsi, Universitas Nusantara PGRI Kediri*. <https://docplayer.info/36814671-Hubungan-percaya-diri-terhadap-hasil-belajar-senam-lantai-guling-depan-pada-siswa-kelas-x-ma-syafi-iyah-terpadu-jombang-tahun-pembelajaran-2015-2016.html>
- Hadjarati, H., & Haryanto, A. I. (2020). Motivasi Untuk Hasil Pembelajaran Senam Lantai. *Multilateral Jurnal Pendidikan Jasmani Dan Olahraga*, 19(2), 137. <https://doi.org/10.20527/multilateral.v19i2.8646>
- Hammado, N., & Sahabuddin. (2019). PKM senam otak pada Siswa Sekolah Dasar Negeri Kompleks IKIP 1 Makassar. In *PROSIDING, Seminar Nasional Pengabdian Kepada Masyarakat* (Vol. 1, Issue 1). <https://ojs.unm.ac.id/semnaslpm/article/view/10877>

- Iswanto, H., & Adi, S. (2018). Survei Ketersediaan dan Kelayakan Sarana Prasarana Senam Artistik di Persani Kota Malang. *IPJ*, 2 (1): 48 - 54.
- Kadek Yogi Parta, L. P. S. W. (2016). Pengaruh Model Dan Media Pembelajaran Terhadap Hasil Belajar Kemampuan Dasar Senam Lantai Pada Mahasiswa Jurusan Penjaskesrek Undiksha. *JPI (Jurnal Pendidikan Indonesia)*, 5(1), 97. <https://doi.org/10.23887/jpi-undiksha.v5i1.8932>
- Kurniasih, N., Haka, N. B. (2017). Penggunaan Tes Diagnostik Two-Tier Multiple Choice untuk Menganalisis Miskonsepsi Siswa Kelas X pada Materi Archaeobacteria dan Eubacteria. *BIOSFER*, 8 (1): 114-127.
- Kurniawan, W., Pramono, H., & Rumini. (2020). Effects of Intelligence Quotient, Emotional Quotient, and Motor Educability on Players Ability to Tact in Soccer Games. *Journal of Physical Education and Sports*, 9(1), 44-49. <https://journal.unnes.ac.id/sju/index.php/jpes/article/view/36650>
- Lesmana, H. S. (2018). Peran Motor Educability Di Dalam Meningkatkan Keterampilan Olahraga Pada Pembelajaran Penjas. *Repository, Universitas Negeri Padang*. <http://repository.unp.ac.id/id/eprint/24442>
- Lutan, Rusli. (1988). Belajar Keterampilan Motorik, pengantar teori dan metode, Jakarta: Depdikbud Ditjen Pendidikan Tinggi PPLPTK.
- Mabrur, M., Setiawan, A., & Mubarak, M. Z. (2021). Pengaruh Model Pembelajaran Direct Instruction Terhadap Hasil Belajar Teknik Dasar Guling Depan Senam Lantai. *Physical Activity Journal*, 2(2), 193. <https://doi.org/10.20884/1.paju.2021.2.2.4014>
- Maulana, M., Ismaya, B., & Hidayat, A. S. (2020). Minat Siswi Dalam Pembelajaran Pendidikan Jasmani Senam Lantai Sman 1 Cikampek. *Jurnal Literasi Olahraga*, 1(1), 66-76. <https://doi.org/10.35706/jlo.v1i1.3766>
- Morni, Wiwik, & Andika. (2019). Metode meningkatkan keberanian siswa melalui pembelajaran senam lantai roll belakang. *Pendidikan Jasmnai Kesehatan Dan Rekreasi FKIP UNTAN, Pontianak*, 1-10.
- Pane, B. S., & Saragih, A. H. (2016). Pengaruh Gaya Mengajar dan Motor Educability Terhadap Passing Atas Bolavoli Pada Siswa Putra SMP Gajah Mada Medan. *Jurnal Teknologi Pendidikan*, 9(1), 1-13. <https://doi.org/https://doi.org/10.24114/jtp.v9i1.4887>
- Perdana, F., & Agus, A. (2019). Pengaruh Latihan Jump to Box terhadap Peningkatan Daya Ledak Otot Tungkai Atlet Senam Artistik Putri Club Senam Semen Padang. *Jurnal Stamina*, 2 (2): 244 - 253.
- Pratama, A. N. (2017). Hubungan Motor Educability dan Percaya Diri Dengan Hasil Belajar Renang Gaya Bebas Pada Siswa Putra Kelas X SMA Budi Mulia Utama. *Skripsi, FIK UNJ Jakarta*. http://repository.unj.ac.id/186/1/SKRIPSI_ADITIYA_NOVAL_PRATAMA.pdf

- Prestianto, A. (2017). Pengembangan Software Media Pembelajaran “Stop Motion Teknik Senam Lantai Pada Smartphone Berbasis Android.” *Skripsi, Pendidikan Keperawatan Olahraga, FIK UNY, Yogyakarta*, 1–23. <https://eprints.uny.ac.id/56605/>
- Reza, E. A., Syaifei, M. M., & Achmad, I. Z. (2013). Tingkat Rasa Percaya Diri Siswa Pada Pembelajaran Senam Lantai. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699. <https://journal.ipm2kpe.or.id/index.php/JPJO/article/view/1832>
- Rustiawan, H., & Rohendi, A. (2021). Peranan Motor Educability Dalam Low Rope Circuit Activity Pada Kegiatan Outbound. *Jurnal Keolahragaan*, 7(1), 40–47. <https://jurnal.unigal.ac.id/index.php/JKP/article/view/5303>
- Sahabuddin, Hakim, H., & Syahrudin. (2020). Kontribusi Motor Educability Terhadap Kemampuan Senam Ritmik Alat Simpai Pada Siswa Sekolah Dasar. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 6(2), 449–465. https://doi.org/10.29407/js_unpgri.v6i2.14564
- Sari, Yudi Karisma. (2018) "Analisis Biomekanika Gerak Handspring pada Senam Lantai."
- Semarayasa, I. K. (2010). Pengaruh Metode Pembelajaran dan Tingkat Motor Educability Terhadap Penguasaan Keterampilan Teknik Dasar Bermain Sepaktakraw. *Tesis, Program Pascasarjana, UNiversitas Sebelas Maret*. <https://digilib.uns.ac.id/dokumen/detail/14295>
- Semarayasa, I. K., Darmawan, G. E. B., & Sudarmada, I. N. (2013). Pengaruh Metode Pembelajaran Dan Tingkat Motor Educability (ME) Terhadap Keterampilan Dasar Smash Kedeng Dalam Permainan Sepak Takraw Di Smpn 4 Kubutambahan. *JPI (Jurnal Pendidikan Indonesia)*, 2(1), 128–137. <https://doi.org/10.23887/jpi-undiksha.v2i1.1409>
- Shakty, A. M. O. (2019). Kontribusi Motor Educability dan Motor Ability Terhadap Hasil Belajar Bermain Bulutangkis. *Skripsi, FPOK, Universitas Pendidikan Indonesia*. <http://repository.upi.edu/44626/>
- Syahrial, D., Sudijandoko, A., & Priambodo, A. (2020). Pengaruh Permainan Kecil Berdasarkan Tingkat *Motor Educability* terhadap Motivasi dan Keterampilan Passing Permainan Futsal. *Jurnal Imiah Mandala Education*, 195 - 203.
- Syiroj, A., Sunarno, A., & Dewi, R. (2017). Perbedaan Gaya Mengajar dan *Motor Educability* terhadap Hasil Belajar Passing Bawah Bola Voli pada Siswa Kelas XI MAN Rantauprapat. *Jurnal Pedagogik Olahraga*, 15 - 31.
- Ulfah, A. A., Dimiyati, D., & Putra, A. J. A. (2021). Analisis Penerapan Senam Irama dalam Meningkatkan Kemampuan Motorik Kasar Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 5(2), 1844–1852. <https://doi.org/10.31004/obsesi.v5i2.993>

- Utomo, G. T., Junaidi, S., & Rahayu, S. (2012). Latihan Senam Aerobik Untuk Menurunkan Berat Badan, Lemak, Dan Kolesterol. *JSSF (Journal of Sport Science and Fitness)*, 1(1), 1–10.
<https://journal.unnes.ac.id/sju/index.php/jssf/article/view/205>
- Wahidi, T. R. (2017). Pengaruh Metode Latihan terhadap Peningkatan Pasing dalam Permainan Sepak Bola. *Juara*, 2 (2): 66 - 72.
- Wahyu Heny Kartika Sari, Tatok Sugiarto, S. P. (2016). Pengembangan Pembelajaran Senam Lantai Rangkaian Sederhana Siswa Kelas VIII di SMP Negeri 2 Ngoro Kabupaten Mojokerto. *Jurnal Pendidikan Jasmani*, 26(1), 1–15.
<http://journal.um.ac.id/index.php/pendidikan-jasmani/article/view/7726/3545>
- Widowati, A., & Rasyono. (2013). Pengembangan Bahan Ajar Senam Lantai Untuk Pembelajaran Senam Dasar Pada Mahasiswa Fakultas Ilmu Keolahragaan Universitas Jambi. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Yuliyanto, R. (2018). Korelasi Power Otot Lengan, Kelentukan dan Kekuatan Otot Punggung dengan Kemampuan Handspring Senam Artistik. *Jurnal Ilmiah PENJAS*, 4 (2): 17 - 34.