IOSR Journal of Sports and Physical Education (IOSR-JSPE)
e-ISSN: 2347-6737, p-ISSN: 2347-6745, Volume 11, Issue 2, Series 1,(Mar. – Apr. 2024), PP 27-32
www.iosrjournals.org

Badminton Skills And Self-Efficacy Of Primary School Students Through A Learning Approach Using The Play Method

Ahadin[1], Dadi Dartija[2]
[1](*Department Of Elementary School Teacher Education / Syiah Kuala University, Indonesia)*
[2](*Man 1 Banda Aceh/ Indonesia)*

Abstract:
Background*: Badminton skills are the technical and tactical abilities required to play the sport of badminton effectively. The playing method approach in learning badminton can also help increase students' self-efficacy by providing positive experiences in overcoming challenges and achieving goals. Through fun and interactive games, students have the opportunity to experience success in mastering badminton skills. In addition to that observations and* conducting interviews with numerous students *at Elementary Schools in Banda Aceh City, it is known that the lack of interest and self-efficacy of students has lost interest in badminton. Monotonous training and lack of playing experience also cause low badminton skills. The playing method approach is an effective solution to increase students' interest, self-efficacy, and skills simultaneously.*
Materials and Methods*: The participants in the study consisted of two groups, namely experimental (play method) and control (conventional), each consisting of 50 students. Data collection techniques were carried out using tests and questionnaires. The research instruments used were badminton skills tests and student self-efficacy questionnaires. The data analysis technique uses the ANOVA test.*
Results*: The research results show that the sig. badminton skill posttest data is 0.043 which means less than α = 0.05. So H_0 is not accepted, and consequently, H_1 is accepted. This demonstrates that the badminton skills of students who receive a learning approach using the playing method are better than students who receive conventional learning in terms of the total number of students. The self-efficacy of students who receive a learning approach using the play method is better than students who receive conventional learning. The low self-efficacy of students in the control class is caused by the learning model used which makes students experience boredom in learning.*
Conclusion: *1) students' badminton skills through the playing method are better than the badminton skills of students who receive conventional learning; 2) Student self-efficacy through the playing method is better than the learning self-efficacy of students who receive conventional learning.*
Key Word*: Badminton skills, Self-efficacy, Playing methods.*

Date of Submission: 21-04-2024 Date of Acceptance: 01-05-2024

I. Introduction

The learning approach explains that learning strategies prioritize the process of change through experience, changes that occur as a result of the learning process which includes: understanding, attitudes, knowledge, information, abilities, and skills[1]. The learning approach emphasizes change, practice, and experience, occurring over a certain period of time[2]. In the teaching and learning process for badminton skills material, several good learning approaches need to be used. In this research, the learning approach used is a play method approach. The playing method in learning badminton is an approach that emphasizes learning through fun and interactive game activities[3]. By utilizing a more relaxed approach but still focused on learning objectives, the playing method allows students to learn more effectively while remaining involved and motivated in the badminton learning process. The characteristics of play methods are active, open, flexible, free, happy, fun, spiritual product, seasonal, natural, satisfaction, pretend, need, and spontaneous[4]. Self-efficacy refers to an individual's confidence in their capability to accomplish specific tasks, overcome challenges, or achieve desired goals in various situations[5]. This includes individuals' beliefs in their ability to overcome obstacles, manage stress, and achieve success in the activities they undertake[6]

The playing method approach in learning badminton positively influences the development of students' badminton skills and self-efficacy. In the playing method, students are allowed to learn badminton through fun games and activities by creating a relaxed but still effective learning environment[7]. Through direct interaction with the sport, students can hone their technical and tactical skills in real game situations, based on the

description above, the aim of this research is to determine the improvement in badminton skills and self-efficacy of students who are taught through the playing method learning approach.

II. Material And Methods

The approach in this research is a quantitative approach with a pretest-posttest control group design[8].

Study Design: a quantitative approach
Study Location: Elementary schools in Banda Aceh City.
Study Duration: January 2024 to Maret 2024.
Sample size: 100 students.
Sample size calculation: Sampling used a multistage random sampling technique. Multistage random sampling uses a combination of Dusrey dynasty sampling techniques[9]. The population is 180 students in Banda Aceh City elementary schools. The 180 students, filled out a social identity questionnaire using a questionnaire. From the results of this data, 35 students had high identity scores, 30 students had medium scores, and 35 students had low scores, so the sample in this study was 100 students. The research samples were 50 students each in the experimental class and control class.
Subjects & selection method: Before learning is carried out, students are given a badminton skills pretest and self-efficacy questionnaire, after learning they are given a badminton skills posttest and self-efficacy questionnaire to assess badminton skills and self-efficacy of students from each class

Procedure methodology

The instruments of this research are the badminton skills test and the self-efficacy questionnaire. The data analyzed comes from the results of the pretest and posttest which were tested using the Anova test. The hypotheses of this research are 1) the badminton skills of students at Banda Aceh City Elementary School through a learning approach using the playing method are better than badminton skills using conventional methods, and 2) The self-efficacy of students at Banda Aceh City Elementary School through a learning approach is better than on student self-efficacy using conventional methods.

Statistical analysis

Data was analyzed using SPSS version 14 (SPSS Inc., Chicago, IL).

III. Result

The data obtained from the research findings consists of quantitative data. Before carrying out the playing method in the experimental class and conventional learning in the control class, each class was first given a pretest to find out the similarities in initial numeracy abilities and self-efficacy. If it is fulfilled, then an ANOVA test is carried out to determine the difference in badminton skills and self-efficacy. Data were analyzed using normality, homogeneity, and ANOVA tests. Here are the results of students' badminton skills and self-efficacy.

A. Students' badminton skills

Badminton Skills Pretest Data Analysis

The results of the normality test for the pretest data are presented in the following table.

Table no 1: Data From The Normality Test Results of The Average Pretest and Post-test

Result	Class	*Kolmogorov-Smirnov*[a]		
		Statistic	df	Sig.
Badminton Skills Pretest	Control	0,123	50	0,051*
	Experiment	0,123	50	0,052*

Based on Table no 1, the pretest score normality test for students' badminton skills in both classes obtained sig. ≥ significance value 0.05. Next, a homogeneity the test was conducted. The results of the homogeneity of variance analysis for the badminton skill pretest data for the experimental class and control class are presented in the following table:

Table no 2. Results of the Homogeneity of Variance Test for Badminton Skills Data Pretest

Aspects of Ability	*Levene Statistic*	df1	df2	Sig.
Badminton Skills Pretest	0,136	1	98	0,711

Table no 2 shows the sig value. Pretest the badminton skills of both classes were more than $\alpha = 0.05$, namely $0.711 > 0.05$. As a result, furthermore, H0 is accepted, meaning, the badminton skill pretest data for both

classes has a homogeneous variance. Because the badminton skill pretest data for he experimental class and control class exhibit normal distribution, additionally, the variance of the two classes is homogeneous, it can be continued with a two-tailed t-test. The average pretest score difference test was conducted to ascertain if there was a difference between the pretest abilities of the experimental class and the control class regarding badminton skills. The test results for the difference in average pretest data for badminton skills are presented in the following table.

Table no 3. Test Results for Average Differences in Badminton Skills Pretest Data

t-test for Equality of Means		
T	df	Sig. (2-tailed)
0,228	98	0,810

Table no 3 shows the sig value. (2-tailed) badminton skill pretest data is 0.810 which means more than $\alpha/2 = 0.025$. So H_0 is accepted. This means that there is no difference between the pretest badminton skills in the experimental class and the control class. Thus, it can be concluded that these two classes possess comparable initial abilities. After carrying out the playing method in the experimental and conventional classes in the control class, then each class was given a post-test to find out the students' badminton skills. Before carrying out the Anova test, a Posttest data normality test was first carried out in the experimental and control classes. The results of the normality analysis of the Kolmogorov-Smirnov test for post-test data for the experimental and control classes are presented in the following table.

Table no 4. Posttest Data Normality Test Results for Badminton Skills

Result	Class	*Kolmogorov-Smirnov*[a]		
		Statistic	df	Sig.
Badminton Skills Posttest	Control	0,121	50	0,057
	Experiment	0,123	50	0,058

Based on Table no 4, shows that the posttest results for the badminton skills of experimental and control class students have a sig. greater than the value $\alpha = 0.05$. As a result, H_0 is accepted, or in other words, the posttest data for badminton skills in the experimental and control classes come from a normally distributed population. Next, a homogeneity test is carried out as follows.

Table no 5. Results of Homogeneity of Variance Test for Badminton Skill Posttest Data

Aspects of Ability	*Levene Statistic*	df1	df2	Sig.
Badminton Skills Pretest	0,087	1	98	0,768

Based on Table no 5, it shows that the sig. Posttest data for badminton skills for both classes is more than $\alpha = 0.05$, namely $0.768 > 0.05$. As a result, H_0 is accepted or in other words, the badminton skill posttest data for both classes has a homogeneous variance. The results of the previous test indicated that the badminton skill post-test data for both the experimental class and control class were normally distributed, and the variance of the two classes was also homogeneous, so the ANOVA test was then carried out. The post-test average score difference test was carried out to prove whether the badminton skills of students who received learning using the playing method were better than students who received conventional learning. The formulation of hypothesis 1 is as follows:

$H_0 : \mu_1 = \mu_2$ There is no difference in the badminton skills of students who receive a learning approach using the playing method and students who receive conventional learning

$H_1 : \mu_1 > \mu_2$ The badminton skills of students who receive a learning approach using the playing method are better than students who receive conventional learning

By using a significance level of $\alpha = 0.05$, the test criteria are:

If $F_{count} \geq F_{table}$ then H_0 is rejected

If $F_{count} < F_{table}$ then H_0 is accepted

The results of the test for differences in average badminton skill post-test data are presented in the following table.

Table no 6. Test Results for Average Differences in Badminton Skill Posttest Data

	Sum of Squares	df	*Mean Square*	F	Sig.
Between Groups	954,810	1	954,810	4,223	0,043
Within Groups	22155,780	98	226,079		

Total	23110,590	99			

Table no 6 shows the sig value. Badminton skill posttest data is 0.043 which means less than $\alpha = 0.05$. So H_0 is rejected, and as a result, H_1 is accepted. This shows that the badminton skills of students who receive the playing method are better than students who receive conventional learning in terms of all students.

The results of data analysis, both descriptive analysis and statistical tests after learning, found that the badminton skills of experimental class students were better than control class students. The difference in treatment in the form of playing methods is one of the reasons why the experimental class students' badminton skills are better. Additionally, according to the research findings, there are advantages to the playing method, namely that it can improve students' badminton skills.

B. Student self-efficacy

Student self-efficacy is seen from questionnaires given before and after the learning process takes place. Students were given a questionnaire to fill in student self-efficacy in the form of a closed form questionnaire consisting of 28 questions. Before carrying out the play method in the experimental class and conventional learning in the control class, each class was first given a pretest to find out the similarities in students' initial self-efficacy towards learning. The following is a description of the results of the self-efficacy questionnaire analysis.

The outcomes of the normality analysis of student pretest data utilizing the Kolmogorov-Smirnov test are presented in the following table.

Table no 7. Results of the Self-efficacy Pretest Data Normality Test

Result	Class	*Kolmogorov-Smirnov*[a]		
		Statistic	df	Sig.
Self-Efficacy Pretest	Control	0,079	50	0,200
	Experiment	0,120	50	0,070

Based on Table no 7, shows that the results of the pretest self-efficacy of control and experimental class students have a sig. greater than the value $\alpha = 0.05$. As a result, H_0 is accepted, or in other words, the pretest self-efficacy data for the experimental and control classes comes from a normally distributed population. Next, a homogeneity test was carried out with the following results.

Table 8. Homogeneity Test of Pretest Self-efficacy Data Variance

Aspects of Ability	*Levene Statistic*	df1	df2	Sig.
Self-Efficacy Pretest	1,143	1	98	0,288

Based on Table 8, it shows that the sig. pretest self-efficacy for both classes was more than $\alpha = 0.05$, namely $0.288 > 0.05$. As a result, H_0 is accepted, or in other words, the self-efficacy pretest data for both classes has a homogeneous variance. Based on the previous test results, show that the pretest self-efficacy data for the experimental class and the control class are normally distributed and the variance of the two classes is also homogeneous, so a two-party t-test is continued to determine whether there is a difference or similarity between the pretest abilities of the experimental class and the control class regarding self-efficacy. The following are the results of the test for differences in average pretest self-efficacy which are presented in Table no 9.

Table no 9. Test Results for Average Differences in Self-Efficacy Pretest Data

t-test for Equality of Means		
T	Df	Sig. (2-tailed)
0,750	98	0,455

The table shows the sig value. (2-tailed) pretest self-efficacy data is 0.455 which means more than $\alpha/2 = 0.025$. So H_0 is accepted. This implies that there is no significant difference between the pretest self-efficacy of the experimental class and the control class. Thus, it can be concluded that these two classes exhibit similar initial abilities. Based on the average score of pretest self-efficacy and posttest self-efficacy obtained by students in the experimental and control classes, in general, it can be said that self-efficacy occurred in both classes. However, further statistical testing needs to be carried out to determine the differences in self-efficacy in the two classes. The results of the normality analysis of the Kolmogorov-Smirnov test for post-test data for the experimental and control classes are presented in Table 10 below.

Table no 10 Post-test Data Normality Test Results for Self-efficacy

Result	Class	*Kolmogorov-Smirnov*[a]		
		Statistic	df	Sig.
Self-Efficacy Post-test	Control	0,091	50	0,200
	Experiment	0,109	50	0,196

Based on this table, shows that the results of the post-test self-efficacy of experimental and control class students are greater than the value α= 0.05. As a result, H_0 is accepted, or in other words, the posttest self-efficacy data for the experimental and control classes comes from a normally distributed population. Furthermore, the results of the homogeneity of variance analysis for the post-test self-efficacy data for the experimental class and control class are presented in Table 11 below.

Table 11. Homogeneity Test of Post-test Self-efficacy Data Variance

Aspect of ability	*Levene Statistic*	df1	df2	Sig.
Self-efficacy Post-test	2,723	1	98	0,102

Based on these results, it shows that the sig. posttest self-efficacy data for both classes is more than α = 0.05, namely 0.102 > 0.05. As a result, H_0 is accepted or the post-test self-efficacy data for both classes has homogeneous variance. The previous test results showed that the post-test self-efficacy data for the experimental class and control class were normally distributed and the variance of the two classes was also homogeneous, so the statistical test that will be used to test the difference in the averages of the two samples is a parametric test, namely the ANOVA test. The post-test average score difference test was carried out to prove whether the self-efficacy of students who received learning using the play method was better than students who received conventional learning. The test criteria at the significance level α= 0.05 are to accept H_0 if sig. ≥ 0.05

The formulation of hypothesis 2 is as follows:

$H_0 : \mu_1 = \mu_2$ There is no difference in the self-efficacy of students who receive the playing method and students who receive conventional learning.

$H_1 : \mu_1 > \mu_2$ The self-efficacy of students who receive the playing method is better than students who receive conventional learning

By using a significance level of α = 0.05, the test criteria are:

If $F_{count} \geq F_{table}$ then H_0 is rejected

If $F_{count} < F_{table}$ then H_0 is accepted

The findings of the test for differences in average post-test self-efficacy data are presented in Table no 12.

Table no 12. Test for Differences in Mean Post-test Self-efficacy Data

	Sum of Squares	df	*Mean Square*	F	Sig.
Between Groups	806,560	1	806,569	37, 1	0,000
Within Groups	2135,80	98	21,786		
Total	2941,840	99			

The table above shows the sig value. Post-test self-efficacy data is 0.000 which means less than α (0.05). So H_0 is rejected, and as a result, H_1 is accepted. This shows that the self-efficacy of students who receive learning using the play method is better than students who receive conventional learning in terms of all students. The research results show that the self-efficacy of students who receive a learning approach using the play method is better than students who receive conventional learning. The low self-efficacy of students in the control class was caused by the learning model used, which made students experience boredom in learning.

IV. Discussion

The learning approach using the playing method on badminton game material is an approach that emphasizes learning through fun and interactive activities[10]. In this method, students will be invited to learn badminton through games specifically designed to develop their technical and tactical skills. The playing method allows students to learn more effectively because they can directly apply the skills learned in a real game context. In-game situations, students can test and hone their skills directly, such as hitting technique, strategy, and reactions to changing game situations. This gives them valuable practical experience and helps them understand badminton concepts better[11]. This learning approach using the play method makes the learning process more fun and interesting for students. By using interactive games and activities, students are more actively involved in learning, thereby increasing their interest and motivation to learn badminton.

Self-efficacy refers to an individual's belief in their capability to accomplish specific goals or perform certain tasks in specific situations[12]. This includes an individual's belief in their ability to overcome challenges, overcome obstacles, and complete the tasks at hand. In the context of badminton learning, self-efficacy reflects students' confidence in their ability to master technical and tactical skills in the sport such as making the right shots or adopting effective strategies in the game[13]. In the playing method, self-efficacy is the key to improving students' badminton skills[14]. Through fun games, students have the opportunity to directly try and test their skills in real game situations. Success in scoring points or implementing effective strategies can increase their confidence in their abilities in the sport.

V. Conclusion

Students' badminton skills through a learning approach using the playing method are better than the badminton skills of students who receive conventional learning and students' self-efficacy through a learning approach using the playing method is better than self-efficacy students who receive conventional learning. Thus it can be said that the application of a learning approach using the playing method can be applied to improving students' badminton skills

References

[1]. Suardi, Moh. Belajar & Pembelajaran. Deepublish, 2018
[2]. Sutianah, Dr Cucu, S. Pd, And M. Pd. Belajar Dan Pembelajaran. Penerbit Qiara Media, 2022.
[3]. Cahyaningtias, Veranda Putri, And Mochamad Ridwan. "Efektivitas Penerapan Media Pembelajaran Interaktif Terhadap Motivasi." Riyadhoh: Jurnal Pendidikan Olahraga 4.2 (2022): 55-62.
[4]. Nopiyanto, Yahya Eko, And Septian Raibowo. Filsafat Pendidikan Jasmani & Olahraga. El Markazi, 2019.
[5]. Warner, Lisa Marie, And Ralf Schwarzer. "Self-Efficacy." The Wiley Encyclopedia Of Health Psychology 2 (2017).
[6]. Schunk, Dale H., And Maria K. Dibenedetto. "Self-Efficacy And Human Motivation." Advances In Motivation Science. Vol. 8. Elsevier, 2021. 153-179.
[7]. Hidayat, Cucu, And Dicky Tri Juniar. Strategi Pembelajaran Pendidikan Jasmani. Deepublish, 2020.
[8]. Zientek, Linda, Kim Nimon, And Bryn Hammack-Brown. "Analyzing Data From A Pretest-Posttest Control Group Design: The Importance Of Statistical Assumptions." European Journal Of Training And Development 40.8/9 (2016): 638-659.
[9]. Sedgwick, Philip. "Multistage Sampling." Bmj 351 (2015).
[10]. Hendrawan, Setya, And Sapto Wibowo. "Penerapan Media Audio Visual (Video) Terhadap Hasil Belajar Pukulan Drop Short Dalam Pembelajaran Bulutangkis (Studi Pada Siswa Kelas Viii Smp Negeri 1 Ngimbang Lamongan)." J. Pendidik. Olahraga Dan Kesehat 3.5 (2017): 722-732.
[11]. Malawi, Ibadullah, Ani Kadarwati, And Dian Permatasari Kusuma Dayu. Teori Dan Aplikasi Pembelajaran Terpadu. Cv. Ae Media Grafika, 2019.
[12]. Hussain, Md Saadat, Sadaquat Ali Khan, And M. C. Bidar. "Self-Efficacy Of Teachers: A Review Of The Literature." Jamshedpur Res. Rev 1 (2022): 110-116.
[13]. Liu, Hairui, Et Al. "College Students' Development Of Badminton Skills And Tactical Competencies Following Play Practice." Journal Of Teaching In Physical Education 40.2 (2020): 284-292.
[14]. Hidayat, Yusuf, Et Al. "The Effect Of The Combined Self-Talk And Mental Imagery Program On The Badminton Motor Skills And Self-Confidence Of Youth Beginner Student-Athletes." Bmc Psychology 11.1 (2023): 35