



The Effect Of The Problem Based Learning Model On The Scissors Style High Jump At SMPN 1 Kramatmulya

Al Imron Maulana¹, Elang Fauzan²

^{1,2}Faculty of Education, Physical Education, Health and Recreation Study Program,
Muhammadiyah University of Kuningan, Indonesia

Abstract

This research is motivated by the low ability of high jump, especially in scissors style, in students, which is caused by a lack of understanding of the basic techniques of high jump and less than optimal training provided by teachers. Teachers tend to choose other sports so that athletics is slightly behind in students' understanding, especially in the high jump athletics branch and tend to provide comprehensive examples without focusing on structured learning. This study aims to improve high jump skills, especially in scissors style, through the application of a problem-based learning approach. The method used in this study is an experiment with a pretest and posttest design in one group. The research sample consisted of 31 students of class VIII E, taken randomly from a population of 245 students of class VIII at SMP Negeri 1 Kramatmulya, Kuningan Regency. This study used a cluster random sampling technique, a high jump ability test for scissors style was used as a measurement tool. The results showed that a problem-based learning approach can significantly improve high jump skills, especially in scissors style in students. Problem solving in the learning process helps students apply more specific targets, which ultimately improves high jump skills in scissors style. This research is expected to be able to integrate technology as an innovation in high jump learning to improve students' skills in athletics, especially in the high jump event in the scissors style.

Keywords: Physical Education, Athletics, Learning Model, Scissor Style High Jump, Problem Based Learning

Correspondence author: Al Imron Maulana, Universitas Muhammadiyah Kuningan, Jawa Barat, Indonesia.
Email: alimronmaulana1718@gmail.com



Jurnal Pendidikan Jasmani (JPJ) is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)

INTRODUCTION

According to Wirani in Kulon and Afektif (2022:14), physical education is a conscious and systematic process for individuals and members of society through various activities to acquire physical abilities and skills, develop growth, intelligence, and develop character.

According to Dwi Poetra and Teoti Soekanto in M. Sobri Sutikno (2019:51), a learning model is a conceptual framework that describes systematic procedures in organizing learning experiences to achieve specific learning objectives, serving as a guide for learning designers and teachers in planning and implementing teaching and learning activities. Based on the above definition, the authors argue that a learning model is material that can describe

or explain future learning and can systematically view and design the learning process, thus depicting the steps involved in learning activities.

According to Yuli and Gunawan in Ummah (2019:4). It is stated that problem-based learning (PBL) is a learning technique characterized by the initiation of learning through the provision of authentic, everyday questions, active group activities, identification of student knowledge gaps, and independent exploration of material and solutions related to the problem.

Based on the results of observations conducted by the researchers, the high jump is a branch of athletics that is highly favored by students. However, when practicing in schools, there is often a lack of facilities for this sport, resulting in a lack of understanding of the high jump among students at SMPN 1 Kramatmulya. Based on the above description, the researcher is interested in conducting a study entitled "The Effect of the Problem-Based Learning Model on the Scissor Style High Jump at SMPN 1 Kramatmulya."

METHOD

This research method used experiments because it aligns with the considerations and problems analyzed. The explanation of the experimental method explains how to obtain convincing data and ensure continuity between variables.

The research design used in this study was a One-Group Pretest-Posttest Design, a design that uses one group. One group is first given a pretest and then given treatment for three sessions. After the treatment, the researcher gives a posttest. Generation is a method of drawing conclusions about a broader group of individuals or objects based on data obtained from a smaller group of individuals or objects. The population used in this study was all eighth-grade students at SMPN 1 Kramatmulya. Sampling is a data collection method that involves recording a portion of the population that represents all members of the population. Thus, the data collected is an estimate of the population. The sample used in this study was 31 students.

The data collection techniques used in this study were observation and testing. The tests used in this study were pretest and posttest. A pre-test was administered to the control and experimental classes to determine students' initial abilities. A post-test was administered to the control and experimental classes to determine differences in students' critical reasoning abilities after being treated with Problem-Based Learning.

The data analysis techniques used included normality testing, homogeneity testing, and hypothesis testing.

RESULTS AND DISCUSSION

Result

Table 1. Normality Test Results

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.194	31	.004	.936	31	.064
Posttest	.153	31	.062	.934	31	.057

a. Lilliefors Significance Correction

Based on the results of the research conducted, it is known that the results of the analysis of the research data for the normality test show that the results of the pretest data have a p value (sig) of $0.064 > 0.05$, then the posttest has a p value (sig) of $0.057 > 0.05$, therefore it can be concluded that the data obtained in this study are normally distributed.

Table 2. Homogeneity Test Results

Test of Homogeneity of Variances						
		Levene				
		Statistic	df1	df2	Sig.	
Pretest	Based on Mean	1.364	7	21	.271	
	Based on Median	.983	7	21	.470	
	Based on Median and with adjusted df	.983	7	11.103	.489	
	Based on trimmed mean	1.300	7	21	.298	

The results of the homogeneity test show that the sig value based on the mean is $0.271 > 0.05$, so it can be concluded that the variance value of the pretest and posttest data for the Application of the Problem Based Learning Model to improve the scissor style high jump skills of class VIII students at SMP Negeri 1 Kramatmulya is homogeneous or the same.

Table 3. Hypothesis Test Results

Paired Samples Test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
			n	Mean	Lower	Upper			
Pair 1	Pretest - Posttest	-6.44355	2.83189	.50862	-7.48230	-5.40480	-12.669	30	.000

Table 4. Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	73.3710	31	3.06789	.55101
	Posttest	79.8145	31	3.03862	.54575

This hypothesis test uses the Paired Sample T-Test, because in this study there is one sample group but has two data to be tested. The results of the t-test above can be seen that the calculated t value is 12.669 and the t table is 1.692 (df3) with a sig p value of 0.000. Therefore, the calculated t value is greater than the t table ($12.669 > 1.692$) and the significance of $p 0.000 < 0.05$, so there is a significant influence. Thus, the hypothesis (H_0) is rejected and (H_1) is accepted.

Discussion

This is in line with research by Parwata (2021) and Romansyah (2017), which stated that implementing a problem-based learning model can improve physical education learning outcomes. The research conducted in each educational unit showed positive results and the problem-based learning method was effective in improving physical education learning outcomes. This explains that the problem-based learning model, which has the characteristic of solving a problem, is very effective when applied to junior high school students. In this study, students were given real-life problems related to scissor style high jump skills, and students were asked to find solutions through an active and collaborative learning process. The results showed that students were able to develop their technical skills significantly through this method.

The application of the problem-based learning model resulted in higher affective domain results in the experimental class, because the problem-based learning model makes students the designers of knowledge that allows students to acquire knowledge based on their own discoveries with their groups. This is in accordance with the statement of Irwan et al., (2024) in their research related to the application of PBL to long jump skills, which stated that the results of the study showed that the problem-based learning model was effective in improving students' long jump abilities.

The results of this study are in line with Safitri et al., (2023) in their research on the influence of the problem-based learning model on athletic learning outcomes. They stated that the problem-based learning model has a significant influence on short-distance running athletic learning achievement in the Physical Education subject at SMPN 23 Pekanbaru. This shows the positive impact of the problem-based learning model on athletic learning achievement. The use of this learning model results in a more minimal delivery of learning materials and in general, learning is guided by the teacher to students, in contrast to conventional learning models.

Based on previous research and the results obtained by the researcher, it can be concluded that the application of the problem-based learning model aims to encourage students to become more active learners with their group members, accepting, appreciating, and internalizing them, and identifying problems around them, especially in the learning aspect. These problems are used to connect curiosity and initiative to the learning material.

Hypothesis testing showed a significant improvement in scissor style high jump skills between before and after treatment with the problem-based learning model. Based on the t-test, it can be seen that the application of the problem-based learning model has a significant effect on eighth-grade students at SMP Negeri 1 Kramatmulya. This is evident in the students' accuracy in the basic scissor style high jump technique, which has improved.

CONCLUSION

This study was conducted to determine the influence of the independent variable, namely the influence of the problem-based learning model on the dependent variable, namely the ability or skill of the scissor style high jump. Based on data analysis, it can be concluded that there is a significant influence between the application of the problem-based learning model on the scissor style high jump skills of students of SMP Negeri 1 Kramatmulya and there is a significant increase in scissor style high jump skills after being given treatment.

ACKNOWLEDGMENT

The author expresses his gratitude as an expression of immeasurable appreciation, especially to: Mr. apt. Wawang Anwarudin, Msc. as the Head of the Rector of the Muhammadiyah University of Kuningan. Mr. Dr. Boby Agustan, M.Pd. as the Dean of the Faculty of Education and Social Technology (FPST). Mr. Dr. Iif Firmana as the Head of the Physical Education, Health, and Recreation (PJKR) Study Program at the Muhammadiyah University of Kuningan. Mr. Elang Fauzan, M.Pd. as the supervisor who has sacrificed his time, energy, and thoughts to guide and provide advice in completing this thesis report. All lecturers at the PJKR Home Base at the Muhammadiyah University of Kuningan for the knowledge and inspiration they have given. My beloved father, Jahidi, and mother, Titin Suhartini, who have devoted all their attention and time to encouraging the author to complete this thesis. Indra Lesmana as my older brother who always reminds and pays attention to the process of completing this thesis. My beloved friends, especially the PJKR Study Program class of 2021, who have always struggled together until now. May his good deeds be accepted by Allah SWT and he receive the best reward from Him. Amen.

REFERENCES

- Ahmar, H., Budi, P., Ahmad, M., Mushawwir, A., & Khaidir, Z. (2020). Penerapan Model Pembelajaran Problem Based Learning: Literature Review. *Jurnal Keperawatan Muhammadiyah*, 10–17. <http://journal.um-surabaya.ac.id/index.php/JKM>
- Alfiyansyah, Jamal. (2019). *Pengaruh Model Pembelajaran Direct Intruktion Terhadap Keterampilan Motorik Kasar*.
- Budiman, S., & Suharto, A. W. B. (2021). Filsafat Ilmu Pendidikan Islam Dalam Perspektif Pendidikan Jasmani. *JISIP (Jurnal Ilmu Sosial Dan Pendidikan)*, 5(3), 505–514. <https://doi.org/10.36312/jisip.v5i3.2195>
- Comission, E. (2016). *model pembelajaran bermain*. 4(1), 1–23.
- Dr. Muhtar Tatang, M.Si dan Irawati Riana, M. S. (2020). *ATLETIK* (P. Dr. Lengkana Setia Anggi, M (ed.); 3rd, Mei 202 ed.). UPI Sumedang Press.
- Dwi Poetra, R. (2019). teknik dasar lompat tinggi. *Gastronomía Ecuatoriana y Turismo Local.*, 1(69), 5–24.
- Fajri, I., Yusuf, R., & Mohd Yusoff, M. Z. (2021). Model Pembelajaran Project Citizen Sebagai Inovasi Pembelajaran Dalam Meningkatkan Keterampilan Abad 21. *JURNAL HURRIAH: Jurnal Evaluasi Pendidikan Dan Penelitian*, 2(3), 105–118. <https://doi.org/10.56806/jh.v2i3.30>
- Irwan, Hasyim, & Adil, M. (2024). Implementasi Model Pembelajaran Problem Based Learning Dalam Pelajaran Lompat Jauh SMAN 8 Makassar. *Global Journal Sport Science*, 2(3), 985–992.
- Khan Mohmand, S. (2019). Research Instruments. In *Crafty Oligarchs, Savvy Voters*. <https://doi.org/10.1017/9781108694247.012>
- Kulon, K., & Afektif, P. (2022). *Metode Bermain di Lingkungan Pantai Sebagai Upaya Meningkatkan Kemampuan Lompat Tinggi Siswa Sekolah Menengah Pertama Hayatunnufus*, 1 Lalu Sapta Wijaya Kusuma, 2 Eko Sucipto *The Method of Playing in the Beach Environment as an Effort to Improve the Juni*. 1(1), 14–25.
- Maksum, D. A. (2012). *Metodologi penelitian dalam Olahraga*. Unesa University Press-2012.
- Mucharom, M. Z. (2022). Pengaruh Problem Based Learning Terhadap Keaktifan Dan Berpikir Kritis Siswa dalam Karakter Kebangsaan di SPN Polda Jatim. *Jurnal Ilmiah Mandala Education*, 8(1), 494–508. <https://doi.org/10.36312/jime.v8i1.2701>
- Parwata, I. M. Y. (2021). Pengaruh Metode Problem Based Learning Terhadap Peningkatan

- Hasil Belajar Pendidikan Jasmani Olahraga dan Kesehatan: Meta-Analisis. *Indonesian Journal of Educational Development*, 2(1), 1–9. <https://doi.org/10.5281/zenodo.4781835>
- Pipit Mulyah, Dyah Aminatun, Sukma Septian Nasution, Tommy Hastomo, Setiana Sri Wahyuni Sitepu, T. (2020). Olahraga Lompat Tinggi Gaya Gunting. *Journal GEEJ*, 7(2).
- Review, J., & Nomor, V. (2024). *Abd Rahman Jurnal Review Pendidikan dan Pengajaran Jurnal Review Pendidikan dan Pengajaran inquiry*. 7, 4729–4738.
- Safitri, R., Alnedral, A., Gusril, G., Wahyuri, A. S., & Ockta, Y. (2023). Pengaruh Model Pembelajaran Project Based Learning dan Problem Based Learning dengan Self Confidence Terhadap Hasil Belajar Atletik Lari Jarak Pendek. *Gelanggang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga (JPJO)*, 7(1), 20–29. <https://doi.org/10.31539/jpjo.v7i1.7292>
- SHELEMO, A. A. (2023). Pengaruh PBL terhadap Lari SMPN 1 Makasar. *Nucl. Phys.*, 13(1), 104–116.
- Sudarta. (2022). *Lompat Tinggi Gaya Gunting penjelasan*. 16(1), 1–23.
- Tumaloto, E. H., Ilham, A., Bernanda Rizky, O., & Datau, S. (2024). Edukasi Penggunaan Media Pembelajaran Pendidikan Jasmani Berbasis Augmented Reality atau teknologi. *Lamahu: Jurnal Pengabdian Masyarakat Terintegrasi*, 3(2), 128–134. <https://doi.org/10.37905/ljpmt.v3i2.26862>
- Ummah, M. S. (2019). pengembangan media pembelajaran problem based learning untuk meningkatkan kreativitas siswa dalam pembelajaran fisika. *Sustainability (Switzerland)*, 11(1), 1–14. http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI
- Widodo, N., & Jaelani, A. (2023). Pengaruh Prestasi Kerja Dan Pengalaman Kerja Terhadap Promosi Jabatan (Studi Kasus Pada Toyota Auto 2000 Cab. Kramat Jati). *ADI Bisnis Digital Interdisiplin Jurnal*, 4(1), 126–130. <https://doi.org/10.34306/abdi.v4i1.887>