Physical Education and Its Scope: A Literature Review of Empirical Studies with A Holistic Perspective Teaching Practices in Indonesia

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Abstract

Study purpose. Physical Education (PE) is a part of sports education that places body movement as the main principle of learning whose outcomes include cognitive, motoric, affective, and social. Extensive research has been conducted to find the ideal PE teaching concept. The literature review aimed to gather information about existing studies in Indonesia in an effort to achieve PE learning objectives.

Materials and methods. A systematic review was conducted using PRISMA guidelines related to PE teaching outcomes using the Scopus database. The article strategy for systematic review used a combination of title, abstract, and keywords with the criteria ‘learning outcome’ AND (‘physical education’ OR ‘sport education’ OR ‘physical activity’). The systematic review only analysed articles that met the exclusion criteria and inclusion criteria as a result of screening the articles obtained 31 articles that were processed for systematic review.

Results. The results of the literature review show that studies conducted by researchers still focus on improving physical learning, cognitive learning, and affective learning but does not include social learning. The approach used has not fully utilised the game approach so not in line with the philosophy of PE.

Conclusion. Quite a lot of research has been conducted in an effort to achieve the learning objectives of PE but it is still limited, therefore, it is recommended that further research focuses on finding PE learning that is able to cover the overall learning outcomes of PE legitimized by using a game approach.

Keywords: Physical Education, Teaching, Empirical Study
Introduction

Physical Education (PE) is a part of sport education that is primarily implemented in schools in the form of learning (Baena-Morales, Merma-Molina, & Ferriz-Valero, 2023). In essence, PE is implemented by placing the body at the centre of attention as an embodiment of moving beyond a dualistic view of natural science (Aartun, 2022) and viewing movement as a central principle in an effort to be responsive to the needs of all students (Clark, Penney, Whittle, & Jones, 2023). To that end, PE is described as an important subject matter that provides students with the skills, knowledge and attitudes necessary to remain active across the lifespan (Pangrazi & Beighle, 2019). PE is a compulsory subject at every level of education which makes it equal to other subjects and must be considered (Sofyan, Abdullah, & Hafiar, 2022).

PE has experienced significant challenges in its teaching and learning context (MacPhail, 2020) despite intensive efforts by researchers and scholars to investigate the effectiveness of teaching methods, educational objectives and instructional strategies (Kirk, 2014). In addition, the traditional paradigm of PE is centred on multi-activity and sport techniques that result in students lacking skills, the use of short learning sessions, and the pursuit of unachievable benefits for all student profiles (Casey & Kirk, 2020; Goodyear et al., 2017).

PE has traditionally used a command style of teaching based on sport-based content and shifted to decontextualised practice of sport techniques (Kirk, 2016) which has resulted in learners experiencing difficulties in learning and playing during games (Harvey, Pill, & Almond, 2018). In light of this, PE learning practices have been replaced by model-based practices and provide alternative structures to enhance students' abilities (Casey & MacPhail, 2018). Although PE teachers may have limited understanding, if provided with the right support and opportunities for professional development, it is necessary to strengthen teachers' philosophical views (Wiklander, Fröberg, & Lundvall, 2023). The application and integration of moral philosophies into established pedagogical frameworks can also help educators to envision how they can help young people to attain a fully developed lifestyle through their teaching (Brunsdon, 2023). High-quality PE is central to the explicit planning and coordination of meaningful, coherent, relevant and sustainable physical activity opportunities for young people in schools (Cale, 2023).

Extensive research has long been conducted upholding students' lifelong participation in PE (Beni, Fletcher, & Chrónínín, 2018) and strongly connecting students through participation in collaborative achievement of motor and social goals (Araujo, Mesquita, Hastie, & Pereira, 2016), and legitimised PE learning outcomes include physical learning, cognitive learning, social learning, and affective learning (Carl-Emil Marstrander Askildsen & Løndal, 2023). This aims to meet society's need for individuals who are critical, responsible, and able to adjust to rapidly changing environments or what is known as student-centred PE teaching (Gubacs-Collins, 2015). Previous systematic reviews related to PE conducted with motor skills stimulation through game models (Didi Suryadi et al., 2024) and cooperative learning (DSuryadi et al., 2024) but their scope are still very specific. In relation to this, a literature review was conducted to explore information related to studies that have been conducted by researchers and practitioners in Indonesia in an effort to achieve PE learning objectives. This literature review is important because it aligns the practice of PE learning in Indonesia with the concept of PE pedagogy.
Materials and methods

Search Strategy

A systematic review was conducted searching for the scope of PE teaching and learning outcomes using the Scopus database. The use of the Scopus database is due to having a leading indexing system for citations (Samsuddin, Shaffril, & Fauzi, 2020), being popular and widely used by researchers (Khan & Muktar, 2020), and having easy access to research literature, citation index coverage, and extensive digital publications (Shaifudin et al., 2022). The article strategy for systematic review used a combination of title, abstract, and keywords with the criteria ‘learning outcome’ AND (‘physical education’ OR ‘sport education’ OR ‘physical activity’) with a search scope conducted on 11 May 2024.

Selecting Studies

The systematic review only analysed articles that met the following exclusion criteria: (a) the article is not open access; (b) has not entered the final process; c) using other than English; (d) not sourced from the journal. Furthermore, the inclusion criteria used are: (a) the research must involve subjects or participants; and (b) the article explicitly discusses the implementation of PE teaching in Indonesia.

Procedure

The search was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Mohamed Shaffril, Samah, Samsuddin, & Ali, 2019). PRISMA is a tool for reporting systematic reviews and meta-analyses (Gedda, 2015) and does not require ethical review and is reliable because it is sourced from quality-assured journals (Kapadia et al., 2016). The reference lists of the included articles were searched to identify additional studies to find relevant articles. A total of 366 articles were retrieved from the Scopus database search. Then, 214 articles were excluded due to having at least one of the exclusion criteria. Furthermore, 121 articles were excluded after full-text screening because they did not fulfil one or more of the inclusion criteria. At the end of the screening process, 31 articles were processed in the systematic review figure 1.
Results

31 articles included in the literature review process were analysed. The analysis covered several aspects that were considered important and representative of the whole article including content, methods used, and results table 1.

<table>
<thead>
<tr>
<th>Author and year</th>
<th>Purpose</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Lubis et al., 2022)</td>
<td>Testing the effectiveness of problem-based learning and flipped classroom combined with Android to improve learning outcomes of pencak silat artistic movements.</td>
<td>Experiment</td>
<td>Using a problem-based learning model students can learn more effectively</td>
</tr>
<tr>
<td>(Waffak et al., 2022)</td>
<td>examining the effectiveness of basketball learning model with TGfU approach to increase HOTS and reduce bullying</td>
<td>Experiment</td>
<td>The model used can improve HOTS and reduce bullying and affect learning outcomes</td>
</tr>
<tr>
<td>(Khairuddin, Alnedral, Komaini, Syharastani, &amp; Masrun, 2022)</td>
<td>To analyse the effect of PE and motor skills learning approach on physical fitness of primary school students.</td>
<td>Experiment</td>
<td>Task-based learning has a better effect than a command-based approach in improving fitness</td>
</tr>
<tr>
<td>(Adi, Hanief, Widiawati, PanganiBan, &amp; Muslim, 2024)</td>
<td>investigate the relationship between physical fitness, body fat, BMI, and physical activity level with PE learning outcomes of primary school students</td>
<td>Corelation</td>
<td>Physical fitness has a significant relationship with learning outcomes, while body fat, BMI, and physical activity level are not significant.</td>
</tr>
<tr>
<td>(Pramantik &amp; Burhaein, 2019)</td>
<td>Analysing the Floor Time Approach to Improve Learning Outcomes of Side Rolling for Students with Cerebral Palsy</td>
<td>Action research</td>
<td>The scores in the second cycle increased, from 2 subjects aged 8 and 9 years old.</td>
</tr>
<tr>
<td>(Parlina et al., 2021)</td>
<td>studying the comparison of floor mixed-method research</td>
<td></td>
<td>there are problems in the psychological, family,</td>
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<tr>
<td>Author and year</td>
<td>Purpose</td>
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<tr>
<td>(Firdaus, Hartoto, Hariyanto, Subagya, &amp; Mario, 2023)</td>
<td>exercise learning through distance learning</td>
<td></td>
<td>school, and environmental aspects due to the lack of facilities.</td>
</tr>
<tr>
<td>(Kusnanik, Hardiyono, &amp; Yardinal, 2022)</td>
<td>investigate and evaluate factors associated with the achievement of PE learning outcomes</td>
<td>Survey</td>
<td>Students with BMI and PF are not sufficient to obtain optimal learning outcomes without high learning motivation.</td>
</tr>
<tr>
<td>(Aliriad, Adi, Manullang, Endrawan, &amp; Satria, 2024)</td>
<td>developing a competition-based locomotor basic movement learning model of small games for primary school students</td>
<td>Research &amp; Development</td>
<td>The developed model is feasible and effective to use</td>
</tr>
<tr>
<td>(Marwan, 2014)</td>
<td>Investigating motor skills and motivation to learn physical education through traditional games.</td>
<td>Eksperiment</td>
<td>The traditional game approach has a significant effect on increasing student motivation</td>
</tr>
<tr>
<td>(Kaloka, Nopembri, &amp; Elumalai, 2022)</td>
<td>meningkatkan hasil belajar jurus tunggal pencak silat dengan metode pelatihan berbasis komputer</td>
<td>Action research</td>
<td>the use of computer-based learning aids is very effective in improving students' skills in pencak silat.</td>
</tr>
<tr>
<td>(Rihatno &amp; Nu raini, 2023)</td>
<td>investigate students' attitudes, especially regarding attitudes towards nonlinear pedagogy (ATNP), by gender and grade level</td>
<td>Survey</td>
<td>Students' opinions towards nonlinear teaching are similar in primary and secondary schools, regardless of the grade level in the school</td>
</tr>
<tr>
<td>(Dewanti, Nompembri, Hartanto, &amp; Arianto, 2023)</td>
<td>evaluate the success of PESH online learning in primary schools.</td>
<td>Survey</td>
<td>These variables have a significant influence on the average success of learning outcomes.</td>
</tr>
<tr>
<td>(Roesdiyanto, 2014)</td>
<td>developing a valid and reliable PE learning outcomes assessment for volleyball based on GPAI</td>
<td>Research &amp; development</td>
<td>the product developed is valid and reliable</td>
</tr>
<tr>
<td></td>
<td>knowing the effect of multiple intelligence learning methods on early childhood student learning outcomes.</td>
<td>Eksperiment</td>
<td>Multiple intelligence learning methods significantly affect student learning outcomes</td>
</tr>
<tr>
<td>Author and year</td>
<td>Purpose</td>
<td>Methods</td>
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<tr>
<td>(Fenanlampir, Leasa, &amp; Batlolona, 2021)</td>
<td>develop new learning strategies in PE learning</td>
<td>Research &amp; development</td>
<td>The HPC strategy is feasible to implement subject to minor revisions.</td>
</tr>
<tr>
<td>(Dewanti, Nopembri, &amp; Hartanto, 2024)</td>
<td>produce a product in the form of a learning module based on blended learning</td>
<td>Research &amp; development</td>
<td>the blended learning-based learning module developed is feasible and effective to improve learning outcomes.</td>
</tr>
<tr>
<td>(Pamungkas &amp; Annasai, 2024)</td>
<td>development of a cooperative learning model to increase motivation and cooperation among senior high school students</td>
<td>Research &amp; development</td>
<td>The developed model has been prepared and is suitable for use.</td>
</tr>
<tr>
<td>(Satyawan, Lasmawan, Artanayasa, Swadesi, &amp; Yoda, 2023)</td>
<td>developing interactive multimedia in E-learning</td>
<td>Research &amp; development</td>
<td>the development of interactive multimedia is categorised as effective in improving learning outcomes</td>
</tr>
<tr>
<td>(Aziz et al., 2023)</td>
<td>To see the relationship between the results of special tests and the learning outcomes of students' basic athletic movements</td>
<td>Corelation</td>
<td>there is a significant relationship between the results of special tests and the learning outcomes of basic athletic practices.</td>
</tr>
<tr>
<td>(Hidayat, Komaini, &amp; Gemaini, 2022)</td>
<td>Utilisation of smart swimming application to explore the factors that influence swimming learning outcomes</td>
<td>Eksperiment</td>
<td>the factors of learning motivation, physical activity, nutritional status, and VO2Max that influence swimming learning outcomes,</td>
</tr>
<tr>
<td>(Taufik, Ridlo, Solahuddin, Iskandar, &amp; Taroreh, 2022)</td>
<td>obtain an overview of using YouTube-based virtual applications on learning outcomes of basic movement skills in elementary schools</td>
<td>Action research</td>
<td>Learning basic movement skills using YouTube apps is fully meaningful in improving Learning Media</td>
</tr>
<tr>
<td>(Umar, Alnedral, Ihsan, Mario, &amp; Mardesia, 2023)</td>
<td>Analyse the effect of different learning methods with different levels of motor skills on the learning outcomes of</td>
<td>eksperiment</td>
<td>In terms of the peer teaching method, students with high motor skills performed better in learning basic volleyball techniques. Meanwhile,</td>
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<tr>
<td>Author and year</td>
<td>Purpose</td>
<td>Methods</td>
<td>Results</td>
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<tr>
<td>(Gazali &amp; Cendra, 2020)</td>
<td>looking for the validity of badminton textbooks for Physical Education and Recreation Education students</td>
<td>Research &amp; development</td>
<td>the validity value of the coursebook is very high and this badminton coursebook is very feasible to use.</td>
</tr>
<tr>
<td>(Mardesia, Dlis, &amp; Sukur, 2021)</td>
<td>examining the effectiveness of inclusive and command teaching styles in improving breaststroke swimming learning outcomes</td>
<td>eksperiment</td>
<td>provides positive results compared to the inclusive teaching style on breaststroke swimming learning outcomes.</td>
</tr>
<tr>
<td>(Usra, Bayu, Solahuddin, &amp; Octara, 2023)</td>
<td>knowing the learning outcomes of junior high school students who use the TGfU learning model.</td>
<td>eksperiment</td>
<td>significant difference in critical thinking skills before and after the application of TGfU</td>
</tr>
<tr>
<td>(Jumareng, Setiawan, Patah, Aryani, &amp; Gani, 2021)</td>
<td>exploring students' perceptions of online learning and preferred platforms in physical education classes during the COVID-19 pandemic.</td>
<td>qualitative</td>
<td>Students' perceptions consider online learning to be very important in the current COVID-19 era, and the majority of students’ most favoured platform is Zoom Meetings.</td>
</tr>
<tr>
<td>(Astuti et al., 2024)</td>
<td>aims to determine the effect of mental training and circuit-based training programme on learning outcomes of elementary school volleyball students.</td>
<td>Eksperimen</td>
<td>Learning models based on mental training and play sequences can improve basic volleyball skills and increase student confidence and motivation.</td>
</tr>
<tr>
<td>(Riyanto &amp; Betaubun, 2019)</td>
<td>improved emotional intelligence was developed by using a learning model</td>
<td>Eksperiment</td>
<td>Emotional intelligence plays a role in realising educational goals</td>
</tr>
</tbody>
</table>
The results of the analysis of the literature review related to the purpose of the study obtained data that the purpose of the study was divided into two groups. First, the study was conducted to test the effectiveness or investigation of an approach to improving learning outcomes (Lubis et al., 2022; Waffak et al., 2022; Khairuddin et al., 2022; Pramantik & Burhaein, 2019; Adi et al., 2024; Firdaus et al., 2023; Aliriad et al., 2024; Marwan, 2014; Rihatno & Nuraini, 2023; Roesdiyanto, 2014; Aziz et al., 2023; Hidayat et al., 2022; Taufik et al., 2022; Umar et al., 2023; Mardesia et al., 2021; Usra et al., 2023; Astuti et al., 2024; Riyanto & Betaubun, 2019; Sujana et al., 2023; Marheni et al., 2022; Ihsan et al., 2021; Jumareng et al., 2021; Kaloka et al., 2022). The second group aims to conduct development to improve the quality of PE learning (Kusnanik et al., 2022; Dewanti et al., 2023; Fenanlampir et al., 2021; Dewanti et al., 2024; Pamungkas & Annasai, 2024; Satyawan et al., 2023; Gazali & Cendra, 2020).

The methods used by researchers in conducting the study consisted of seven types with experimental research being the most widely used method by researchers as many as twelve studies (Pramantik & Burhaein, 2019; Marwan, 2014; Taufik et al., 2022; Waffak et al., 2022; Khairuddin et al., 2022; Aliriad et al., 2024; Roesdiyanto, 2014; Hidayat et al., 2022; Umar et al., 2023; Mardesia et al., 2021; Usra et al., 2023; Astuti et al., 2024; Riyanto & Betaubun, 2019; Sujana et al., 2023; Marheni et al., 2022; Ihsan et al., 2021; Jumareng et al., 2021; Kaloka et al., 2022). In second place the most widely used method is Research & development with nine studies (Kusnanik et al., 2022; Dewanti et al., 2023; Fenanlampir et al., 2021; Dewanti et al., 2024; Pamungkas & Annasai, 2024; Satyawan et al., 2023; Gazali & Cendra, 2020). The third order is the survey method with four studies (Firdaus et al., 2023; Kaloka et al., 2022; Rihatno & Nuraini, 2023; Sujana et al., 2023). The fourth most used method is Action research with three studies (Pramantik & Burhaein, 2019; Marwan, 2014;
The next sequence of studies using the Correlation method is two studies (Aziz et al., 2023; Adi et al., 2024). Then one study each that uses qualitative methods (Jumareng et al., 2021) and mixed-method research (Parlina et al., 2021). Furthermore, the analysis of the results of the study of articles included in the literature review shows that student learning outcomes are effectively improved through various approaches such as the use of problem-based learning models (Lubis et al., 2022), task-based in improving fitness (Khairuddin et al., 2022), the Floor Time approach (Pramantik & Burhaein, 2019), the use of computer-based learning aids in pencak silat (Kaloka et al., 2022), multiple intelligence learning methods (Roesdiyanto, 2014), blended learning-based learning modules (Dewanti et al., 2024), inclusive teaching styles on breaststroke swimming learning outcomes (Mardesia et al., 2021), the traditional game approach to increasing student motivation (Marwan, 2014), interactive multimedia development (Satyawan et al., 2023), the use of YouTube application media (Taufik et al., 2022), the use of learning media that has been given (Ilsean et al., 2021), peer teaching methods in learning basic volleyball techniques (Umar et al., 2023), the use of TGfU model on students’ critical thinking skills (Usra et al., 2023), and learning models based on mental training and playing sequences can improve basic volleyball technique skills and increase students’ confidence and motivation (Astutti et al., 2024). In addition, the research and development carried out shows the results of the model used can increase HOTS and reduce bullying and affect learning outcomes (Waffak et al., 2022), feasible and effective to use (Aliriad et al., 2024), valid and reliable (Dewanti et al., 2023), HPC strategy is feasible to implement (Fenanlampir et al., 2021), has been prepared and suitable for use (Pamungkas & Annasai, 2024), and the validity value of the textbook is very high and very feasible to use (Gazali & Cendra, 2020).

Other findings from the analysis of study results learning outcomes are strongly related to, while body fat, BMI, and physical activity levels are not significant (Adi et al., 2024) and BMI and PF are not sufficient without high learning motivation (Kusnanik et al., 2022). Learning outcomes, especially swimming learning, are influenced by factors of learning motivation, physical activity, nutritional status, and V02Max (Hidayat et al., 2022). Then there are problems in psychological, family, school, and environmental aspects due to lack of facilities (Parlina et al., 2021). Teacher quality is still not good, student motivation is quite good, and facilities and infrastructure are not good (Sujana et al., 2023). Life skills education have the potential to protect children from possible negative influences, and threats to everyday life (Marheni et al., 2022). Emotional intelligence plays a role in realising Education goals (Riyanto & Betaubun, 2019), and similar nonlinear teaching in primary schools (Rihatno & Nuraini, 2023). There is a significant relationship between specific test results and learning outcomes of basic athletic practices (Aziz et al., 2023). Online learning through Zoom Meeting is essential in the COVID-19 era (Jumareng et al., 2021).

Discussion

The literature review aims to explore information related to studies that have been conducted by researchers and practitioners in Indonesia in an effort to achieve PE learning objectives. The results of the literature review showed that the first purpose of the study was to test the effectiveness or investigation of an approach to improving learning outcomes and the second group aimed to conduct development to improve the quality of PE learning. Furthermore, the methods used in the study consisted of Experimental research, Research & development, survey, Action research, Correlation, qualitative, mixed-method research. The results of the study showed that student learning outcomes were effectively improved through various approaches.

The results of the literature review show that studies conducted by researchers still focus on improving learning outcomes that include physical learning, cognitive learning, and
affective learning. These results align with the goal of upholding students' lifelong participation in PE (Beni et al., 2018) and strongly connecting students through participation in collaborative achievement of motor and social goals (Araujo et al., 2016). However, it does not include social learning. This is contrary to the legitimised learning outcomes of PE which include physical learning, cognitive learning, social learning and affective learning (C.-E.M. Askildsen & Løndal, 2024). In addition, PE is understood as teaching kinesthetic intelligence for human excellence by integrating social-emotional learning and broad public health outcomes (Whalen, 2023). The learning used has also not used many play approaches but only a few (Waffak et al., 2022; Kusnanik et al., 2022; Aliriad et al., 2024; Astuti et al., 2024; Sujana et al., 2023). This application is certainly not in line with the philosophy of PE which is oriented towards the game as an object (Garcia-Puchades & Chiva-Bartoll, 2020).

The proper implementation of PE teaching using a play approach for teachers is certainly a challenge that has an impact on its implementation (García-López, Gutiérrez, Sánchez-Mora, & Harvey, 2019). Many teachers are still weak in translating the concept of the play approach to learning (Goodyear et al., 2017). Teachers in implementing learning still focus on improving motor learning but are still lacking in improving cognitive skills (Barba-Martín, Bores-García, Hortigüela-Alcalá, & González-Calvo, 2020) so it requires strengthening understanding for teachers through study (Ortiz, Merino, Morales-Belando, Vaquerocristóbal, & González-Gálvez, 2023). The learning that teachers design must also be based on student background, school/club, and country characteristics (Hordvik, MacPhail, & Ronglan, 2019) and the curriculum in each school (Kinnerk, Harvey, Kearney, MacDonncha, & Lyons, 2019). In addition, continuous learning is recommended to improve PE teachers' professional knowledge about and implementation of innovative practices in PE (Beni et al., 2023).

Conclusions

The literature review shows that studies that have been conducted related to researchers and practitioners in Indonesia in an effort to achieve PE learning objectives can be categorised as quite a lot using various objectives and approaches. The results of the studies conducted show that student learning outcomes are effectively improved through a variety of approaches. However, studies conducted by researchers still focus on improving motor learning outcomes that only include physical learning, cognitive learning, and affective learning and have not led to social learning outcomes. In addition, the approach used has not fully utilised the game approach. For this reason, it is recommended that future studies should focus more on finding PE teaching that is able to cover the overall learning outcomes of PE that are legitimised by using a game approach.

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Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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