



The Implementation of Net Games in Physical Education Learning in Elementary Schools: A Systematic Review

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Abstrak

According to previous research, problems are still found in the net game implementation. The problems are related to infrastructure and the absence of innovation in learning methods. The purpose of this study was to determine the implementation of net games and provide recommendations on how to implement the net games in Physical Education subject in elementary schools. The results of previous research on net games became the background for conducting the research using a systematic review method. The database for data search included *Google Scholar*, *Taylor & Francis*, *DOAJ*, and *Research Gate*. From the four databases, 146 research on net games were found. For the systematic review stage, 20 studies were determined as the main sources of this study. From the 20 studies, findings to help solve problems occurring during the implementation of net games were found. The findings found from a table tennis game involved a happy bouncing ball, tennis bet modification, training methods, mini-pong, gender-based cooperative learning, audio-visual learning, Moodle courses, bet holding techniques, reciprocal teaching styles, and command learning styles. The findings found from the volleyball game included mini volleyball ball modification, 3 on 3 games, role-playing, *libas* game, faith-based methods in Islamic schools, Cooperative Learning Model, Tactical-Game, cooperative learning, Student Team Achievement Divisions (STAD), and a playful approach in volleyball games. Based on the 20 studies, the upper-grade elementary school students could participate in net games well. When problems occurred, they could use the findings that have been described.

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INTRODUCTION

Physical Education for Sports and Health (PJOK) is an educational process through selected physical activities, games, and sports to achieve educational goals (Mahendra, 2015). PJOK aims to assist students in strengthening physical fitness and health through the introduction and cultivation of positive attitudes and basic movement abilities in various structured physical activities (Hendri and Aziz, 2020). In addition, PJOK is helpful for optimizing the physical growth and psychological development of students, shaping students' physical health (Ma'mun and Setiawan, 2015), building a solid personality foundation in responding to problems that occur, and supporting the creation and development of abilities. abilities that exist in students (Isnaini, 2021).

The success rate in learning PJOK in elementary schools can be determined by creativity and the application of the learning approach used. A very identical approach in PJOK learning is the game approach because it can be used as a fun recreational facility and is a natural way as a place to see children's behavior and can be used to identify children's talents effectively (Alim, 2009).

The game is a physical activity in which it already contains elements of fun, equipped with several elements that contain simple competition, contains fantasy or imagination, or contain elements of adaptation and modification in the rules (Mahendra, 2015). One of the games in PJOK learning is the net game (Wibowo, 2014). Net games are basically games that use a net barrier as a sign of separation between one player/team and other players/teams while the players try to drop the ball into the opponent's field (Komari, 2014).

Based on the syllabus and RPP PJOK explained that net games were carried out by upper-class students consisting of table tennis and volleyball games. Table tennis is a small ball game that is unique and recreational in nature, and this game is very popular with children and adults (Herliana, 2019). In contrast, the volleyball game is a game that uses a large ball to be reflected on the net (net), which aims to drop the ball in the opponent's field area in order to find victory (Yusmar, 2017). Elementary school because it can train the brain's work performance (Supri Hatin, 2021), form good body postures including anatomical, physiological, health, and physical abilities (Murtiyono, 2015), and can have a good influence on the development of students' fundamentals basic movements (Burstian do & Nurkholis, 2018).

In the process of implementing net games in elementary schools, there are several obstacles experienced. Suganda & Suharjana (2013) explain that there are two problems in the implementation of volleyball learning, namely infrastructure and lack of learning innovation. In line with this, Hulfian & Aminullah (2020) argue that the net game learning media, which still lacks facilities and infrastructure, is inadequate and below standard and does not create a desire of happiness (happiness) in a learning atmosphere due to insufficient learning media. Research conducted by Saputra & Subhan (2019) explains that the interest and basic skills of table tennis in fifth-grade elementary school students are still low, as seen from a field survey conducted by 20 students who performed basic table tennis techniques, only 3 to 5 people were able to do it. Play table tennis.

There are still problems encountered in implementing net games in elementary schools, requiring further review by conducting a systematic review. Because this study aims to determine the implementation of net games and provide recommendations to teachers in overcoming gaps that occur when learning net games. To achieve this goal, this research was driven by the following research question "How is the implementation of net games in PJOK learning in high school elementary schools?".

METHOD

This study uses a systematic review that combines evidence from previous research in answering predetermined questions and obtaining research recommendations by identifying and assessing relevant references and synthesizing findings (Pollock & Berge, 2018; Hariyati, 2010). Steps Systematic review used in this study adopted from the research procedure (Barbara, 2020). There are five steps in conducting a systematic review, namely: (1) formulating a review; (2) inclusion and exclusion criteria; (3) the search strategy to be applied; (4) plans for screening and reviewing articles to be carried out; (5) and what extraction and analysis methods will be used (Barbara 2020).

RESULTS AND DISCUSSION

The inclusion criteria used in this study used the PICO analysis technique, which can be seen in Table 1. The inclusion criteria used in this study using the PICO technique consisted of the population used were high school and elementary school students; the phenomenon studied was the implemen-

tation of net games. The context in this study was PJOK learning. The type of research selected was related to net games, the language used in Indonesian and English, and the period of publication of articles used in the last ten years.

Search articles using four databases: Google Scholar, Taylor & Francis, DOAJ, ResearchGate, and the Harzing application with keyword searches, as seen in table 1.

Table 1. Keywords

<i>Population</i>	<i>Phenomenon of Interest</i>	<i>Context</i>
Grade 4, 5, and 6 Elementary School Students	Table Tennis Games	physical education
<i>4th, 5th, and 6th Grade Elementary School</i>	Volleyball Game	<i>Physical Education</i>
	<i>Volleyball Games</i>	
	<i>Table Tennis Games</i>	

It is known from Table 1 the population keywords are elementary school students in grades 4, 5, and 6 elementary schools with 4th, 5th, and 6th Grade Elementary School English, then the keywords from the phenomenon of table tennis and volleyball games with the English language. English volleyball games and table tennis games. The keyword from the context is physical education in English Physical Education.

In searching for articles, the researcher uses the PRISMA chart in the selection and assessment process. It can be seen in chart 1. In this prism chart, it is explained that at the search identification stage using the database, 146 research articles related to net games were found, but searches using other sources from the bibliography were not found.

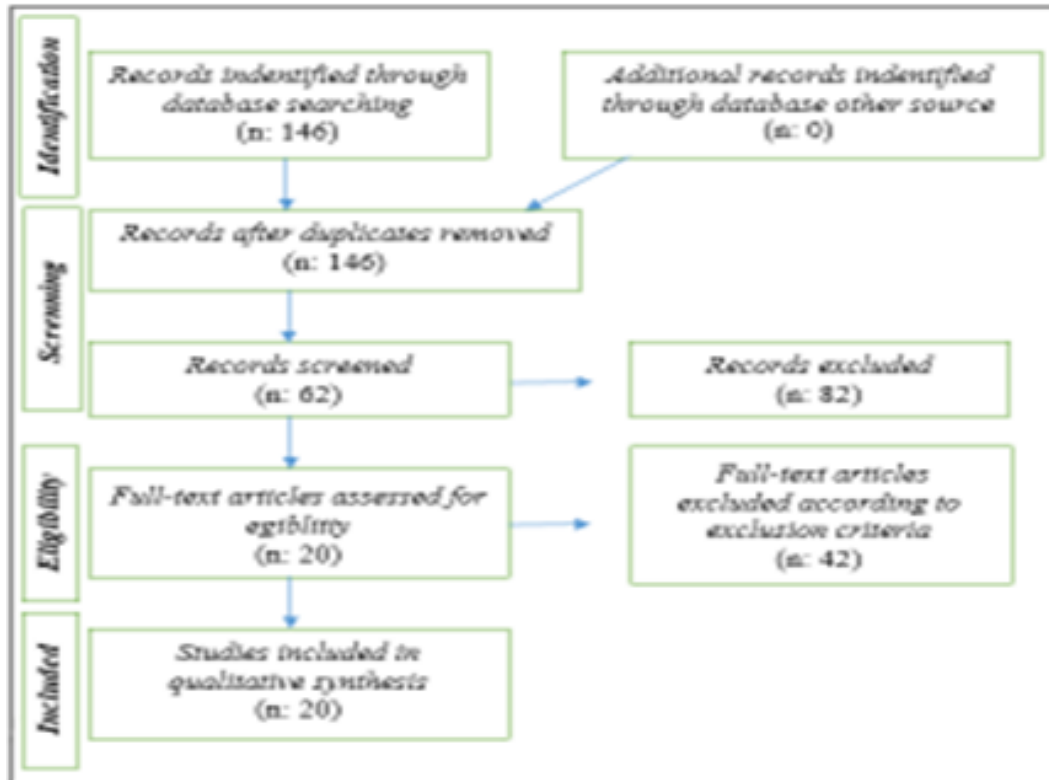


Figure 1. PRISMA Diagram

The next stage of the screening process was screening as many as 62 research articles and as many as 82 research articles were excluded. Of the 62 research articles that can be downloaded in total, only 20 research articles and 42 other articles cannot be downloaded in full and are determined as the primary source in this study using 20 research articles.

After going through the selection and assessment process, 20 articles have obtained that match the desired criteria. Then the data extraction and synthesis process were carried out, which can be seen in table 2.

It is known from the research findings that it can help with infrastructure problems in table tennis; you can use the happy bounce ball game because this game can be done without using a table and net. If you are constrained in the table tennis bet, you can modify it by making table tennis bet

made of plywood, and the handle is made of wood. The next problem is the creativity of teachers in developing learning methods, in this case, they can use training methods, mini-pong based on gender-based cooperative learning audio-visual, Moodle courses, holding bet techniques, reciprocal teaching styles, and commando-style learning.

If there is a problem with infrastructure in volleyball games, you can use the modification of mini volleyball, 3 on 3 games, role-playing, and libas games. The game has been modified a lot from the field, the volleyball used, and the simplified rules of the volleyball game. Apart from infrastructure, problems occur in the creativity of teachers in developing learning methods using faith-based methods in Islamic schools. The following method is Cooperative Learning Model, A Tactical-Game, cooperative learning Student Teams

Achievement Divisions (STAD), and a playful approach in volleyball games.

CONCLUSION

Data were obtained from four databases: Google Scholar, Taylor & Francis, DOAJ, and ResearchGate. Found 146 studies with the final results determined as many as 20 studies that are used as the main source in this study. From the findings of the study, it was explained that upper-grade elementary school students were able to take part in net game learning well. These findings can also be used as a reference if problems occur during the net game learning process.

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Table 3. Results of extraction and synthesis

No	Researcher Name	Year Publication / Country	Method	Conclusion
1	Rizal Ahmad Fauzi, Indra Safari, Muhammad Nur Alif, and Entan Saptani.	2020 Indonesia	Classroom Action Research	Students' motivation by using a modified tool (mini-pong) increased. However, only male students were concerned because male students were concerned with respect and status from friends and teachers, which created competition. In contrast, female students only participated and did not attach importance to status.
2	Faisal, Dian Budiana and Entang Hermanu	2018 Indonesia	Classroom Action Research	The learning of the game of table tennis went well with the application of cooperative learning using audio-visual seen from the student's forehand drive, and backhand drive had increased.
3	Junhua Zou, Qingtang Liu a, and Zongkai Yang	2012 China	Classroom Action Research	The results showed that (1) students obtained significant learning outcomes by participating in the Moodle course, (2) there was no statistically significant mean difference in interest in table tennis between the two intervention groups
4	Moch Fahmi Abdulaziz, Harry Pramono, Anirotul Qoriah, and Bagus Ginanjar	2017 Indonesia	<i>Research and Development</i>	All students can accept happy Bouncing Ball because students can move actively and understand the applicable rules. Therefore, it can be concluded that learning is going well.
5	Suprihatin	2021 Indonesia	Classroom Action Research	There was an increase in table tennis playing skills after being given learning using the practice method to Class V students as many as 13 students, or 92.86%, completed learning, and the average score was 86.43 (good).
6	Indra Safari	2016 Indonesia	Experiment	Based on the facts in the field, the learning process of the basic technique of hitting the table tennis game without using the net will speed up the process of students mastering the table tennis game in sports learning.
7	Alpian Darmawan, Yuanita, and Oktarina	2018 Indonesia	Experiment	The learning process with the positive influence of reciprocal teaching style on learning outcomes of forehand strokes in table tennis game for sixth-grade students of SD Negeri 3 Simpang Rimba. It can be concluded that with a respiratory teaching style, the implementation of net games goes well.
8	Nur Ahmad Muharra and Setyo Harmono	2021 Indonesia	Classroom Action Research	Modification of batch using holding batch can increase the effectiveness of student learning in the game of table tennis in fifth-grade students of State Elementary School 5 Kediri.
9	Danang Dwi Purwanto and S. Suharjana	2017 Indonesia	<i>Research and development</i>	Based on the overall data obtained, it can be concluded that the model for introducing basic table tennis game techniques is successful, feasible, and well applied to high school students.
10	Devi Chess Winata	2020 Indonesia	Classroom Action Research	It is known that the results of learning with the commando teaching style can improve forehand push for students. The implementation process went well and was accepted by students.
11	Athanasia Chatzipanteli, N. Digelidis, C. Karatzoglidis and	2014 Greece	Experiment	It is known that the tactical game approach can improve metacognitive behavior in the volleyball game class in physical education in elementary schools.

Table 3. Results of extraction and synthesis (continue)

No	Researcher Name	Year Publication / Country	Method	Conclusion
12	Pungki Indarto, Gatot Jariono, Muhammad Faiz, Rafli Muhammad, and Dwi Endri Mei Minawati	2021 Indonesia	<i>Research and Development</i>	The learning process increases because of student learning outcomes before and after the application of the faith-based circuit learning model in the modified volleyball game. Results obtained before treatment of 40.3 and after treatment a value of 61.5 with an effective level of 35.
13	I Marwan	2019 Indonesia	<i>Research and Development</i>	Implementing a volleyball game with a modified model of mini volleyball can be used in the corner learning process for character building for elementary school students.
14	Hashim, Ishak Bachtiar	2021 Indonesia	Classroom Action Research	The PJOK learning process through the cooperative learning model can improve the volleyball game learning outcomes well.
15	Sustenance Wibisono, Dwi Cahyo Kartiko, and Setiyo Hartoto	2018 Indonesia	Classroom Action Research	The STAD type cooperative learning model can improve learning motivation and outcomes in the volleyball bottom passing game in PJOK subjects for class V students.
16	Sumbara Hambali and Sutiswo Sutiswo	2020 Indonesia	Classroom Action Research	The learning process using a play approach can improve volleyball game skills learning outcomes in PJOK learning. In elementary school.
17	Yulingga Nanda Hanief, Hendra Mashuri, and Tri Bagus Agiasta Subekti	2018 Indonesia	Classroom Action Research	Improved bottom passing learning outcomes in the volleyball game for fifth-grade elementary school students through three on three games. It can be concluded that the net game was carried out well using 3 on 3 games.
18	Dini Noerfalah, Lukmannul Haqim Lubay, and Didin Budiman	2019 Indonesia	Classroom Action Research	The improvement was seen in the skills of passing, controlling the ball, and dropping the ball to the opponent's space. The success of the learning process is due to the use of role-playing.
19	Fathul Aziz Shofi	2015 Indonesia	Classroom Action Research	Libas games have been proven to improve volleyball learning outcomes for fourth graders at SD Negeri Karanganyar 01. It was concluded that the net game was implemented well.
20	Eko Wahyu Anggi Susanto	2015 Indonesia	Classroom Action Research	The implementation of net game learning by using Bolkendi games can improve student service-learning outcomes under volleyball games for students.