Games Approach Implementation: Improvement of Basic Swimming Exercises in Introduction to Water for Preschool, Kindergarten, and School Age Categories

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Info Artikel	Abstract
	This study aims to determine the increase in basic swimming training by introducing water techniques in the pre-school, kindergarten and school-age categories. This study involved 102 swimming school students in testing the validity and reliability, and 97 students were used as research samples using accidental sampling. The research was conducted at the Bandung International Swimming School Swimming Club. The instrument used in this research is the Swimming Games Program questionnaire given to Bandung International Swimming School trainers. The data obtained were then tested statistically using SPSS Version 24 with a significance level of $\alpha = 0.05$ using the paired sample t-test. The implications of this research can provide information to swimming coaches and parents that swimming games programs have the potential to help train children in increasing courage and basic swimming techniques.

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INTRODUCTION

Drowning/drowning is one of the leading causes of accidental death in children (World Health Organization, 2014). For all age categories, in FY2020, the estimated karena drowning/drowning deaths were 295,000 (Franklin, R.C.; Peden, A.E.; Hamilton, E.B.; et al. 2020). Although deaths from drowning are not considered fatal deaths, in particular, deaths from flooding due to boating and deaths from drowning associated with disasters (Eden, A.E.; Franklin, R.C.; Mahony, A.; et al. 2017) Disproportionately drowning is particularly fatal for children and adolescents, with more than half of the deaths occurring from drowning under the age of 25 (World Health Organization, 2014) In many countries, children under the age of five are the highest age of death (Franklin, R.C.; Scarr, J.P.; Pearn, J.H. 2010) such deaths are expected in swimming pools (Franklin, R.C.; Peden, A.E 2017).

Learning to swim has proven to be a very effective drowning prevention strategy (Rahman, F.; Bose, S.; Linnan, M.; Rahman, A.; et al., 2012). The World Health Organization (WHO) has proposed that swimming is one of the ten critical strategies for the prevention of drowning /drowning (World Health Organization; 2017). Participation in swimming learning (in schools) has been shown to reduce the risk of drowning between the age range of 1-19 years (Brenner, R.A.; Taneja, G.S.; Haynie, D.L.; et al. 2009)

Swimming is not only a competitive sport for elite athletes, but swimming is also one of the most popular and healthy types of sports (Chase et al., 2008; Oja et al., 2015); in addition, swimming can also improve heart health, fitness and body composition (Lahart & Metsios, 2018; Tanaka, 2009). Swimming is also a fundamental skill for survival. For example, previous studies have shown a relationship between swimming competence, swimming lessons, and drowning/drowning (Brenner et al., 2003; World Health Organization, 2014); Children who take formal swimming lessons or have the ability to swim are less prone to drowning than children who cannot swim (Brenner et al., 2003).

Aquatics is an activity in water that aims to train children to develop their motor, cognitive, affection and social potential. According to (Susanto,2014), Aquatics is all kinds of water activities that can be done in rivers, lakes, seas, beaches, and swimming pools. Swimming is one of the activities used to develop motor, cognitive, affective and social potential (Susanto, 2014). Learning to swim ideally begins at the age of 3-7 years. At the age of 10-12 years, the age for specialization, while peak attainment ranges from 16-18 years (Bompa; 1990).

When children first learn to swim, not all children usually have the courage to put all their bodies into the water. To be able to enter his body requires more courage. So that if you do not have the courage, being forced will cause traumatic results in children. One of the external factors to help increase courage in children when swimming is water games, first

with the principle from static games to dynamic games or from easy games to complex games. The purpose of the game is so that children are brave and can swim.

Water games for pre-school are also called aquatic activities. Learning water games can be interpreted as a form of forward–backwards movement in the water using aids or not using additional tools. The movements performed in such water games are riding a bicycle, moving and hovering from place to place lain. Water games are carried out using a timeline or not at all; there must be developed for the child (Wilhelm, 1997). Based on this background, this study aims to improve basic swimming skills in the pre-school age, school age and grade schooler age categories.

METHODS

The research method used is a quasi-experiment with a quantitative approach. The research design used in this study was the One Group Pretest Post-Test Design. The study sample was selected using accidental sampling techniques. Data analysis using a paired sample t-test to see the effect before and after treatment/treatment given. The analysis was carried out at a significance level of $\alpha = 0.05$.

The sampling technique used in this study was accidental sampling. The total number of Students in this study was 97, consisting of 30 Pre-school students, 31 Kinderagten Students and 36 School age students. All students come from Bandung international swimming school swimming club.

The data obtained from the collected data is in the form of quantified data. The data is then analyzed to answer research questions. The data analysis that will be carried out includes 1). Validity and Reliability Test of the (Instrument; 2). The Data Normality Test was carried out through the Kolmogorov Smirnov z test; 3). Data homogeneity test using variance test; and 4). Test the Hypothesis using the Paired Sample t-test. The data analysis carried out was assisted by SPSS software version 24. Data collection using Questionnaires to Trainers before and after treatment provided through google form to disseminate the questionnaire to Trainers.

FINDINGS AND DISCUSSION

Findings

Research conducted by (Amy E. Peden and Richard C. Franklin, 2020) with the title "Learning to Swim: An Exploration of Negative Prior Aquatic Experiences Among Children." This study shows that Learning to swim through a structured program is essential for developing aquatic competencies and preventing drowning. Fear of water can generate phobic behaviours counterproductive to the learning process. Research (Afina Zakiah Kusumaningrum; Agus Kristiyanto; Slamet Riyadi, 2019), "The Implementation of Swimming Games Learning for Pre-School Students in Singapore Piaget Academy" showed that games are one of the practical approaches in carrying out swimming learning activities in children. Research (David I. Anderson and Alicia Rodriguez, 2014) under

the title "Is There an Optimal Age for Learning to Swim?" The results showed that the age to start swimming training is between 5 and 7 years old.

A summary of the results of previous studies proves that learning to swim with games can make it practical for children to learn quickly. The research will be conducted to support some of the previous research on improving basic swimming exercises.

It is no secret that children love to play in the water, and some fun swimming games for children can add to their euphoria and excitement. Swimming not only offers a sense of excitement but also implies many benefits for health (Harshita Makvana, 2021). The water game program aims to generate positive changes in participants by introducing them to exciting activities that will improve their mastery of basic swimming techniques. Some research results state that swimming game programs can improve children's ability to accelerate mastery of basic swimming techniques (Afina Zakiah Kusumaningrum; Agus Kristiyanto; Slamet Riyadi, 2019).

The role of swimming learning in children is very beneficial for children's physiology and teaching/training experience for teachers/trainers; the Swimming Games Program is part of the extrinsic (outside) motivation for children or coaches that can make intrinsic motivation (in) for both. This will benefit both parties so that the swimming learning process becomes more qualified and efficient and experiences a significant improvement in learning swimming (Burac Daniela Gioconda, 2012).

Swimming aids are one of the learning media in swimming learning. Using media and learning resources is essential mastered by a teacher/coach (Rusman, 2013). In the Swimming Games Program, we can develop various things through the game, as for the Swimming Games Program adapted from (starluxgames, 2018): 1) Sharks and Minnows, One of the children becomes a shark to chase Minnows (small fish) / other children, and it can also be a teacher/trainer and chase his child; 2) Guess the style; the Teacher / Coach will exemplify or imitate one of the styles in the water; later, the child will go into the water and guess the style the coach/teacher performed; 3) Treasure Hunter, the trainer, prepares the coins and then throws them to the bottom of the pool. After that, the child will take the money with the help of a teacher/trainer; 4) Star style, Students, perform Movements like stars in space by opening both hands, kakai and looking down the floor; 5) The child will choose one of the superheroes and then will glide/glide, assisted with tools or held by the trainer and even the target until it can be alone/independent.

The Swimming Games Program described above will be linked to the Content of the learn-to-swim programme of (Derwin K. C. Chan, Alfred Sing Yeung Lee, Duncan J. Macfarlane, Martin S. Hagger & Kyra Hamilton, 2020) consisting of: a) Aqua walking/Walking inside the pool; b) Holding breath underwater; c) Breathing exercise underwater; d) Floating and stationary exercise; e) Gliding exercise.

Plato has expressed the idea of using

games in Education since antiquity. Later during the Renaissance, the idea was developed by Feltre, Bacon and Fénélon. This educational promoter is carried out in modern times through playing Froebel, Montessori, Decroly, and others. The five types of development that can be moderated through the game, according to author D.B. Elkonin in the journal (Burac Daniela Gioconda, 2013), are as follows: 1) From small groups to more numerous groups; 2) From the unstable group to the more stable group; 3) From games without themes to games using thematic; 4) From episodes of different games with no connection between them to thematic games with systematic development; 5) From the reflection of personal life and the immediate environment to the reflection of events that occur in social life.

This method is designed to be able to stimulate didactic behaviour through motivation in playing. This is sub-organized under a formative perspective in learning-assessment activities.

Pretest & Postees Results during 4x Treatment

No	Category	Mean	Number of Students
1	Preschool_Pretest	10,5000	30
	Preschool_Postest	12,3667	30
2	Kindergarten_Pretest	9,5161	31
	Kindergarten_Postest	15,3226	31
3	SchoolAge_Prestest	12,1111	36
	SchoolAge_Postest	16,3611	36

Based on the results of the test conducted by the trainer and poured into the questionnaire, there are the following results: a) In the pre-school category, which numbered 30 students, there was an increase in basic techniques in swimming after being given a swimming games program; b) In the kindergarten category, which numbered 31 students, there was an increase in basic techniques in swimming after being given a swimming games program; c) In the school-age category, which numbered 36 students, there was an increase in basic techniques in swimming after being given a swimming games program.

Discussion

The meeting of basic swimming exercises and water recognition techniques through the *swimming games program* refers to some previous research. Research (Afina Zakiah Kusumaningrum; Agus Kristiyanto; Slamet Riyadi, 2019) implemented a *swimming games* program for two meetings. Then the research conducted by (Burac Daniela Gioconda, 2012) applied for a swimming learning game program in children aged 4-5 years for 1x exercise. Based on the

study's results (Afina Zakiah Kusumaningrum; Agus Kristiyanto; Slamet Riyadi, 2019), swimming aids that are attractive to children will increase interest in playing, courage, and love to play water. In addition, it will also provide benefits when playing while learning by swimming, providing basic swimming skills for children to perform movements such as sliding, moving legs, jumping and others.

The main focus of this study is the application of swimming games programs that refer to (starluxgames, 2018) where the purpose of the game will be combined with basic swimming techniques introduction to water speech (Derwin K. C. Chan, Alfred Sing Yeung Lee, Duncan J. Macfarlane, Martin S. Hagger & Kyra Hamilton, 2020) consisting of *Aqua walking* in the pool, Holding breath underwater / holding breath underwater, Breathing exercise**,** Floating and stationary exercise. The implementation of this program amounted to 4 meetings for each age level which were carried out separately.

CONCLUSION

Learning to swim is one of the activities so that drowning does not occur. In addition, swimming is a trendy sport and can make the body healthy and provide basic survival skills. Care is needed When teaching children when they first learn to swim; some children are afraid of water, so if it is forced, there will be trauma. To increase courage, the coach needs to understand the child's characteristics. One way to improve your basic swimming technique

skills and courage is by awarding the game in the water with the trainer. Depending on the child's needs, the games given can be done from land to water, from static to dynamic and from easy to difficult/difficult. In the future, we hope there will be many variations of exercises, especially water games, that can increase courage and confidence and improve swimming techniques for children.

ACKNOWLEDGEMENTS

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