

## APPLICATION OF THE PROJECT BASED LEARNING MODEL TO IMPROVE PHYSICAL SPORT AND HEALTHY EDUCATION LEARNING OUTCOMES FOR VOCATIONAL HIGH SCHOOL STUDENT HOSPITALITY VOLLEYBALL MATERIAL

Hani Elinta Br Simatupang<sup>1)\*</sup>, Hendra Mashuri<sup>2)</sup>, Ni Putu Dwi Sucita Dartini<sup>3)</sup>

<sup>1,2,3)</sup> Sports Education, Ganesha Education University

<sup>1)</sup>[hani@undiksha.ac.id](mailto:hani@undiksha.ac.id), <sup>2)</sup>[hendra.mashuri@undiksha.ac.id](mailto:hendra.mashuri@undiksha.ac.id), <sup>3)</sup>[sucita.dartini@undiksha.ac.id](mailto:sucita.dartini@undiksha.ac.id)

### ABSTRAK

Penelitian ini bertujuan untuk menentukan perbaikan dalam hasil pembelajaran PJOK melalui bahan voli untuk kelas XI perhotelan siswa di SMK Negeri 1 Singaraja dengan menerapkan model pembelajaran berbasis proyek. Penelitian ini adalah jenis penelitian tindakan kelas. Mata pelajaran dari penelitian ini adalah perhotelan siswa di kelas XI di SMK Negeri 1 Singaraja, berjumlah 37 siswa. Data dikumpulkan melalui tes tertulis dan tes praktis pada dasar teknik berlalu atas dan bawah yang menggunakan format untuk menilai dasar teknik berlalu atas dan bawah pada aspek kognitif, aspek psikomotor dan aspek emosi. Data dianalisis dengan deskriptif analisis statistik. Hasil penelitian menunjukkan bahwa ada peningkatan dalam hasil pembelajaran bahan voli PJOK untuk siswa yang menggunakan pembelajaran berbasis proyek yang dapat dilihat dari peningkatan hasil pembelajaran rata-rata dari siklus I dari 71,4 sampai 86.3 dalam siklus II, dengan pembelajaran sebelumnya yang lengkap dalam siklus I 12 (32,43%) orang meningkat menjadi 37 (100%) orang dalam siklus II. Jadi model pembelajaran berbasis proyek dapat meningkatkan hasil pembelajaran PJOK dalam bahan voli untuk para siswa peraih keramahan kelas XI.

**Abstract.** This research aims to determine the improvement in physical sport and healthy education learning outcomes through volleyball material for class XI Hospitality students at Vocational High School 1 Singaraja by applying the Project Based Learning learning model. This research is a type of classroom action research. The subjects of this research were students in class XI Hospitality at Vocational High School 1 Singaraja, totaling 37 students. Data was collected by means of written tests and practical tests on basic upper passing and lower passing techniques using the format of assessing basic upper passing and lower passing techniques on cognitive aspects, psychomotor aspects and affective aspects. Data was analyzed using Descriptive Statistics analysis. The results of the research show that there has been an increase in the learning outcomes of physical sport and healthy education volleyball material for students using project based learning which can be seen from the increase in the average

### Sejarah Artikel

Dimasukkan : 15 Juni 2024  
Direview : 8 Juli 2024  
Diterima : 14 Agustus 2024  
Disetujui : 30 Oktober 2024

### Kata-kata Kunci:

Pembelajaran berbasis masalah, hasil pembelajaran, passing atas bola voli, passing bawah bola voli

### Article History

Submitted : June 15, 2024  
Reviewed : July 8, 2024  
Accepted : August 14, 2024  
Published : October 30, 2024

### Keywords:

Project Based Learning, Learning Outcomes, Volleyball Upper passing and Lower passing.

learning outcomes from cycle I from 71.4 to 86.3 in cycle II, with the previous learning being complete in cycle I 12 (32.43%) people increased to 37 (100%) people in cycle II. So the Project Based Learning model can improve physical sport and healthy education learning outcomes in volleyball material for Class XI Hospitality students. For this reason, it is recommended for teachers to choose the Project based learning (PjBL) learning model in their classroom action research if they want to overcome the problem of learning outcomes and student activity.

## **INTRODUCTION**

Physical education is a learning process through physical activities that are designed and structured systematically to improve physical fitness, develop motor skills, knowledge and healthy and active living behavior, sportsmanship and emotional intelligence. Physical Education, Sports and Health (PJOK) is essentially an educational process that provides attention through physical activity or human physical development Fadila et al., (2021). PJOK is an educational process that aims to maintain students' physical fitness and at the same time develop motor movements and interactions between students in a systematically managed environment. Physical education hopes that students can gain various experiences to express personal impressions that are fun, creative, innovative, skilled, improve and maintain physical fitness and understanding of human movement. The learning model refers to the learning approach used, including learning objectives, stages of learning activities, learning environment, and classroom management. By implementing this learning model, it is hoped that all students will be able to express their opinions equally, learn to discuss, clarify subject ideas and concepts, and solve problems. The use of appropriate learning models can improve student learning outcomes. Learning outcomes are mastery of a particular goal to be achieved in an educational program unit or the achievement of educational goals in general. According to Harefa, (2022) "learning outcomes are related to achievement in acquiring abilities in accordance with the specific planned objectives".

Based on the results of initial observations, one of the efforts that could be carried out at SMK Negeri 1 Singaraja class The assessment of learning outcomes revealed that 28 students had not met the criteria for achieving learning objectives (KKTP) in the aspects of skills, knowledge and attitudes and 9 people had met the criteria for achieving learning objectives (KKTP). The cause of this problem is a lack of facilities and infrastructure, teachers have not used learning media, learning media is limited to textbooks which only consist of pictures so it is difficult for students to translate pictures and teachers have not maximized the use of student-oriented learning models so that students are in motion. just waiting for orders from the teacher. Based on the results of observations, one of the efforts that can be made is to apply a learning model that is centered on students, namely, with a project based learning model because this project based learning model can improve students' mastery of concepts and critical thinking skills, so that students become more active in learning and can improve

student learning outcomes. The project based learning (PjBL) learning model is expected to be able to overcome the problems of student learning outcomes which have so far been more about waiting for information from the teacher to meaningful learning to discover for themselves the concepts of the material being studied, it is hoped that the quality of the process and student learning outcomes will be better. Project based learning is a learning model that organizes classes in a project. According to Maghfiroh and Gofur (2021), the project based learning model is a learning model that uses projects or activities as the core of learning.

Project-based learning does not only aim for students to gain cognitive knowledge, but targets overall learning. Apart from cognitive aspects, students can also develop psychomotor and affective aspects. Through PjBL students also gain knowledge by digging up their own information through the projects they work on. The project based learning model also has the advantage of being able to help students in a more active and interactive learning process. The advantages gained when using this learning model are: Increasing motivation, improving problem solving abilities, increasing collaboration, improving skills Rosmalisa, (2022).

Based on the description above, research will be carried out entitled Application of the Project Based Learning Learning Model to Improve PJOK Learning Outcomes in Volleyball class XI Hospitality material at SMK Negeri 1 Singaraja for the 2023/2024 academic year.

## **METHODS**

The research carried out is classified as classroom action research (PTK). Classroom action research is an effort to examine the learning activities of a group of students by providing an action (treatment) that is deliberately brought about by the teacher, together between the teacher and students, or students under the guidance of the teacher with the aim of improving and increasing the quality of learning. Mulyasa (2013). In short, classroom action research is a form of research that is reflective in nature with certain actions in order to improve or increase learning practices in the classroom in a professional manner" (Kanca, 2010). In this research, learning tools will be developed including learning plans, observation sheets, and learning results tests. All learning tools prepared are adapted to the type of approach applied. This research design uses a cycle with a classroom action research model which is carried out in two cycles, with each cycle consisting of 2 (two) meetings.

From the definition above, it can be concluded that classroom action research is action research to be able to solve real problems that occur in the classroom and increase the teacher's real activities in developing the learning process. The research setting is to explain where the research was conducted, when, under what conditions, and the duration of the action in detail according to the many predicted cycles. The place used is the Bhuana Patra Singaraja GOR field. The research was carried out on class Research design is a tactic for

organizing the research environment so that researchers can collect relevant (valid) data according to the characteristics of the variables and research objectives.

This classroom action research was carried out in two cycles with each cycle consisting of one meeting. The first meeting provides material and evaluates learning outcomes. Each Classroom Action Research Design (PTK) cycle consists of four stages, namely: (1) action plan, (2) action implementation, (3) observation/evaluation, (4) reflection.

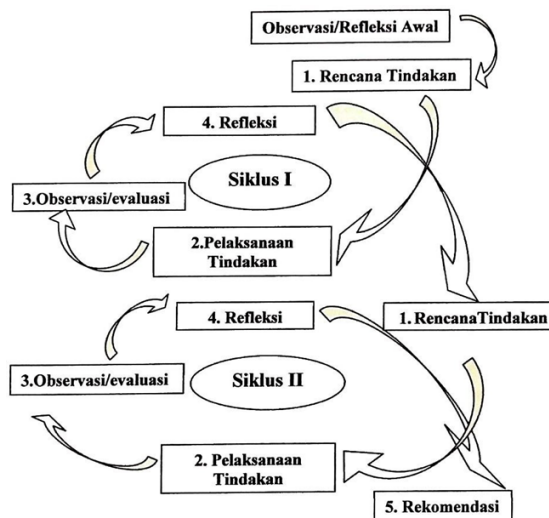


Figure 1 Classroom Action Research Design (Research Methods for Teaching Physical Education and Sports, Kanca, 2010)

**RESULTS AND DISCUSSION**

**Results**

Based on the results and discussion of research that has been carried out using volleyball material on over-passing and under-passing for class

**Description of Cycle I Research Results Analysis**

Based on table 4.1, it can be seen that the average learning outcome in cycle I was 71.4 or in the sufficient category. With a median of 68.8, the mode of 63.8 based on this data can be classified based on criteria.

Table 1. Descriptive Statistics for Cycle I

PJOK Cycle I Values	
Mean	71,43243243
Standard Error	1,376888388
Median	68,86666667
Mode	63,86666667
Standard Deviation	8,375285094
Range	28,23333333
Minimum	61,36666667
Maximum	89,6

Sum	2643
Count	37

With these results, it can be seen that the average PJOK learning result for volleyball material on upper passing and lower passing in cycle I is 71.4, this figure is in the sufficient category.

The results of data analysis of learning outcomes in cycle I through volleyball material on over-passing and under-passing for class

Table 2. Data Analysis of Cycle I Learning Results

No	Criteria	Number of Students	Category
1	89-100	3	Very Good
2	77-88	9	Good
3	65-76	13	Enough
4	0-64	12	Not Enough

Based on the table above, it can be seen that the results of PJOK learning in cycle I, volleyball material, upper passing and lower passing in class . With details of learning outcome scores according to the following categories: 3 students (8.10%) received very good category scores, 9 students (24.32%) received good category scores, 13 students (35.13%) received good category scores. %, and the less than 12 students category (32.43%).

### Description of Cycle II Research Results Analysis

Based on table 4.3, it can be seen that the average learning outcome in cycle II is 86.3 or in the good category. With a median of 85.9, the mode of 85.9 based on this data can be classified based on criteria.

Table 3. Descriptive Statistics for Cycle II

<i>PJOK Cycle II Values</i>	
Mean	86,3009009
Standard Error	0,611140439
Median	85,9
Mode	85,9
Standard Deviation	3,717422166
Range	15,36666667
Minimum	79,23333333
Maximum	94,6
Sum	3193,133333
Count	37

With these results, it can be seen that the average PJOK learning result for volleyball material on upper passing and lower passing in cycle II is 86.3, this figure is in the good category. The results of the data analysis of cycle II learning outcomes through volleyball material on over-passing and under-passing for class

Table 4. Data Analysis of Cycle II Learning Results

No	Criteria	Number Of Student	Category
1	89-100	12	Very Good
2	77-88	25	Good
3	65-76	0	Enough
4	0-64	0	Not Enough

Based on the table above, it can be seen that the learning outcomes in cycle II of volleyball material on overpassing and underpassing for class With details of the learning outcome scores according to the following categories: 12 students (32.43%) received very good category scores, 25 students (67.56%) in the good category, adequate category and none in the poor category (0 %) learners.

#### Increasing Data from Research Results from Cycle I and Cycle II

The improvement in PJOK learning outcomes in volleyball material for over-passing and under-passing for class

Table 5. Improvement of Learning Outcomes in Cycle I and Cycle II

No	Stages	Learning Outcomes	Student Completene ss	Increasing Learning Outcomes	Increasing Learning Completeness
1	Cycle I	71,4	12 O People (32,43%)	12 People (14,9)	25 People (67,56%)
2	Cycle II	86,3	37 People (100%)		

Based on table 4.5, the results of data analysis on PJOK volleyball learning outcomes, upper passing and lower passing in class %), after being given action in cycle II, 37 students (100%) got the complete category, with an increase of 25 people (67.56%) from cycle I.

#### Discussion

The big ball game volleyball is the material contained in PJOK at school. This discussion will explain the results of research on the application of the Project based learning learning model regarding volleyball over and under passing in students of class XI Hospitality at SMK Negeri 1 Singaraja for the 2023/2024 academic year. The changes that occurred were based on the learning results from cycle I which were applied in cycle II, namely in the learning

process the researcher gave examples of movements to students by practicing them, replacing them with students creating a project in the form of a video of the basic techniques for passing over and under passing in volleyball.

In measuring students' success in cycles I and II, researchers collaborated with teachers to provide tests on cognitive, affective and psychomotor aspects during the learning process. After conducting research by conducting Project Based Learning, in the completeness of learning outcomes in cycle I and cycle II, the average completeness of student learning outcomes has increased, namely in cycle I it was 71.4, increasing to 86.3 in cycle II

Based on the results of the research that has been carried out by the researcher and the description presented above, it can be concluded that the application of the Project Based Learning (PjBL) learning model can improve learning outcomes (PJOK) in the volleyball game material of upper passing and lower passing in students of class XI Hospitality Vocational School. Negeri 1 Singaraja academic year 2023/2024.

## CONCLUSION

Based on the results of classroom action research that has been carried out regarding the learning process by applying the Project Based Learning learning model to improve learning outcomes (PJOK) through over-passing and under-passing volleyball material for Class XI Hospitality students at SMK Negeri 1 Singaraja for the 2023/2024 academic year. It was concluded that the application of the Project Based Learning Model can improve learning outcomes (PJOK) through volleyball material on over-passing and under-passing for class It can be seen from the increase in average from 71.4 in cycle I to 86.3 in cycle II. In cycle I and cycle II, the percentage increase in the average value of PJOK learning outcomes for upper passing and lower passing volleyball material in cycle I was 71.4 (classical completeness 71.4%) in the sufficient category and the average value of PJOK learning outcomes for upper passing volleyball material. and passing under cycle II increased to 86.3 (100% classical completion) in the good category. This shows that the application of the project based learning model improves PJOK learning outcomes regarding the volleyball game material of over-passing and under-passing in class.

## REFERENCES

- Amrizal, F. (2021). Evaluasi Pembelajaran Pendidikan Jasmani Berbasis Kurikulum 2013 Di Sekolah Menengah Atas. *Physical Activity Journal*, 3(1)
- Anggraini, Dewi, P., & Wulandari, S.S. (2020). Analisis Penggunaan Model Pembelajaran Project Based Learning Dalam Peningkatan Keaktifan Siswa. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*, 9(2), 292–99.
- Ansori. (2022). Upaya Peningkatan Pembelajaran Passing Bawah Bola Voli Melalui Model Pjbl. *Science*, 7(1), 1–8.

- Darmawan H. (2022). Penggunaan Model Pembelajaran Kooperatif Tipe Jigsaw Terhadap Kemampuan Pemahaman Konsep Belajar Siswa. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 8(1)
- Febrianti, Dian, A, Artanayasa, W, Dwi, N.P, & Dartini, S. (2021). Modul Pembelajaran PJOK Berbasis Tematik Terpadu Untuk Peserta Didik Pada Tema Kegemaranku (Sub Tema: Gemar Bernyanyi Dan Menari). *Jurnal Ilmu Keolahragaan Undiksha*, 9(1), 1–7. <https://ejournal.undiksha.ac.id/index.php/JJK>.
- Hapnita, Widia, Abdullah, R, Gusmareta, Y, & Rizal, F. 2017. Faktor Internal Dan Eksternal Yang Dominan Siswa Kelas Xi Teknik Gambar Bangunan Smk N 1 Padang Tahun 2016 / 2017. *Journal of Civil Engineering and Vocational Education*, 5(1), 2175–82.
- Ilham, Oktadinata, A., & Kholidman, I. (2019). Analisis Keterampilan Passing Bawah Dan Passing Atas Peserta Ekstrakurikuler Bola Voli Sma Negeri 2 Kota Sungai Penuh. *Cerdas Sifa*, 1(1), 56–67.
- Istriani, Legista, P., Alviana. (2024). Pengaruh Penggunaan Model Pembelajaran Teams Games Tournament Terhadap Pemahaman Konsep Matematika Kelas X SMK Adi Luhur Diartikan Sebagai Kurang Berhasilnya Proses Pembelajaran. Keberhasilan Proses Pembelajaran Dipengaruhi Oleh Beberapa Aspek Terutama K. *Jurnal Matematika dan Ilmu Pengelatan Alam*, 2(1), 349–60.
- Kuntoro, A. (2023). Efektivitas Project Based Learning Dalam Kurikulum Merdeka Pada Pembelajaran Aktivitas Pengembangan Terhadap Minat Belajar Siswa Sekolah Menengah Kejuruan. *Jurnal Ilmiah Wahana Pendidikan*, 263–69, <https://doi.org/10.5281/zenodo.7781785>.
- Lamsari, L.S. (2019). Peningkatan Konsentrasi Belajar Mahasiswa Melalui Pemanfaatan Evaluasi Pembelajaran Quizizz Pada Mata Kuliah Kimia Fisika I. *Jurnal Dinamika Pendidikan*, 12(1), 29–39.
- Maghfiroh, Nuril, Susilo, H., & Gofur, A. (2016). Pengaruh Project Based Learning Terhadap Kerampilan Proses Sains Siswa Kelas X SMA Negeri Sidoarjo. *Jurnal Pendidikan*, 1(8), 1588–93.
- Martiani, M. (2021). Kemandirian Belajar Melalui Metode Pembelajaran Project Based Learning Pada Mata Kuliah Media Pembelajaran Pendidikan Jasmani. *Edukatif: Jurnal Ilmu Pendidikan*, 3(2), 480–86.
- Muflihah, A. (2021). Meningkatkan Motivasi Dan Hasil Belajar Siswa Melalui Model Pembelajaran Index Card Match Pada Pelajaran Matematika. *Jurnal Pendidikan Indonesia*, 2(1), 152–60.
- Muhammad, A., Atiq, A., Yanti, N., & Pratama, A.N. (2022). Meningkatkan Kemampuan Pengembalian Bola Hasil Smash Dari Lawan Berbasis Model Project Based Learning Pada Pembelajaran Mata Kuliah Tenis Lapangan. *Gelanggang Olahraga: Jurnal Pendidikan Jasmani dan Olahraga (JPJO)*, 6(1), 45–52.
- Novera, Ellya, Daharnis, D., Erita, Y, & Fauzan, Z, Ahmad, Fitria. (2021). Efektivitas Model Pembelajaran Kooperatif Tipe Course Review Horay Dalam Peningkatan Aktivitas Dan Hasil Belajar Matematika Siswa Sekolah Dasar. *Jurnal Basicedu*, 5(6), 6349–56.
- Nugraha, Ugi, & Yuliawan, E. (2021). Meningkatkan Hasil Belajar Passing Atas Bola Voli Melalui Pendekatan Gaya Mengajar Latihan Dengan Menggunakan Audio Visual.

---

*Altius: Jurnal Ilmu Olahraga dan Kesehatan*, 10(2), 231–42.

- Nurfitriyanti, Monti, Claudia, Novoa, M.C., & Vizcaíno, C.E. (2003). Anatomía y Etnobotánica de Dos Especies de Boraginaceae de La Provincia Pampeana (Argentina) Usadas En Medicina Popular. *Acta Farmaceutica Bonaerense*, 22(3), 197–201.
- Pangesti, A., Ayu, W., Fanani, A., & Prastyo, D. (2020). Pengaruh Model Project Based Learning Terhadap Motivasi Belajar Siswa. *Buana Pendidikan: Jurnal Fakultas Keguruan dan Ilmu Pendidikan*, 16(30), 27–32.
- Parma, S., Roni, Hudayani, F., & Asnaldi, A. (2022). Evaluasi Pembelajaran Pendidikan Jasmani Olahraga Dan Kesehatan Pada Masa Pandemi. *Jurnal MensSana Jurnal Ilmiah Bidang Pendidikan Olahraga*, 7(1), 31–38.
- Ramadani, F., Harahap, Fauziyah, Nurliza, & Nanda E. A. Nasution. (2020). Penerapan Model Pembelajaran Project Based Learning Untuk Meningkatkan Hasil Belajar IPA Dalam Pembelajaran Daring Di Kelas IX SMP. *Jurnal Pelita Pendidikan*, 8(1), 52–61. <https://jurnal.unimed.ac.id/2012/index.php/pelita/article/view/17301/13178>.
- Saputra, Nanda, & Aziz, I. (2020). Tinjauan Tingkat Kondisi Fisik Pemain Bolavoli Putra Sma 2 Pariaman. *Jurnal Performa Olahraga*, 5(1), 32–38.
- Sari, Atika, E., & Utami, R.W. (2023). Penerapan Model Pembelajaran Project Based Learning (PjBL) Untuk Meningkatkan Hasil Belajar Siswa Kelas III SDN 1 Sindangrasa. *Jurnal Intisabi*, 1(1), 41–49.
- Sari, Taula, R., & Angreni, S. (2018). Penerapan Model Pembelajaran Project Based Learning (PjBL) Upaya Peningkatan Kreativitas Mahasiswa. *Jurnal VARIDIKA*, 30(1), 79–83.
- Surya, Putri, A., Relmasira, S.C., & Hardini, A.T.A. (2018). Penerapan Model Pembelajaran Project Based Learning (Pjbl) Untuk Meningkatkan Hasil Belajar Dan Kreatifitas Siswa Kelas Iii Sd Negeri Sidorejo Lor 01 Salatiga. *Jurnal Pesona Dasar*, 6(1), 41–54.
- Ulfah, & Arifudin, O. (2021). Pengaruh Aspek Kognitif, Afektif, Dan Psikomotor Terhadap Hasil Belajar Peserta Didik. *Jurnal Al-Amar: Ekonomi Syariah, Perbankan Syariah, Agama Islam, Manajemen dan Pendidikan*, 2(1), 1–9. <http://ojs-steialamar.org/index.php/JAA/article/view/88>.
- Wirayasa, Putra, I.D.G., Darmayasa, I.P., & Satyawan, I.M. (2021). Pengembangan Instrumen Penilaian Hasil Belajar Ranah Kognitif Model 4D Pada Materi Sepak Bola Berdasarkan Kurikulum 2013. *Jurnal Pendidikan Jasmani, Olahraga dan Kesehatan Undiksha*, 8(3), 81–88.