

## VOLLEYBALL EDUCATION TO FOSTER DISCIPLINE AND TEAMWORK

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### ABSTRACT

This study was motivated by low levels of cooperation and discipline among elementary school students, which pose challenges to achieving the holistic goals of character education. The purpose of this study was to analyze the effect of implementing character-based volleyball lessons on the improvement of these two values. The research used a quasi-experimental One-Group Pretest-Posttest design. The research sample consisted of 35 fifth-grade students from SD Negeri No. 53/IX Kenali Kecil, Muaro Jambi Regency, who were selected using purposive sampling. The treatment consisted of mini volleyball lessons modified by applying the Cooperative Learning principle during 16 meetings. Data were collected using the Teamwork Scale for Youth (TSY) questionnaire and a discipline questionnaire, then analyzed using the Paired Sample t-Test. The results showed significant increases in cooperation scores (mean difference = 10.45;  $p = 0.000$ ) and in discipline (mean difference = 8.55;  $p = 0.000$ ) after the intervention. These findings prove that structured, character-oriented volleyball learning is an effective pedagogical vehicle for internalizing the value of cooperation through team dynamics and discipline, as well as the rules of the game. This study contributes to science, particularly in the fields of character education and physical education pedagogy, by showing that integrating character education into physical education learning through team sports (such as volleyball) is a relevant, contextual, and significant strategy for shaping the character of elementary school students.

Keywords: Volleyball, Cooperation, Discipline, Cooperative Learning, Elementary School.

### INTRODUCTION

The 21st-century education paradigm demands a balance between developing students' cognitive capacity and continuous character building. Emphasizes this through four pillars of education, one of which is learning to live together, which stresses the urgency of mastering social skills, discipline, and collaboration skills as the foundation for living in a complex society. The findings of the OECD, (2022) Incorporate this reality by revealing a gap between students' academic achievement and social-emotional competencies, with many students experiencing difficulties in areas such as discipline and cooperation. This condition poses a double challenge for the world of education: not only to educate the nation academically, but also to shape individuals with strong character and integrity. (Permendikbud, 2018).

The Indonesian government has responded to these challenges through its Character Education Strengthening (PPK) policy, which has been integrated into the national curriculum. However, its implementation at the elementary school level still faces several significant

obstacles. The results of a national survey indicate that most teachers complain about low student discipline. In contrast, other teachers highlight the lack of enthusiasm for cooperation in group activities. (Kementerian Pendidikan Riset, dan Teknologi, 2022). This phenomenon reveals a gap between policy expectations and reality in the field. Furthermore, this condition not only disrupts the effectiveness of the teaching and learning process but also has the potential to lower the quality of social interaction in the classroom. (Dewi et al., 2020; Carretero et al., 2021). A similar study in elementary schools in Muaro Jambi Regency confirmed the challenges in character building, where aspects such as discipline, responsibility, and cooperation still require more intensive attention and guidance. (Febriza et al., 2024).

In this context, physical education emerges as a discipline with a strategic and unique role. Physical Education, Sports, and Health (PJOK) is seen not only as a vehicle for developing motor skills but also as an effective medium for instilling responsibility, fostering cooperation, promoting discipline, and internalizing moral values. (Bailey et al., 2009; Bailey & Morley, 2006). Physical activity-based learning processes provide students with a space to directly experience the dynamics of social interaction, healthy competition, and rule compliance in a real and meaningful context. (Casey & MacPhail, 2018).

One physical activity with great potential for character education is volleyball. As a team sport, volleyball inherently requires players to follow rules, communicate effectively, and work together to achieve common goals. These characteristics create an authentic, contextual learning experience that supports the development of students' social-emotional dimensions. (Casey & MacPhail, 2018). Several empirical studies, such as the research by Marković et al., (2022) Support this claim by showing that mini-volleyball modifications can improve students' discipline and cooperation scores. However, in Indonesia, academic studies that examine character dimensions through volleyball remain limited, with many focusing more on motor skills and physical health. (Dzuldhi et al., 2022; Yuliani et al., 2024). This gap is also evident in studies examining the implementation of character education through physical education, which tend to be descriptive and have not yet been conducted in-depth evaluations of the effectiveness of specific learning models, such as volleyball, in shaping character. (Febriza et al., 2024).

Given the identification of these gaps, this research is important for providing contextual empirical evidence. The urgency of this research is even greater given the specific conditions in Muaro Jambi District, where reports from the Education Office (2021) and findings by Wahyuningsih et al. (2023) reveal similar problems, including low discipline and weak cooperation among elementary school students. The findings of Febriza et al. (2024) at SD Negeri 76/IX Mendalo Darat, located in the same district, show that although efforts to

implement character education through PJOK have been made, its effectiveness in shaping cooperation and discipline through an experimental approach has not been widely tested. Therefore, the implementation of structured, character-based volleyball learning is expected to be an innovative solution. Through a systematic approach, this study is expected not only to contribute to the enrichment of scientific knowledge but also to provide practical guidance for PJOK teachers in designing learning that is not only enjoyable but also meaningful for character building in students (Hastie & Casey, 2019).

## LITERATURE REVIEW

The global education paradigm has shifted to emphasize the importance of character development alongside cognitive abilities. UNESCO (2015) promotes learning to live together as a critical pillar of education, underscoring the importance of collaboration and discipline skills. OECD findings (2022) show that many education systems face challenges in balancing academic achievement with students' social-emotional competencies, including cooperation and discipline.

In Indonesia, Character Education Strengthening (PPK) is a core policy mandated by Permendikbud (2018). However, its implementation at the elementary school level faces obstacles, including low discipline and weak student cooperation (Ministry of Education, Research, and Technology, 2022). This condition is also reflected in areas such as Muaro Jambi Regency, where reports from the Education Office (2021) and research by Wahyuningsih et al. (2023) identify similar issues.

Physical Education, Sports, and Health (PJOK) is recognized as having unique potential for character development. Bailey et al. (2009) and Bailey & Morley (2006) emphasize that PJOK can serve as an effective medium for instilling values such as responsibility, cooperation, and discipline through meaningful physical experiences. Game-based learning approaches, particularly team sports, create an authentic context for social interaction and adherence to rules (Casey & MacPhail, 2018).

Volleyball, as a team sport, offers a structure that inherently encourages cooperation and discipline. International research, such as by Marković et al. (2022), shows that mini-volleyball modifications can effectively improve these character values in elementary school students. However, the literature in Indonesia is still limited in exploring character dimensions through volleyball, with more research focusing on motor and health aspects (Dzuldhi et al., 2022; Yuliani et al., 2024). Existing studies on character education through PJOK are also primarily descriptive and lack experimental evaluation of the effectiveness of specific learning models

(Febriza et al., 2024). Thus, there is a gap in the literature that requires empirical evidence on the effectiveness of character-based volleyball learning in the Indonesian context, especially at the elementary school level.

## METHODOLOGY

This study used a quasi-experimental One Group Pretest-Posttest (O1–X–O2) design to assess the effect of treatment on student characteristics, without a comparison group (Sugiyono, 2011). The research sample was determined by purposive sampling of 35 fifth-grade students at SD Negeri No. 53/IX Kenali Kecil, Muaro Jambi Regency, considering their cognitive and socio-emotional development levels that had reached the concrete operational stage (Pakpahan & Saragih, 2022). The treatment (X) was a modified character-based volleyball learning program, conducted over 16 meetings, using the principles of Cooperative Learning, which emphasize positive interdependence and individual accountability. (Johnson & Johnson, 1999).



**Figure 1. Research Design**

Data were collected using the Teamwork Scale for Youth (TSY) questionnaire and a validated, reliable discipline questionnaire. (Hagger et al., 2021; Priscila Pereira da Silva & Morais Peixoto, 2024). Data analysis was conducted quantitatively, beginning with the Shapiro-Wilk test for normality. Hypothesis testing was continued with the Paired Sample t-Test for normally distributed data or the Wilcoxon Signed Rank Test for non-normally distributed data. (Pallant, 2005). He aimed to test the significance of differences in students' cooperation and discipline scores before and after the treatment.

## RESULT

The implementation of character-based volleyball learning spanned 16 sessions. Data on students' cooperation and discipline were collected through pretest and posttest instruments. The results of the descriptive and inferential statistical analyses are presented in Tables 1 and 2.

Table 1.

Descriptive Statistics of Student Cooperation and Discipline Scores

Variable	Measure	N	Mean	Sd	Min	Max
Cooperation	Pretest	35	28.40	4.12	20	36

Variable	Measure	N	Mean	Sd	Min	Max
Discipline	Posttest	35	38.85	3.78	32	45
	Pretest	35	24.65	3.95	18	32
	Posttest	35	33.20	3.20	27	38

Based on Table 1, the average score for both variables increased. The cooperation score increased by 10.45 points, from 28.40 in the pretest to 38.85 in the posttest. Similarly, the discipline score increased by 8.55 points, from 24.65 to 33.20. To test the significance of these increases, an inferential statistical test was conducted. The results of the Shapiro-Wilk normality test showed that the data were normally distributed ( $p > 0.05$ ), so the hypothesis test was conducted using a Paired Sample t-Test. The test results are presented in Table 2.

Table 2.

Results of Paired Sample t-Test of Pretest and Posttest Scores

Variable	Mean Difference	Std. Deviation	t-value	df	p-value (Sig.)
Cooperation	10.45	2.98	20.715	34	0.000
Discipline	8.55	2.67	18.912	34	0.000

Table 2 shows that the p-values (Sig.) for both variables are 0.000, which are much smaller than the significance level  $\alpha = 0.05$ . This indicates a statistically significant difference between the pretest and posttest scores on the variables of cooperation and discipline. Thus, the null hypothesis ( $H_0$ ) stating that there is no significant difference is rejected, and the alternative hypothesis ( $H_1$ ) is accepted.

## DISCUSSION

The findings of this study confirm that the implementation of modified volleyball learning oriented towards character building significantly improves the cooperation and discipline of elementary school students. These results provide empirical answers to the research questions and address the literature gap identified in the introduction, in which research in Indonesia has not yet examined character building through team sports such as volleyball. (Dzuldhi et al., 2022; Yuliani et al., 2024).

The implementation of the Cooperative Learning framework can explain the significant improvement in cooperation. This model, as proposed by (1999), emphasizes positive interdependence and individual accountability. In modified mini volleyball, each student is part of a team system in which success can only be achieved through coordination, communication,

and mutual support. The game's structure, which requires rotation, role division, and simple strategy development, forces students to interact and collaborate actively. These findings are consistent with previous research indicating that team-based learning fosters an authentic collaborative space for the internalization of social values. (Casey & MacPhail, 2018). Thus, volleyball learning successfully transforms physical activity into a social laboratory where the value of cooperation is both trained and experienced in real ways.

Meanwhile, improvements in discipline can be understood through the lens of Bandura, (1977) And the structure of the game's rules. Structured volleyball learning provides models of disciplined behavior, both from teachers and more skilled teammates. Students observe and then imitate behaviors such as obeying the order of service, rotating according to the rules, and respecting the referee's decisions (in this case, the teacher or designated student). Positive reinforcement, whether praise from the teacher or the team's success when the strategy is carried out in an orderly manner, strengthens the internalization of this disciplined behavior. These results are in line with reports stating that team sports act as a counterbalance in the digital age, as they provide real-world experience in training in rule compliance. (Casey & MacPhail, 2018). Modifying the game to suit the children's abilities actually sharpens this aspect, as clear, achievable rules motivate students to comply.

Holistically, these findings demonstrate that PJOK, particularly through volleyball, can shift its focus from solely motor skills to an effective vehicle for teaching values, as emphasized by Bailey & Morley (2006). A structured implementation that combines game modifications and cooperative learning models successfully bridges the gap between PPK policies on paper and actual practices in the field, which have been deemed suboptimal. This study also addresses the contextual urgency in Muaro Jambi Regency, where discipline and cooperation issues remain serious challenges. (Dinas Pendidikan, 2021; Wahyuningsih et al., 2023). Therefore, it can be concluded that volleyball is not merely a physical activity, but a potential pedagogical medium for shaping the character of elementary school students in a simultaneous, enjoyable, and meaningful way.

## CONCLUSION

Based on the results and discussion of the study, it can be concluded that the implementation of modified volleyball learning based on the principles of Cooperative Learning was effective in improving the cooperation and discipline scores of fifth-grade students at SD Negeri No. 53/IX Kenali Kecil, Muaro Jambi Regency. Statistical analysis shows a significant increase in both aspects of character after the intervention, proving that team sports activities can function as a contextual and enjoyable pedagogical vehicle for the internalization of

character values at the elementary school level. These findings address existing research gaps by providing empirical evidence that the focus of physical education learning can and should be expanded beyond the achievement of motor skills to the holistic character building of students.

The theoretical implications of this study are to enrich the body of knowledge in physical education, particularly regarding the integration of character education through play models. This study strengthens the foundations of Lickona's character education theory. (1991) and Bandura's social learning theory (1977) By demonstrating concrete mechanisms of how moral values of knowing, feeling, and action can be developed through direct experiences in structured physical activities. In addition, this study supports the relevance of Piaget's cognitive development theory and Erikson's psychosocial theory to play-based learning in elementary schools.

In practical terms, the results of this study have important implications for various stakeholders. For Physical Education, Sports, and Health (PJOK) teachers, these findings serve as a reference for designing innovative learning activities that use team games, such as mini volleyball, as the primary medium for character building, while maintaining elements of fun and motor development. For schools and policymakers at the regional level, this research justifies further optimizing sports facilities and integrating cooperative learning models into the PJOK curriculum as a systematic strategy to strengthen character education. Socially, the internalization of cooperation and discipline through positive play experiences is expected to contribute to the formation of a younger generation that is more collaborative, responsible, and prepared to navigate the dynamics of community life.

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