

The Effect of PBL Learning Model on Motivation and Learning Outcomes of Dribbling in Soccer

Rozak Zanuarta^{1,*}, Anung Priambodo²

Faculty of Sport and Health Sciences, Surabaya State University, Indonesia
rozakzanuarta.20043@mhs.unesa.ac.id*; ²anungpriambodo@unesa.ac.id

ARTICLE INFO

Article history

Received 2024-02-17
Revised 2024-07-10
Accepted 2024-07-25

Keywords

Problem based learning
Motivation
Learning outcomes
Football dribbling

Keywords.

Problem based learning
Motivasi
Hasil belajar
Mrnggiring bola

ABSTRACT

Problem-based learning is a learning method that has critical thinking skills so that it can overcome problems by finding the right approach. This research aims to understand the influence of the problem based learning (PBL) model on motivation and dribbling learning outcomes in the game of football. This research uses a quantitative approach and utilizes a Non-Randomized Control Group Pretest-Posttest Design research design. Homogeneity and normality tests were carried out in this study with normality test results using K-S. There is data with an abnormal distribution because the sig value is $< \alpha$ (0.05), whereas in the homogeneity test the data results are homogeneous because the sig value is $> (0.05)$. So the test carried out to determine the difference uses the Wilcoxon signed rank test and the Mann-Whitney U test to understand whether the data is significant or not. The results of the Wilcoxon signed rank test research have a sig with a result $< (0.05)$, so it can be concluded that accepting H_a and rejecting H_o means that the data can be declared significant. Increase in motivation with a value of $(0.027 < 0.05)$ (skills aspect learning outcomes with a sig value $(0.039 < 0.05)$, while in the knowledge aspect there is no influence due to a sig value $(0.453 > 0.05)$. Based on these results, it is concluded that there is a significant influence of the problem-based learning model on skills learning outcomes, but it has no effect on learning motivation and knowledge learning outcomes.

This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Abstract

*Problem based learning merupakan metode pembelajaran yang memiliki keterampilan berpikir kritis sehingga dapat mengatasi permasalahan dengan menemukan pendekatan yang tepat. Penelitian ini tujuannya memahami adanya pengaruh model *problem based learning* (PBL) pada motivasi beserta hasil belajar dribbling dalam permainan sepak bola. Penelitian ini mempergunakan pendekatan kuantitatif dan memanfaatkan desain penelitian *Non-Randomized Control Group Pretest-Posttest Design*. Uji homogenitas beserta normalitas dilakukan pada penelitian ini dengan hasil uji normalitas mempergunakan K-S. Terdapat data dengan distribusi tidak normal dikarenakan nilai $\text{sig} < \alpha$ (0,05), sedangkan pada uji homogenitas didapatkan hasil data yang homogen dikarenakan nilai $\text{sig} > (0,05)$. Sehingga uji yang dilaksanakan untuk mengetahui perbedaan mempergunakan uji *wilcoxon signed rank test* dan *mann-whitney u* test guna memahami data signifikan ataukah tidak. Hasil penelitian *Wilcoxon signed rank test* memiliki sig dengan hasil $< (0,05)$, dengan demikian bisa diambil kesimpulan menerima H_a beserta menolak H_o artinya data tersebut bisa dinyatakan signifikan. Peningkatan pada motivasi dengan nilai $(0,027 < 0,05)$ (hasil belajar aspek keterampilan dengan nilai $\text{sig} (0,039 < 0,05)$, sementara dalam aspek pengetahuan tidak adanya pengaruh dikarenakan nilai $\text{sig} (0,453 > 0,05)$. Sehingga didapatkan kesimpulan yaitu terdapat pengaruh signifikan model pembelajaran *problem based learning* terhadap hasil belajar keterampilan, tetapi tidak berpengaruh pada motivasi belajar dan hasil belajar pengetahuan.*

Artikel ini open akses sesuai dengan lisensi [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)



INTRODUCTION

Education is a process of teaching and learning and the development of skills, knowledge, moral values and attitudes that all individuals possess. Education is not only limited to teaching in schools or colleges, but also includes lifelong learning, both formal and informal. Its main objective is to shape individuals to have broad knowledge, necessary skills and good morality to contribute positively to society. As stated in the Government Regulation of the Republic of Indonesia Year (2003) that "National education functions to increase the potential as well as form a national civilization and dignified character in an effort to educate the nation's life, aims to achieve the development of students' abilities in order to become people who are devoted and devoted to God, noble, healthy, knowledgeable, independent, capable, creative, as well as democratic and responsible citizens."

Education in schools is Physical Education, Sports and Health (PJOK), which is learning aimed at encouraging the development of aspects of physical fitness, health, critical thinking skills, movement abilities and attitudes through physical activity. (Parwata, 2021). PJOK is a subject that is taken as part of learning activities at school with an emphasis on aspects of knowledge, attitudes, and skills PJOK aims to increase student potential in psychomotor, cognitive, and affective aspects. (Rahmayanti Dewi et al., 2020)..

PJOK is essentially a learning process that uses physical activities in order to bring about comprehensive changes in the quality of learners, which includes physical and mental qualities. (Mashud et al., 2022).. Student learning outcomes are an indicator of the level of mastery of the material. Teachers in providing learning materials have an important role, which can have an influence on student learning outcomes. (Candra et al., 2023).. Factors that influence learning outcomes are important in encouraging students to achieve maximum learning outcomes. (Cahyaningtias & Ridwan, 2021).. Learning outcomes are a change in a person's attitude that involves psychomotor, effective, and cognitive abilities. (Karim & Jahrir, 2022).. Student learning outcomes are also determined by external and internal factors. (Hasbillah & Suparman, 2021).. Internal factors can be expressed as a factor from within the student. This factor includes perseverance, motivation to learn, socio-economic, psychological factors. External factors are factors from outside the student, which consist of learning models, teaching methods, learning media, mastery of educator materials, there are learning models, namely contextual learning models, cooperative learning models, PBL (*project-based learning*) learning models, traditional or conventional learning models along with inquiry learning models. (Yandi et al., 2023)..

With the support of the learning model used, it is hoped that teachers can help students in ideas, skills, knowledge, ways of thinking and expressing themselves. (Rahmayanti Dewi *et al.*, 2020). The PBL learning model is a method for exploring meaningful and important questions, developing a deep understanding of content, and seeking problem solving. (Mukti & Priambodo, 2021).. PBL aims to have

creative thinking skills and critical thinking, therefore it can solve problems by finding the right solution (Mukti & Priambodo, 2021). (Mukti & Priambodo, 2021)..

Thus, the PBL model is a model that can affect student learning motivation. Motivation is the impetus that exists in an individual to carry out certain actions with a specific purpose, whether conscious or not. (Harahap *et al.*, 2023). Learning motivation is a movement that arises from individuals who are able to make students motivated as a driver of learning enthusiasm. (Pangesti *et al.*, 2020). Students with high or low learning motivation can affect certain learning, for a teacher must master the identification of a learning motivation, both low and high learning motivation, learning methods can affect the results of student development both with low and high quality. (Desi Novitasari & Darmawan, 2019). PJOK and motivation are interconnected, one of the PJOK materials, namely soccer, can increase students' learning motivation and PJOK participation, thus contributing to a healthy lifestyle (de Bruijn *et al.*, 2023).

In learning PJOK at school soccer material is a very popular sport in the world and in Indonesia. It can be seen from the many people who like soccer, both from villages to cities, everyone can do it. (Ricky Kurniawan *et al.*, 2020). Soccer is a sport that always offers beauty in every corner of the game, even though it is seen from the side of training, matches, and soccer is required to be able to perform physical skills, techniques, strategies and also mentally. (Uskoković, 2024).. At the high school level (SMA) soccer is taught from elementary, junior high, and high school, every student knows and understands the basic movements of soccer which include several movements, especially passing (passing the ball), shooting (kicking the ball), dribbling (dribbling) is a soccer motion skill. (Munir *et al.*, 2022). One of the motion skills of soccer is dribbling. Dribbling is the ability to dribble the ball moving between places and helping players to pass opposing players. (Atiq & Budiyanto, 2020). The game of soccer has the goal of putting the ball into the enemy's goal and protecting your own goal so that in this case there is no conceding. The principle of soccer is cooperation (ZHANG, 2020).

During the observation, the researcher communicated with the PJOK teacher, especially class X, and observed directly during the learning process at SMAN 2 Lamongan. The researcher found a problem, namely the lack of motivation level in students before and during the learning process. At the time before learning there were those who did not wear uniforms with the excuse of pretending to be sick and during learning refused to line up in the field because they were afraid of the hot sun. Some other problems in the aspect of learning outcomes of soccer dribbling are still not optimal. There are students who are not focused during the explanation given by the teacher, students still look lazy to try soccer dribbling motion skills, students have not been able to solve the problems found in the learning process. Therefore, learning motivation can affect the success of soccer dribbling skills, combined with the right or fun learning model for students can help mastery in the material of dribbling skills in soccer learning. (Yulianto *et al.*, 2023).

METHODS

The implementation of this research is a quasi-experimental research that uses a quantitative approach and uses a Randomized Control Group Pretest Posttest Design. This design utilizes a pretest-posttest and control group, but the placement of subjects is not randomized. (Maksum, 2018). The population is a collection of all individuals to be ready for research. Class X students of SMAN 2 Lamongan which amounted to 490 and a total of 12 classes were used as the population of this study. The research sample is using random sampling This research sampling method involves pieces of paper. Each class leader will take the piece of paper. The results of the drawing obtained the research sample is class X-10 (treatment class) and X-11 (control class). In the treatment between the two groups only differs in the provision of learning models, for the experimental group given the Problem Based Learning (PBL) learning model, while conventional learning is given a traditional learning model aimed at the control group. The research time allocation was carried out for 3 (three) meetings on January 9, 16 and January 23, 2024. In the teaching and learning process, it was carried out to provide the application of the PBL learning model to the motivation and learning outcomes of soccer dribbling in PJOK learning. The place of research was conducted at SMAN 2 Lamongan on Jl. Veteran No. 1, Lamongan, East Java, Indonesia, zip code 62212. This research instrument is a cognitive assessment (knowledge), psychomotor assessment (skills) and motivation questionnaire sourced from thesis (Diana, 2022) learners. This research was analyzed through descriptive statistical tests, data requirements tests, non-parametric tests using SPSS version 25.

RESULTS AND DISCUSSION

Table 1 Wilcoxon Signed Ranks Test Results Experiment Class

	Variables	Significant
EXPERIMENT	Pretest - Posttest Motivation	0,000
	Pretest - Posttest Knowledge	0,000
	Pretest - Posttest Skills	0,008

Notes: There is a difference if the sig value < a (0.05)

Based on this data, proving the results of the sig value < (0.05), it can be concluded that accepting H_a or rejecting H_o then the data can be declared significant.

Table 2 Wilcoxon Signed Ranks Test Results Control Class

	Variables	Significant
CONTROL	<i>Pretest - Posttest</i> Motivation	0,000
	<i>Pretest - Posttest</i> Knowledge	0,000
	<i>Pretest - Posttest</i> Skills	0,043

Notes: There is a difference if the sig value < a (0.05)

Based on the table, the sig value is obtained $< (0.05)$, therefore we can get the conclusion to reject H_0 and accept H_a , thus the data can be declared significant.

Table 3 Mann-Whitney U Test Results for Experimental and Control Classes

Variables	Sig
Motivation	0,027
Knowledge	0,453
Skills	0,039

Notes: There is a difference if the sig value $< a (0.05)$

Based on these data, the results obtained on the value of knowledge have a sig value $< (0.05)$ then it can be said that there is an influence between the experimental class and the control class related to the value of motivation and skills. While the value of knowledge has a sig value $> (0.05)$ and it can be said that there is no influence between the experimental and control classes.

Percentage Increase

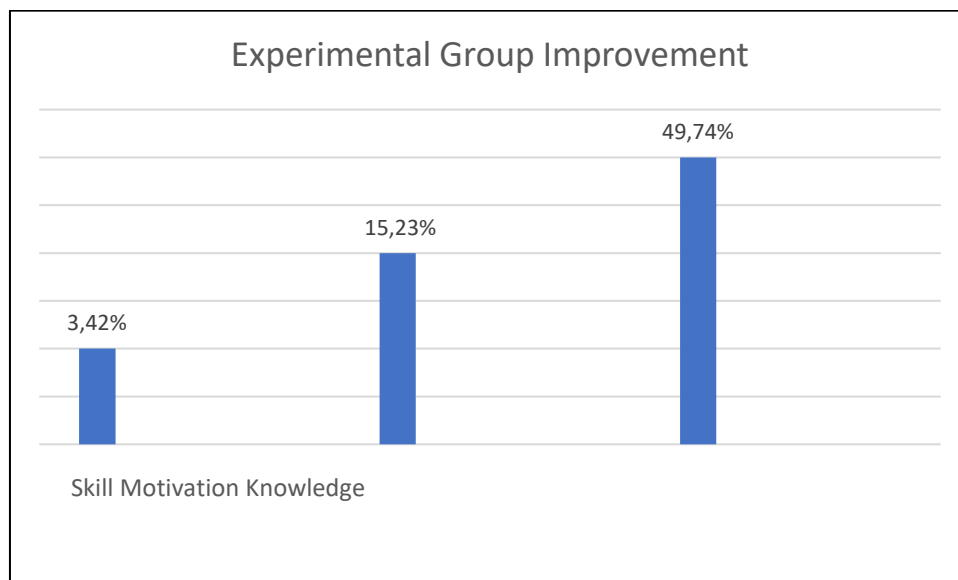


Figure 1 Experimental Class Percentage Increase

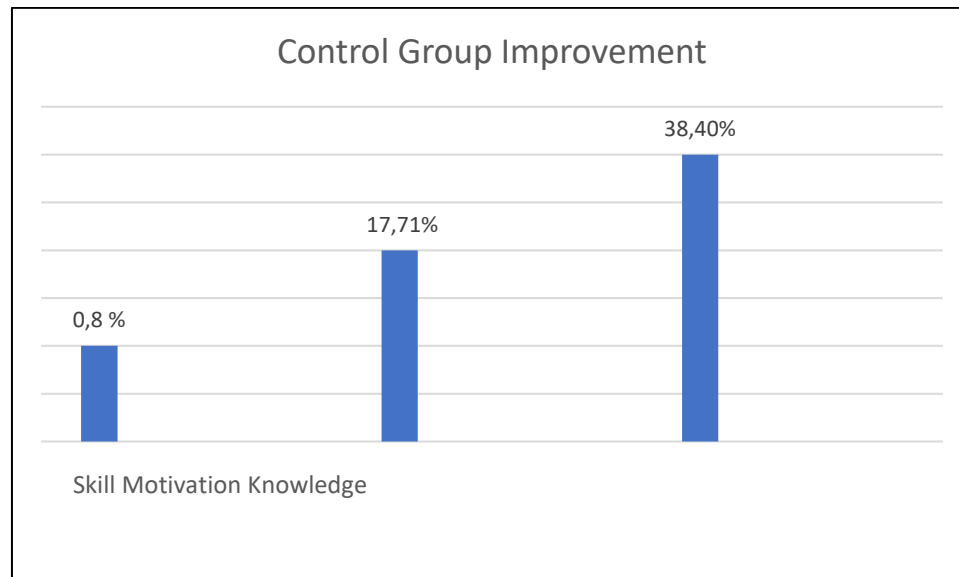


Figure 2 Percentage of Control Class Improvement

Discussion

The purpose of this study was to determine the effect of problem-based learning model on motivation and learning outcomes of dribbling in soccer game at SMAN 2 Lamongan. This study collected data using a questionnaire taken on January 9 to January 23 with 38 respondents from the experimental class and 38 respondents from the control class of SMAN 2 Lamongan students. With the support of previous research by Budi Indrawan, Deni Setiawan and Defri Maulana (2017) entitled "The Effect of *Problem Based Learning Model on Motivation and Learning Results of Playing Football Skills*".

According to Pangesti (2020), learning motivation is a movement that arises from individuals who are able to motivate students as a driver of learning enthusiasm. There are 2 (two) kinds of motivation, namely extrinsic and intrinsic motivation. Intrinsic motivation is a motivation from within an individual's personality while extrinsic motivation is from outside a person. There are differences in the motivation aspects of the experimental class and control class which have a sig value of $0.027 < 0.05$, while for the control class it increases higher than the experimental class, because the application of the problem-based learning model is still new and students cannot adjust to adapt to the new learning model. In addition, understanding the assessment instrument by respondents is also possible to create bias so that it affects the results of the study.

According to Yandi (2023), learning outcomes can be said to be a change in a person's behavior that involves cognitive, psychomotor, and affective abilities. The success of learning outcomes can be known from changes in students as a result of teaching and learning activities. There is an influence on the learning outcomes of experimental and control class skills which have a sig. value of $0.039 < 0.05$,

because students better understand learning outside the classroom which is practiced directly in the field. While in the knowledge aspect of the experimental class and control class with a sig value ($0.453 > 0.05$) there is no effect because when data collection is relatively short, which is carried out 3 (three) meetings.

There are limitations to this study and are of concern to researchers. First, the lack of motivation of students towards soccer learning. Second, the ability of students to work on HOTS (higher order thinking skills) questions so that some students have difficulty working on knowledge questions. Third, the relatively short research time is 3 (three) meetings. This could be the cause or reason that the variables studied did not experience significant differences. Researchers recommend adding a variety of research materials which initially only *dribbling* added *passing* and *shooting* to increase students' interest in learning.

CONCLUSIONS

Based on the results of the study, it is concluded that there is an influence of the problem-based learning model on the learning outcomes of dribbling in soccer players in the skill aspect with a sig value ($0.039 < 0.05$), and there is an influence of the problem-based learning model on the motivation aspect with a value of ($0.027 < 0.05$). While in the knowledge aspect there is no influence because the sig value ($0.453 > 0.05$).

REFERENCES

- Atiq, A., & Budiyanto, K. S. (2020). Analisis Latihan Keterampilan Teknik Dasar Sepak Bola untuk Atlet Pemula. *Gelanggang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga (JPJO)*, 4(1), 15–22. <https://doi.org/10.31539/jpjo.v4i1.1482>
- Cahyaningtias, V. P., & Ridwan, M. (2021). Efektivitas Penerapan Media Pembelajaran Interaktif terhadap Motivasi. *Riyadhoh : Jurnal Pendidikan Olahraga*, 4(2), 55. <https://doi.org/10.31602/rjpo.v4i2.5727>
- Candra, O., Pranoto, N. W., Ropitasari, R., Cahyono, D., Sukmawati, E., & CS, A. (2023). Peran Pendidikan Jasmani dalam Pengembangan Motorik Kasar pada Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(2), 2538–2546. <https://doi.org/10.31004/obsesi.v7i2.4506>
- de Bruijn, A. G. M., de Greeff, J. W., Temlali, T. Y., Oosterlaan, J., Smith, J., & Hartman, E. (2023). Objectively measured physical activity during primary school physical education predicts intrinsic motivation independently of academic achievement level. *British Journal of Educational Psychology*, 93(S1), 90–112. <https://doi.org/10.1111/bjep.12527>
- Desi Novitasari, V. F., & Darmawan, G. (2019). Penerapan Small Side Games Terhadap Hasil Belajar Passing dan Motivasi Siswi Mengikuti Pembelajaran Sepak bola Vivi Foni Desi Novitasari *,

- Gatot Darmawan. *Jurnal Pendidikan Olahraga Dan Kesehatan*, 07, 85–88.
- Diana, W. A. (2022). Pengaruh Model Pembelajaran Dan Motivasi Berprestasi Terhadap Hasil Belajar Passing Bolavoli. *Jurnal Penjakora*, 9(1). <https://doi.org/10.23887/penjakora.v9i1.45860>
- Harahap, Z. N., Azmi, N., Wariono, W., & Nasution, F. (2023). Motivasi, Pengajaran dan Pembelajaran. *Journal on Education*, 5(3), 9258–9269. <https://doi.org/10.31004/joe.v5i3.1732>
- Hasbillah, M., & Suparman, S. (2021). Upaya Meningkatkan Hasil Belajar Passing dalam Permainan Sepak Bola melalui Model Pembelajaran Kooperatif Tipe TGT (Teams Games Tournament) Siswa SMP Negeri 1 Tanasitolo Kabupaten Wajo. *Jendela Olahraga*, 6(1), 113–120. <https://doi.org/10.26877/jo.v6i1.6957>
- Karim, A., & Jahrir, A. S. (2022). Korelasi Komponen Fisik Dengan Hasil Belajar Dribbling Sepak Bola. *Jurnal Olahraga Dan Kesehatan Indonesia*, 2(2), 109–116. <https://doi.org/10.55081/joki.v2i2.589>
- Maksum. (2018). Metodologi Penelitian Dalam Olahraga. *Jawa Barat: CV Jejak*, 298.
- Mashud, M., Muhammad, R., Mu'arifin, M., Didik, P., Afri, T., & Wulandari, A. (2022). Model Pembelajaran Pendidikan Jasmani Untuk Meningkatkan Kecakapan Kolaborasi Siswa di Indonesia: Article Review. *Jendela Olahraga*, 7(2), 78–94. <https://doi.org/10.26877/jo.v7i2.11973>
- Mukti, F. P., & Priambodo, A. (2021). Perbandingan Pendekatan Pembelajaran Project Based Learning Dengan Problem Based Learning Terhadap Hasil Belajar Passing Sepak bola Kelas XI Di SMA Negeri 1 Gresik. *Jurnal Pendidikan Olahraga Dan Kesehatan*, 09(01), 313–319.
- Munir, A., Qurtubi, A. Z. Al, & Wahyudi, A. N. (2022). Peningkatan Hasil Belajar Passing Sepak Bola Pada Siswa Sekolah Dasar dengan Metode Sport For Develpoment. *Jendela Olahraga*, 7(2), 119–129. <https://doi.org/10.26877/jo.v7i2.12004>
- Pangesti, W. A., Fanani, A., & Prastyo, D. (2020). Pengaruh Model Project Based Learning Terhadap Motivasi Belajar Siswa. *Buana Pendidikan: Jurnal Fakultas Keguruan Dan Ilmu Pendidikan*, 16(30s), 27–32. <https://doi.org/10.36456/bp.vol16.no30s.a2753>
- 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>
- Rahmayanti Dewi, Resti Gustiawati, & Rolly Afrinaldi. (2020). Implementasi Model Pembelajaran Problem Based Learning Dalam Pembelajaran Pendidikan Jasmani Di SMA Negeri 4 Karawang. *Journal Coaching Education Sports*, 1(2), 83–92. <https://doi.org/10.31599/jces.v1i2.327>

- Ricky Kurniawan, A. P., Junaidi, S., Setya Subiyono, H., & S, S. H. (2020). Health and Receptions Journal of Physical Education, Sport, Health and Recreation. *Journal of Physical Education, Sport*, 9(1), 58–62. <http://journal.unnes.ac.id/sju/index.php/peshr>
- Uskoković, V. (2024). How the Game of Soccer can Foster Creative Research in Natural Sciences. *Retos*, 51, 179–199. <https://doi.org/10.47197/RETOS.V51.100346>
- Yandi, A., Nathania Kani Putri, A., & Syaza Kani Putri, Y. (2023). Faktor-Faktor Yang Mempengaruhi Hasil Belajar Peserta Didik (Literature Review). *Jurnal Pendidikan Siber Nusantara*, 1(1), 13–24. <https://doi.org/10.38035/jpsn.v1i1.14>
- Yulianto, P. F., Budiyo, K., Iskandar, M. I., Santoso, A. B., & Gunadi, D. (2023). Pengaruh Latihan Passing Menggunakan Target Gawang Kecil Terhadap Keterampilan Short Pass Pada Permainan Sepak Bola. *Jendela Olahraga*, 8(1), 65–73. <https://doi.org/10.26877/jo.v8i1.13975>
- ZHANG, J. (2020). Problems and Prospects: A Study on the Development History of Chinese Football Industry. *International Journal of the History of Sport*, 37(sup1), 102–123. <https://doi.org/10.1080/09523367.2020.1723552>