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Comparison of Breaststroke Swimming Skills Through The Use of Media in Class X Students of Sanata Karya Langgur High School

Bernadus Frans Rahawarin[1], Idris Moh.Latar[2], Mariana. D. Hukubun[3]

Program Studi Pendidikan Jasmani Kesehatan dan Rekreasi FKIP Unpatti

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Abstract

This study analyses the comparison of breaststroke swimming ability through the use of learning media, namely waist safety aids (Save Belt) with hand bouy in class X students of SMA Sanata Karya Langgur. The use of methods in this study is an experiment with a post-test only group design. The study population was class X students of SMA Sanata Karya Langgur who could not swim, from the total population obtained 30 female students. The sampling technique was purposive sampling, from 30 students then grouped into two groups with the same number of 15 students per group. The first group uses a save belt tool and the second group uses a hand bouy tool. The measuring instrument or instrument used for the performance of breaststroke swimming skills uses an assessment rubric. The results showed that the scores obtained by students who used the save belt tool were 79-93, while students who used the hand bouy tool received scores of 36-60. The results of the t-test analysis resulted in a t-count value of 10.71 with 28 degrees of freedom, and a t-table value of 2.048 at a significant level of 5%, so t-count> t-table (10.71> 2.048). The conclusion is that there is a comparison of breaststroke swimming skills through the use of media with save belt tools with hand bouy tools in class X students of SMA Sanata Karya Langgur there is a difference.

Keywords: *Save Belt, Hand Bouy, Breast Stroke*

(*) Corresponding Author: *jasielfrans@gmail.com[1], mohidrislatar@yahoo.co.id[2], marianahukubun01@gmail.com[3]*

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INTRODUCTION

In the era of science and technology reform, maximum efforts must be made to improve learning and teaching activities so that the quality of education increases. This is done because advances in education have widespread implications for human thinking in various fields so that each young generation has to learn a lot to become educated people in accordance with the demands of the times.

The success of an educational goal depends on how the teaching and learning process is experienced by students, in addition to the quality of the teacher himself. A teacher's ability to design learning will influence the implementation of learning and learning outcomes.

Designing learning is one of the competencies possessed by an educator. One of the forms of pedagogical competence of an educator is being able to design learning to achieve learning goals by taking into account various factors. An educator's ability to design learning will influence the implementation of learning and learning outcomes.

According to Susilahudin (2018), in learning design there are elements of the process of developing learning materials or products for specific purposes. The aim of this learning design certainly cannot be achieved if the resulting learning design does not go through a mechanism for realization or design testing, evaluation and improvement.

In implementing physical education learning, the learning design designed by a teacher really determines students' skills in carrying out each basic technique taught. The learning design that is designed must be structured and systematic so that it can stimulate students to carry out every movement taught.

Apart from the learning design, physical education teachers must also prepare standard physical education learning media so that they can support and assist students in carrying out difficult movements during the learning process. Then the school does not yet have swimming learning facilities that can be used by students and teachers in the learning process in the swimming pool.

However, in reality, the media used during the physical education learning process are standard, and besides being quite expensive, the media often does not suit the physical and psychological condition of the learner. For example, in swimming lessons, it is known that swimming is a water sport where all activities are carried out in water and has huge risks for those who cannot swim.

There are also difficulties that come from within the students themselves, namely that not all students can swim, and there are students who still feel afraid and traumatized by the deep conditions of the swimming pool, students are not yet used to swimming pools and students are not yet able to perform basic swimming techniques. Often swimming lessons carried out by physical education teachers are only scary for students who cannot swim as a result of the physical education teacher's lack of creativity in designing and modifying learning media.

Requires appropriate media to prevent accidents and help students more easily carry out the movement techniques taught. However, the media in this case, namely the tools that are usually used, are too heavy, big, small, and make it difficult to move around and students feel afraid to try so that the learning process feels unpleasant for students.

In fact, the swimming aids that currently exist in the form of swimming vests, jergens, inner tubes or used tires and other things that make it easier to learn to swim for those who can't swim are still difficult to procure. It also really interferes with the effectiveness and efficiency of learning basic swimming techniques for beginners or those who can't swim yet. It feels like it really interferes with your movement space, and is even considered an obstacle to movement.

Moreover, the media prepared by the physical education teacher during swimming lessons uses buoys that are tied to the students' arms and is expected to be very helpful, but instead it seems difficult to carry out the swimming movements taught. So not all aids can be used efficiently and practically to help students stay afloat so they are expected to be able to carry out the series of swimming movements taught.

Physical education learning does not always have to use standard equipment, because the amount of standard equipment (usually minimal) will result in the intensity of student involvement in learning activities being very limited. Meanwhile, what is needed by students when taking swimming lessons is the

intensity of their involvement in the activities carried out, such as exercises or drills for the arms, legs, breathing and coordination of movements, where these series of movements are very difficult if carried out by students who cannot swim.

It is very important to use learning media that can be designed or planned by the teacher, either in the form of modifications or making the media yourself. The real essence of modification, according to Yoyo Bahagia (2017), is to analyze and develop lesson material by breaking it down into potential learning activities so that it can facilitate students in their learning.

Because the basic principles of design mentioned above are in accordance with the needs and orientation of education, especially learning, the term design has begun to be borrowed and used by educational experts or teachers to find a process or form of learning activity that is of high quality (effective, efficient and practical), can answer students' needs, developed systematically, and have a sustainable impact.

In this case, it is a tool that helps during the process of learning to swim in the pool, so that it can make it easier and more courageous for students to carry out each series of swimming techniques taught so that learning indicators can be achieved well.

METHOD

The research method used is the experimental method, with design *post-test only group design* simply given*post test* after being given treatment. The experimental group was given treatment using assistive devices*save belt*, and the control group was given assistive devices*hand boil*. Random sampling technique*purposive sampling* namely selecting students who cannot swim, from 30 students then grouping them into two groups with the same number, namely 15 students per group. The first group used assistive devices*save belt* and the second group used assistive devices*hand boil*. The measuring tool used for performance of breaststroke swimming ability uses an assessment rubric with the aspects assessed consisting of 1) starting position, 2) body position when sliding, 3) arm movements, 4) leg movements, 5) breathing, 6) coordination movements and 7) finish at a distance of 20 meters.

Table 1. Assessment Rubric Breaststroke Swimming Performance

Rated aspect	**Motion Quality**			
	1	2	3	4
1. Posis start.				
a. Stand on the edge of the pool with your back to the pool wall and one leg bent against the pool wall and the other leg resting on the floor at the edge of the pool.				
b. Both arms straight forward,				
c. body slightly bent, gaze straight ahead, body slightly bent.				
d. look straight ahead.				

2. Body position when sliding using assistive devices. a. both arms straight in front b. Most of the head is below the water surface. c. the position of the shoulders and hips is slightly above the water surface (almost flat or streamlined body posture). d. The body position is perfectly gliding on the water.
3. Breaststroke arm movements a. opening and capturing phases b. interesting phase c. resting phase. d. The depth of the arm/hand below the water surface during the resting phase is around 15-20 cm.
4. Foot movements. a. both lower legs are pulled simultaneously towards the hips and then after that phase is done b. The ankles of both feet are turned outwards to form an angle of ± 50°. c. Then from this position both feet make a stepping movement d. finally by kicking until both legs meet straight behind
5. Breathe (*breathing*). a. Head raised b. Do breathing c. both legs follow by pulling towards the hips d. Head back into the water surface.
6. Breaststroke coordination movements. a. Perform each series of breaststroke swimming movements with attention b. body position when sliding, c. movements during inhalation (*breathing*), d. leg movements, hand movements in breaststroke swimming.
7. Finish Students cover a distance of 2 meters
Score:

Data testing uses a t-test with a significance level of 5%. The formula is as follows:
Information:

t (t-test) : Final Result Difference between x and y
Mx : Mean of x
My : Mean of y
SDbm : Standard Deviation of the mean difference.

RESULTS

This research aims to determine whether there is a comparison between assistive devices*save belt* with tools*hand boil*on the breaststroke swimming ability of class*save belt* (the result of collaborative research design by lecturers and researchers) and tools*hand boil* (owned by Sanata Karya Langgur school). This research was conducted for four weeks and in one week there were 3 meetings.

It is known that groups use assistive devices*save belt* obtained a score of 79-93, the average score (mean) of breaststroke swimming ability using assistive devices*save belt* namely 86, standard deviation of breaststroke swimming ability using assistive devices*save belt* namely 3.20. Meanwhile, the group used assistive devices*hand*

boil obtained a score of 36-60, the average score (mean) was 51, Standard deviation of the ability to swim breaststroke using assistive devices*hand boil* namely 7.55.

Pictures 1. Tool Usage*Save Belt* and*Hand Boiled* In Breaststroke

After carrying out the t test, it is known that the mean value and standard deviation as well as the standard deviation of the mean difference have been analyzed and obtained t_{count} is 11 while $t_{table}$is 2.05 this means that $t_{count} \neq t_{table}$(10,71 ≠ 2,05) in which case the t-count has a comparison at a significance level of 5% and 1%. The rejection criteria for H_0 if: if t ≠ = = 2.05. Based on the results t_0, obtained t_{count} = 10.71, then the alternative hypothesis or H_a accepted and H_o rejected. From this test, it can be concluded that the alternative hypothesis is accepted and clearly explains that there is a significant comparison between the results of breaststroke swimming ability using assistive devices.*save belt* with*hand boil* in class Thus the alternative hypothesis (Ha) is accepted, namely that there is a significant comparison between the results of breaststroke swimming ability using assistive devices*save belt* with tools*hand* boil

DISCUSSION

There is a greater ratio of students who use assistive devices*save belt* To improve breaststroke swimming ability, the comparison can be seen from the value, mean, standard deviation and t-test compared to students who use assistive devices.*hand boil*.

This result is significant with the opinion of (Nurhalimah 2020), which explains the advantages of using assistive devices in swimming. Some of the benefits include; 1) Frequency to practice more; 2) Helps the body in position*streamline*; and 3) Master it faster because the tools can correct each movement.

This opinion is in accordance with the results of data analysis testing, which is a helpful tool*save belt* has a significant influence on students' breaststroke swimming abilities. The ability referred to is how students are able to carry out each

series of breaststroke swimming movements taught and easily experience accelerated learning when using assistive devices.*save belt* so that it can help students to float and be able to perform a series of breaststroke swimming movements correctly and smoothly. In line with the opinion of Astuti (2015), that ability is the basis of a person in itselfrelating to carrying out work effectively or very successfully.

In the swimming learning process, a mismatch between the tools used and the student's characteristics will make movement difficult and hinder the speed of learning. Use of assistive devices*hand* bouy, making students drown easily due to the student's body weight being heavier than the aids used. This is what makes students in the group who use aids*hand boil* unable to perform a series of breaststroke swimming movements smoothly. Different from tools*save belt*, very helpful in making the body floatthen it will be easy to help students to carry out each series of breaststroke swimming movements. These results are supported by opinion (Hukubun and Tomasoa 2022)which states that*The level of effectiveness of using a save belt is better because it does not interfere with the movement of the feet and hands when learning basic swimming techniques.* (The level of effectiveness of using a seat belt is better because it does not interfere with leg and arm movements when learning basic swimming techniques). Thus it can be stated that it is a tool*save belt* It is more effective to use in the process of accelerating the mastery of learning to swim, so it is suitable to be used as a tool when compared to a hand bouy tool.

CONCLUSION

Comparison of breaststroke swimming ability through the use of media in class X SMA Sanata Karya Langgur students who use assistive devices*save belt* The effect is greater than students who use assistive devices*hand boil*. Use of aids*save belt* designed by taking into account the characteristics of students, and the design of this tool can help students to float well without sinking.

AIDS*save belt* can support body weight so that it helps students float and can freely carry out a series of breaststroke swimming movements during the learning process without obstacles. On the use of tools*save belt* Very helpful for students so that the body floats, students can do a series of breaststroke swimming movements.

Meanwhile, students use assistive devices*hand buoy* When doing a series of breaststroke swimming movements in the pool, many students experience difficulties because students cannot float well, it is difficult to carry out a series of breaststroke swimming movements smoothly.

With the results of this research, the tools are helpful*save belt* can be used as a tool to help students train and carry out a series of movements, facilitate and speed up breaststroke swimming or to simplify the process of learning to swim.

BIBLIOGRAPHY

Astuti, Siwi Puji. 2015. “Pengaruh Kemampuan Awal Dan Minat Belajar Terhadap Prestasi Belajar Fisika.” *Formatif: Jurnal Ilmiah Pendidikan MIPA* 5(1): 68–75.

Hukubun, Mariana Ditboya, and Yelia Tomasoa. 2022. “Development of

Swimming Learning Aid Design toward Acceleration of Learning Swimming Techniques." 6(2): 307–15.

Nurhalimah, S. 2020. "Implementasi Alat Bantu Papan Luncur Terhadap Kemampuan Renang Gaya Bebas." *Journal of Physical Activity (JPA)* 1(1): 48–59.

Yono, Bahagia. 2017. *Pengembangan Media Pengajaran Penjaskes*.