

## Analysis of Freestyle Swimming Techniques in Swimming Course Students

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### Abstract

*The aim of this research was to determine the level of basic freestyle swimming technique of students in the Swimming Course of the PJKR Study Program. This research is a descriptive study which aims to describe how to analyze basic freestyle swimming movement techniques for Swimming Course students. Overall research results from 30 students of the Swimming Course of the PJKR STKIP Darussalam Cilacap Study Program who were the samples. The level of freestyle swimming technique mastery obtained was 67%. classified as good, with an error rate of 33%.*

**Keywords:** Analysis; Swimming; Freestyle; Subject

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## INTRODUCTION

One effort to create a complete human being is developing the younger generation through sport. The Indonesian government carries out development in various fields, one of which is education. Education is basically to improve quality and qualities, especially those related to learning outcomes. In this case, learning outcomes are influenced by several factors including: by looking at the lecturer's abilities in the teaching and learning process (PBM), knowledge possessed, educational background, performance and responsibilities in the field of education (Surahman, 2018).

One of the sports in education is swimming. According to (Pradana & Noval, 2018) swimming is a complex sport, in every swimming movement you must always use body parts, especially the head, hands and feet. (Hamsa, 2015) also said that swimming is a water sport that is very suitable for anyone and is a fun sport. Meanwhile, according to (Ahmad, Tangkudung, Wijaya, & Widiastuti, 2018) swimming is a sport with activities in water that includes other sports, such as diving, water polo, synchronized swimming and open water swimming, swimming. According to (Mulyana, 2013) swimming consists of four styles that are contested, namely: butterfly style, backstroke, breaststroke and freestyle. One of the styles that is easiest for novice athletes to master is freestyle.

The freestyle swimming technique is very efficient compared to other swimming styles, because the hands and feet are used in a different way, which provides a rest phase during the exercise. *recovery*. According to (Sukmawati & Hartoto, 2015) freestyle swimming is a style that uses swinging movements of the arms across the surface of the water or swimming style. *crawl*. The advantages of freestyle swimming are that the arm stroke movement pattern is the most efficient, has little water resistance, and has a pattern

efficient movement (Rasyid, 2017). From these opinions, it can be concluded that freestyle swimming is a basic swimming technique that is efficient and easier than other swimming styles by using swinging movements of the arms across the surface of the water.

To master this technique requires the student's own motivation to improve the basic swimming technique. According to (Syafuruddin, 2013) a person's success in exercising is influenced by two factors, including internal and external factors. Internal factors are factors that come from the swimmer himself, such as physical, technical, tactical and mental conditions. Meanwhile, external factors include the quality of the trainer or teacher, existing facilities and infrastructure, as well as environmental conditions where the learning and teaching process takes place. The same thing was also continued by (Mulyana, 2013) that swimming achievements are not easy to achieve, because many factors determine a swimmer's performance, such as anatomical factors (arm length, body height, leg length); physiological factors (ability to breathe oxygen, agility, balance, coordination, strength, *power*, flexibility); biomechanical factors (speed of movement and stroke frequency); psychological factors (personality, attribution, achievement motivation, aggression, *arousal*, emergency, *stress*, activation, leadership, communication, commitment, *imagery*, concentration, self-concept, and self-confidence).

There are still many mistakes made by students during lectures, such as in body position, namely the position of the swimmer's body is not parallel to the surface of the water so that the swimmer's body cannot float properly, making it difficult to swim. Errors that occur in leg movements are fractures in the knees, the source of power for leg movements does not come from the groin and the position of both legs is opened wide so that it does not produce a long push. Errors that occur in hand movements are that the elbow is ahead of the hand entering the water, the reach is not far forward, pulling the hand too far into the water causes the swimmer's waist to twist like a walking snake, the stroke of the hand is too short so it does not produce a perfect push. The error that

occurs in the breathing movement is that the head is lifted too much when taking a breath, causing parts of the body to fall, making swimming more difficult. Meanwhile, errors that occur in coordination movements (series of movements) are that after making hand movements and leg movements, the swimmer does not make the movement or the swimmer appears to slow down in carrying out the movement, resulting in the movement not being harmonious and regular, so that it does not make the swimmer move forward and looks stuck. stand. According to (Thomas, 2007) freestyle swimming must combine all arm swing movements, leg swings, breathing patterns into freestyle movements.

According to Bloom in (Sudijono, 2018) analysis is the skill of detailing or describing a material or situation into smaller parts and being able to understand the relationship between the parts of one factor and another.. So students who take swimming courses to be able to master freestyle swimming techniques are expected to be able to coordinate these techniques.

From the various problems stated above, the author believes that new errors will arise that can affect the ability of freestyle swimming technique movements if the above errors are allowed. Therefore, the author is interested in scientifically proving the analysis of freestyle swimming techniques in students of the PJKR STKIP Darussalam Cilacap Study Program through research. Objective

This research was to determine the level of basic freestyle swimming techniques of students in the PJKR Study Program swimming courses.

### RESEARCH METHODS

This research is a descriptive research. Descriptive research is a research method aimed at describing existing phenomena that are taking place currently or in the past (Hamidi & Bahruddin, 2015). The aim is to systematically describe the facts and characteristics of the object or subject being studied accurately.

The population in this study were students of the PJKR STKIP Darussalam Cilacap Study Program who took swimming theory/practice courses in the even semester of 2023. Based on information, there were 30 students taking swimming courses in 6 classes from class A to class F. The sampling technique is *purposive sampling* namely a sampling technique with certain considerations, in this study the samples were 30 people. Where each class takes 5 students who are used as samples.

### RESULTS AND DISCUSSION

This research was carried out in the Tirta Rengganis swimming pool while the implementation time started at 08.30 WIB on April 21 2023, namely after the swimming learning process was completed. This research discusses "Analysis of freestyle swimming techniques for swimming students in the PJKR STKIP Darussalam Cilacap Study Program". In the data collection process, the researcher was assisted by 3 people *judgement* (Assessors) namely (1) Rezki, M.Pd, (2) Nova Risma, M.Pd, (3) Rices Jatra, M.Pd as lecturer

swimming courses. Of the three (3) assessors *judgement* by taking the mean value (NT) of thirty (30) samples of freestyle swimming technique movements, the results of this research will be described as an analysis of freestyle swimming technique in students of the PJKR STKIP Darussalam Cilacap swimming course:

body position, rotational movements of the hands (*hand rotation*), foot movements (*kicking*), Respiratory (*breating*), coordination. For greater clarity, descriptive research data from 3 people *judgement*, needs to be explained clearly. From the assessment of three (3) people *judgement* by taking the middle value (NT) of thirty people (30) samples in the freestyle swimming technique, the results of the analysis of the highest and lowest scores were obtained. The following is

analysis results based on table 1 distribution of the highest score to the lowest score.

**Table 1. Distribution of Freestyle Swimming Technique Assessment Scores**

No	Category	Frequency		
Interval Class		Absolut (Fa)	Relative (%)	
1	45-51	5	16,67	Very less
2	52-58	4	13,33	Not enough
3	59-66	2	6,67	Enough
4	67-73	3	10,00	Good
5	74-80	16	53,33	Very good
Total		30	100	-
Average		72,84	Good	

Based on table 1 above, of the thirty (30) samples that can be analyzed for the freestyle swimming technique of swimming course students at the PJKR STKIP Darussalam Cilacap Study Program, 16 people (53.33%) had a score of 74-80 in the very good category, 3 people (10%) had a score of 67-73 in the good category, 2 people (6.67%) had a score of 59-66 in the fair category, 4 people (13.33%) had a score of 52-58 in the poor category and 5 people ( 16.67%) had a score of 45-51 in the very poor category.

Based on the results of the processed analysis of the analysis of freestyle swimming technique mastery which consists of indicators: body position, hand rotation movements (*hand rotation*), foot movements (*kicking*), Respiratory (*breathing*), and coordination, which is carried out by three people *judgement* against 30 samples. From all indicators or assessments of freestyle swimming techniques, the overall level of mastery of freestyle swimming techniques was found to be 67%, which is classified as good. However, from the description of each indicator of freestyle swimming technique, errors were still found. The level of technical mastery of each indicator of freestyle swimming technique for swimming course students at the PJKR STKIP Darussalam Cilacap Study Program, such as: the level of mastery of body position indicator technique is 62.9% and the error rate is 37.1%, then at

hand rotation movement indicator (*hand rotation*) of 63.6% and the error rate of 36.4%, then the foot movement indicator (*kicking*) was 68.3% and the error rate was 31.7%. the next level of mastery of breathing techniques (*breating*) was 70% and the error rate was 30%, then the level of mastery of coordination techniques was 68.5% and the error rate was 31.5%.

Previously there was also research that discussed the analysis of freestyle swimming skills of female students in FIK-UNJA swimming course 1 written by (Oktadinata, Mardian, & Maryadi, 2017). With the results (1) overall of the 18 samples there were 59% who were able to perform hand swing skills on FIK-UNJA female students, (2) overall of the 18 samples there were 48% who were able to perform leg swing skills on FIK-UNJA female students UNJA, (3) overall of the 18 samples there were 43% who were able to perform hand breathing skills on FIK-UNJA female students, (4) overall of the 18 samples there were 19% who were able to perform movement coordination skills on FIK-UNJA female students. UNJA. The difference with this research is the sample of male students.

Judging from the description above, the average level of technical mastery that occurs in swimming technical movements as a whole is categorized as good, while the goal of basic swimming is understanding the ideas, history of the sport, swimming techniques and rules as well as breaststroke and freestyle swimming skills with coordination. rough movement. But in reality, the techniques used by students of the

swimming course at the PJKR STKIP Darussalam Cilacap Study Program still contain errors in each indicator.

Swimming is a sport that involves activities in water, so an athlete must be able to float. Flotation is the ability to maintain body position above the water surface. Basic conditions for determining the state of floating or sinking of a body. If the body's weight is greater than the maximum buoyancy that the water can provide, the body will sink. In order for swimmers to fulfill the necessary needs in learning and practicing swimming, they must first have knowledge of swimming techniques and the mechanical principles found in the swimmer himself. Knowledge of styling techniques

Swimming must be aware of certain mechanical principles, which are directly related to swimming movements. Lack and absence, as well as neglect of knowledge regarding the principles of this mechanism will result in a swimming style that is not fast, especially for basic swimming for people who are just learning to swim.

There are several factors that cause errors when performing the freestyle swimming technique, one of which is the limited time for students to swim, this may be due to poor transportation or the long distance from the lecture location to where they live. swimming pool, because students spend a lot of money which is then used for transportation costs and consumption needs. Most of the swimming course students at the PJKR STKIP Darussalam Cilacap Study Program who take basic swimming courses only swim during lectures, and do not do any independent training. Meanwhile, achieving good technique is recommended

to do lots of exercises regularly and repeatedly.

Another thing that might cause errors when performing freestyle swimming techniques is a lack of movement skills or *engine educability* and confidence in students who take swimming courses in the PJKR STKIP Darussalam Cilacap Study Program. *Motor educability* have a role that

important in the movement learning process, especially in a sport movement skill, especially freestyle swimming (Pradana & Noval, 2018). Meanwhile, self-confidence plays an important role in a person's life and has a big impact on behavior and attitudes. A student who has good self-confidence believes that he will be able to display any kind of sports performance

which Satiadarma hoped for in (Pradana & Noval, 2018). This is proven by research results (Pradana & Noval, 2018), namely that there is a positive relationship between *engine educability* with the results of learning to swim freestyle in class with the results of learning to swim freestyle.

One step to be able to overcome problems that occur in the freestyle swimming technique of students taking basic swimming is to attend every face-to-face basic swimming lecture and add another day for students to practice independently. Apart from that, supporting facilities and infrastructure are needed in the freestyle swimming training process. Furthermore, to be able to improve movement skills or *engine educability* and student confidence requires regular and repeated practice.

In accordance with the opinion of (Firdaus, 2013) something is done repeatedly as if there has been an automatic association between stimulus and action, between stimulus and response. So, to help students succeed in learning to swim freestyle, training activities must be repeated by giving athletes the opportunity to repeat the sequence of freestyle swimming procedures. Thus, it can be stated that, many factors can influence the level of mastery of freestyle swimming techniques for swimming students in the PJKR STKIP Darussalam Cilacap Study Program. Therefore, it cannot be separated from the evaluation that must be carried out by lecturers and

students work together to improve their previous freestyle swimming techniques, in order to achieve better learning outcomes. Writer too

see the lack of commitment of students in practicing outside lecture hours. In mastering basic swimming techniques, students are expected to have good commitment, as stated by (Mulyana, 2013), a commitment that makes individuals willing to make up their minds and be determined to achieve a goal, even if the individual cannot yet know the final result of that goal. A swimmer who has a strong commitment will try as hard as he can, work hard, and make sacrifices to complete his goal, even if everyone leaves him. Commitment makes swimmers highly motivated and encourages them to complete tasks in realizing the achievements they want to achieve. A strong commitment can encourage swimmers to act selflessly, consistently, sincerely and love their profession. Swimmers who have high commitment can train tenaciously, diligently, and find the best way to complete their tasks effectively and efficiently (Mulyana, 2013).

Apart from the factors above that cause errors when performing freestyle swimming techniques, what is really needed are supporting facilities and infrastructure in the freestyle swimming training process. According to (Thomas, 2007) the tools needed by swimmers to obtain good freestyle swimming technique are; (a) float board, this tool is very useful for improving swimming ability, especially for leg training, (b) foot float (*pull buoy*) is the most effective equipment for increasing hand muscles, (c) foot fins (*to*) is personal equipment needed to strengthen and increase the flexibility of the legs, (d) glasses are equipment that can help see in water.

### CONCLUSION

From the results of the analysis, conclusions can be drawn, namely, the level of technical mastery of each freestyle swimming technique indicator, such as: the level of technical mastery of the body position indicator is 62.9% and the error rate is 37.1%, then the hand rotation movement indicator (*hand rotation*) of 63.6% and the error rate of 36.4%, then the foot movement indicator (*kicking*) was 68.3% and the error rate was 31.7%. the next level of mastery of breathing techniques (*breating*) was 70% and the error rate was 30%, then the level of mastery of coordination techniques was 68.5% and the error rate was 31.5%. Thus, the overall research results of 30 swimming students from the PJKR STKIP Darussalam Cilacap Study Program showed that the mastery level of freestyle swimming techniques was 67%, classified as good.

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