CONCEPTUAL FRAMEWORK OF APPLIED HOLISTIC EDUCATION IN PHYSICAL EDUCATION AND SPORTS: A SYSTEMATIC REVIEW OF EMPIRICAL EVIDENCE

Agam Akhmad Syaukani1,2ABCDE, Asha Hasnimy Mohd Hashim2ABCD and Nur Subekti1B

1Universitas Muhammadiyah Surakarta
2Universiti Teknologi Malaysia

Authors’ Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection

Corresponding Author: Agam Akhmad, Syaukani, e-mail: aas622@ums.ac.id
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Abstract

Background and Study purpose. Holistic education becomes an important aspect to achieve target on education as proposed by sustainable development goals (SDGs). Many believe that education of the future should be comprehensive, aspirational and inclusive, that is holistic education. Physical education is part of school subjects that can be used to realized the educational goal of holistic learning. Through mindful planning and understanding of conceptual framework, physical activity and sports in physical education can be a powerful tool to improve the development of the whole child that includes cognitive, socio-emotional, and physical aspect. To date, there are few systematic reviews that discuss holism in the context of education, and almost none of them specifically discuss holistic education in the physical education setting.

Materials and methods. This paper systematically reports previous empirical studies about the strategies used to implement holistic education in physical education class. There are 15 papers selected in this study following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

Results. As the result, this study proposes a conceptual framework for designing a teaching strategy in PE to promote whole child development. The framework encompasses the learning dimension of body, mind and spirit. All the aspects are discussed below.

Conclusions. Based on the results and discussion obtained from the 15 reviewed papers, we proposed a conceptual framework to design an approach to implement holistic education in physical education.

Keywords: systematic review, holistic education, physical education, PRISMA.

Introduction

Improving the quality of education is a concern for global leaders. There is special attention given by world leaders on education improvement by inserted education vision in The Sustainable Development Goals (SDGs)(United Nations, 2015). The education which proposed in the SDGs highlight the transformation of education toward comprehensive, holistic, aspirational, and inclusive. According to Mahmoudi et al. (2012), holistic education means to repair future citizen that could transform themselves into individual that concern and mindful about others, for the communities and for the planet. This is certainly very relevant to the 21st century demands to balance global economic growth with human development.

Many countries have initiated the use of holistic education in the national education curricula, for example, USA, Canada, Finland, Singapore (Miseliunaite et al., 2022). Those are countries that basically renowned by its high quality of education. They realize that holistic education is necessary to ensure sustainable development, especially regarding human resources. However, judged by SDGs reports, many countries still struggling to achieve significant goals on education. In Indonesia, holistic education has been used as a policy basis in assessing student’s learning outcomes that include affective, cognitive, and psychomotor. However, in practice, there are often misconceptions about
the application of holistic education in school settings. For example, it can be observed from study by Hamami & Nuryana (2022) which interpret holistic learning on the balance between religious and science education. This is certainly contrary to the holistic concept which emphasizes balance in student's outcome that incorporating domain of heart, body, and mind.

Physical education (PE), as part of compulsory subject in most school in every level of primary and secondary education, recently has become more important. This is because the value of physical activity and sports in PE is being highlighted to prevent social and psychological problem such as school violence and suicide (Jeon et al., 2021). Unlike any other subject, PE contain physical and sports lesson that can be used to transfer holistic ability to students. Sports hold a significant place in lives and culture. It is not just an activity for improving health and fitness, but it also has a deeper meaning and value. Sports provide many benefits, both physical and mental, that contribute to overall well-being. Sports could provide students with opportunities to learn how to manage their time, set goals, and handle pressure. It also could teach them how to handle success and failure, which are essential skills for success in life. Therefore, Goudas et al. (2006) proposed a call for “education through physical” as opposed to “education of the physical”.

Although the attention of holistic education is increasing, there were few literatures study of well-rounded competency within holistic education concept. The study is limited to the following: the contribution of holistic education to world’s problem (Miseliunaite et al., 2022), holistic education as an approach for 21st century (Mahmoudi et al., 2012). To the best of our knowledge, literature study focusing on implementation of holistic education within physical education context is scarce or even has not been conducted. Therefore, this paper aim to run investigation from previous study about the strategy that can be used to implementing holistic education into physical education. The main research question of this study is “What are the critical factor that should be considered in designing holistic-based physical education?”. Based on the literature review, we propose a conceptual framework that might benefit teacher to guide an instructional model that could facilitate holistic learning in physical education lesson.

Materials and methods

This study uses a preferred reporting items for the systematic review and meta-analysis (PRISMA) approach in collecting, selecting and analyzing papers related to the implementation of holistic education in physical education classes. The PRISMA method has been widely used in the study of literature on health and technology, as for social science, it has also been found in several important studies in education (Sukirman et al., 2021). PRISMA was chosen as the methodological foundation in this study because it was considered the most suitable method to reduce potential bias.

Search procedures and data sources

Databases used in this study include Scopus, Web of Science (WoS), ProQuest, and Springer Link. The above databases are determined based on their good reputation in the academic world, also the availability for access to our condition. After establishing the databases, researchers then set searching keywords, namely “holistic education”, “whole child education”, “physical education”, “sports”, “school”, “outdoor activity”. This study uses the Boolean operators “AND” and “OR” to string keywords into search strings used in bibliographic search. The search string created is applied to searches that include the entire article (title, abstract, keywords). There is no publication time limit from the article search carried out, meaning that each article can be accepted if it is relevant to a predetermined research topic. The final search was carried out in the end of December 2022 resulted in 233 documents. In databases that provide “search within results” features such as Scopus and Web of Science, the search string created is followed up by entering keywords separately and sequentially into the “search within result” line. To produce articles that relevant with the topics of this study, restrictions are used only on education and social studies by utilizing the “filtered by subjects” feature to limit searches only to social studies. The subjects specified in “filtered by subjects” are social sciences. From the advanced search results using the automated search tool, 91 documents were obtained which will be further processed to the screening stage. The detailed result yielded by searching protocol in this study is provided in Table 1.

<table>
<thead>
<tr>
<th>Database sources</th>
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<tr>
<td>Scopus</td>
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<tr>
<td>WoS</td>
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<tr>
<td>ProQuest</td>
<td>26</td>
</tr>
<tr>
<td>Springer Link</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>233</td>
</tr>
</tbody>
</table>

Eligibility criteria

Before entering the screening process, the collected documents are checked for the possible duplication in more than one database. After eliminating duplicates and refine search using automated search tool, the initial investigation was reduced to 91 documents. There are exclusion and inclusion criteria in this study. Documents which met the exclusion criteria will be eliminated, meanwhile documents which met the inclusion criteria will be included. The detailed exclusion and inclusion criteria is presented in Table 2. All documents other than empirical studies is excluded because it does not contain original research to answer research question. Irrelevant documents refer to any study on holistic education which has no relation to physical education is also rejected. Documents which conducted research in other than school-setting is also excluded. Documents included in this review should use student as a study sample, including high school students, but not limited to junior high school and elementary school student. The selection criteria was also based on following criteria: (1) written in English, (2) peer-reviewed journal, (3) open access.

A total of 91 documents were screened. All documents were entered into Excel and given a sequential number from 1 to 91 based on alphabetical order of the title. This was
followed by a three-stage screening process. In the first stage of the screening process, the title of the documents were reviewed. The purpose of this stage is to exclude documents that seem not relevant to the topic of holistic physical education in schools. If found documents that unclearly met the exclusion criteria, the documents is retained for the next step. If a document was excluded, the exclusion reason was assigned next to document title in the Excel. A total of 55 documents is verified for further screening process. Detailed report on the number of documents being excluded is presented in Figure 1.

Conducted the second round of screening process, the researchers screened the abstract of all remaining documents to determine whether these works employ an experimental study approach on holistic physical education at school. A document was only excluded if it was obvious that it was not fit with the investigation topic of the current study. Figure 1 showed that after the second stage of screening, a total of 25 documents is left for the last stage.

Finally, researchers reviewed all remaining documents during third stage of screening process by read all content of the documents to determine which documents provided sufficient empirical information to be included in the study. Based on the selection criteria presented in Table 2, we selected 15 records as eligible criteria. These were included in the study for further in-depth analysis (see Table 3).

**Data extraction and analysis**

Information on the included articles were extracted by reading the full text of the manuscript. Then, NVivo software for qualitative methods analysis was used in the present study to code important information into selected theme. This software was selected due to the following advantages: (1) managed data effortlessly; (2) able to find themes easily; (3) save time and energy for data classification. The coding framework was executed based on research question using open coding strategy until data richness was achieved. Coding is administered in paragraphs that are done repeatedly to ensure we do not missed important data. All documents were evaluated and coded based on the following arrangement: bibliography of the article, objective of the study, research design, research settings, study participants, intervention, research instruments, data collection procedure, findings, study limitations, future works, and recommendation.

**Results**

There were 15 articles included in this study. Most of the articles analyzed in this study represent Western education, and come from the European continent (Poland, Netherlands, Greece, Spain), the Americas (Canada). Meanwhile, the representation of the eastern education system is represented by articles from several countries on the Asian continent such as South Korea, and Japan. This supports the findings of Lee at al. (2014) which states that holistic education is mostly applied in the Euro-American education system, but still relevant to be applied in eastern education systems. Findings from studies categorized into several theme which contain information to answer the research question to summarize answer on the current practice of achieving student's holistic competency using physical education and sports.

Table 4 describes the classification of variables that are contain in the research of 15 selected papers. We categorized them into three types including cognitive skill, socio-emotional skill, and psychomotor skill. Research summarized in this study analyzed the impact that can be caused by physical activity and sports through PE setting in school. All papers included in this study is limited to empirical study within the scope of physical education or physical activity at school. From the 15 selected papers, mostly were experimental research as illustrated in Fig. 2, namely 73% or 11 articles (Cañabate et al., 2020; Kolovelonis et al., 2023; Koszałka-Silska et al., 2021; Luna et al., 2021; Meijer et al., 2022; Melerò-Cañas et al., 2021; Mullender-Wijnsma et al., 2019; Pirrie & Lodewyk, 2012; Wawrzyniak et al., 2022), followed by correlational 13% or 2 articles (Gwon & Shin, 2023; Morita et al., 2016), explanatory 7% or 2 articles (Jeon et al., 2021; Rillo-Albert et al., 2021).

**PE on improving psychomotor ability**

It is well known that PE is closely related to the empowerment of psychomotor ability. However, not all
Table 3. Selected documents included in the study

<table>
<thead>
<tr>
<th>No</th>
<th>Authors &amp; Year</th>
<th>Country</th>
<th>Publisher</th>
<th>Database</th>
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</thead>
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<td>MDPI</td>
<td>ProQuest</td>
</tr>
<tr>
<td>2</td>
<td>(Cañabate et al., 2020)</td>
<td>Spain</td>
<td>MDPI</td>
<td>ProQuest</td>
</tr>
<tr>
<td>3</td>
<td>(Koszalka-Silska et al., 2021) with a comparison group. ANOVA (2 × 2)</td>
<td>Poland</td>
<td>MDPI</td>
<td>ProQuest</td>
</tr>
<tr>
<td>4</td>
<td>(Condello et al., 2021)</td>
<td>Italy</td>
<td>MDPI</td>
<td>Scopus</td>
</tr>
<tr>
<td>5</td>
<td>(Goudas et al., 2006)</td>
<td>Greece</td>
<td>Springer</td>
<td>SpringerLink</td>
</tr>
<tr>
<td>6</td>
<td>(Luna et al., 2021)</td>
<td>Spain</td>
<td>MDPI</td>
<td>ProQuest</td>
</tr>
<tr>
<td>7</td>
<td>(Jeon et al., 2021)</td>
<td>South Korea</td>
<td>MDPI</td>
<td>WOS</td>
</tr>
<tr>
<td>8</td>
<td>(Meijer et al., 2022)</td>
<td>Netherlands</td>
<td>Wiley</td>
<td>Scopus</td>
</tr>
<tr>
<td>9</td>
<td>(Mullender-Wijnsma et al., 2019)</td>
<td>Netherlands</td>
<td>Springer</td>
<td>WOS</td>
</tr>
<tr>
<td>10</td>
<td>(Morita et al., 2016)</td>
<td>Japan</td>
<td>Elsevier</td>
<td>WOS</td>
</tr>
<tr>
<td>11</td>
<td>(Gwon &amp; Shin, 2023)</td>
<td>South Korea</td>
<td>MDPI</td>
<td>ProQuest</td>
</tr>
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<td>12</td>
<td>(Kolovelonis et al., 2023)</td>
<td>Greece</td>
<td>MDPI</td>
<td>ProQuest</td>
</tr>
<tr>
<td>13</td>
<td>(Melero-Cañas et al., 2021)</td>
<td>Spain</td>
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</tr>
<tr>
<td>14</td>
<td>(Pirrie &amp; Lodewyk, 2012)</td>
<td>Canada</td>
<td>Elsevier</td>
<td>Scopus</td>
</tr>
<tr>
<td>15</td>
<td>(Wawrzyniak et al., 2022)</td>
<td>Poland</td>
<td>MDPI</td>
<td>Scopus</td>
</tr>
</tbody>
</table>

Table 4. Classification of the research variables

<table>
<thead>
<tr>
<th>Cognitive skill</th>
<th>Socio-emotional skill</th>
<th>Psychomotor skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive function</td>
<td>Emotional intelligence</td>
<td>Physical fitness</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>Social competence</td>
<td>Gross motoric skill</td>
</tr>
<tr>
<td>Cognitive performance</td>
<td>Emotional regulation</td>
<td>Sports-specific skill</td>
</tr>
<tr>
<td>Neurocognitive functioning</td>
<td>Self-esteem</td>
<td>BMI</td>
</tr>
<tr>
<td>Cognitive skill</td>
<td>Prosocial behavior</td>
<td></td>
</tr>
<tr>
<td>Brain morphology</td>
<td>Self-belief</td>
<td></td>
</tr>
<tr>
<td>Academic grit</td>
<td>Socio-emotional competencies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Motor conflict</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 2. Study design on selected documents

Fig. 3. Main objective of the studies

research available in the research database is included in holistic education studies. Based on 15 papers included in this study, four papers were attributed physical ability to be one of the research variables along with variables from other competency domain (i.e cognitive and socio-emotional).

Based on the reviewed paper, researchers found that their design of study has several impacts on psychomotor ability. As the research conducted by Morita et al. (2016) said that fitness level and obesity level to be one of important factors for student’s academic achievement. Additionally, based on the experiment conducted by Wawrzyniak et al. (2022) pointed that delivering PE with cognitive task can stimulate development of both psychomotor and cognitive skill. In addition to achieving benefits in improving fitness level and gross motor skills, PE in holistic learning design can also be used as a means to improve sports-specific skills while still achieving goals in other learning domains. Condello et al., (2021) claimed that PE with integrative theory base can help student to achieve motor and non-motor abilities.

In order to achieve benefit in fitness and psychomotor while still able to secure the advantage on other learning domain in the framework of holistic education, some
PE on improving cognitive ability

Cognitive skills are the skills that are used to think, learn, and reason. Some factors that can affect a student’s cognitive skill include genetics, environment, and education. PE has been found to have a positive impact on cognitive skills (Gwon & Shin, 2023; Kolovelonis et al., 2023; Meijer et al., 2022; Melero-Cañas et al., 2021). PE can improve cognitive skills in several ways. First, it can increase blood flow to the brain. When the body doing exercise, the heart pumps more blood to the brain, which helps to improve brain function. Second, PE can improve memory and learning. Exercise has been found to increase the production of a protein called BDNF, which is essential for the growth and survival of brain cells. Third, PE can improve attention and focus. Exercise has been found to increase the production of dopamine, a neurotransmitter that is essential for attention and focus (Chaddock-Heyman et al., 2016; Meijer et al., 2022). It is also supported by Jeon et al. (2021) which states that physical activity in the morning can increase students’ intelligence potential through improving brain functions such as concentration, memory, and attitude in the classroom. However, what needs to be considered is that the type and intensity of physical activity that were reported can affect the final result. Experts believe that aerobic activity is superior to other types of physical activity in terms of improving brain function (Chaddock-Heyman et al., 2016; Morita et al., 2016). In order to get optimal results, the duration of physical activity should also be taken into account. Researchers suggested that moderate to vigorous physical activities (MVPA) and longer exposure of MVPA might be required to produce effect on brain structure and function (Meijer et al., 2022; Pirrie & Lodewyk, 2012). Another indirect effect of PE on academic ability is presented by Mullender-Wijnsma et al. (2019). They believe that physically active academic lesson can contribute to student’s on-task behavior and academic motivation.

Teaching strategy to support the learning outcomes of cognitive ability is varied among researchers. Jeon et al. (2021) established 0th period of PE class to foster health and academic performance among Korean students. The 0th period of PE was implemented based on the fact that morning exercise is good for brain. The activity was held before the beginning of regular class hour. They claimed through this activity, students are having better learning attitude during learning (Gwon & Shin, 2023; Jeon et al., 2021; Kolovelonis et al., 2023; Melero-Cañas et al., 2021).

PE on improving socio-emotional skill

The relationship between physical and psychological aspects in sports has been widely recognized in the concept of sound-body sound-mind where indicators of successful coaching should include the development of both (Goudas et al., 2006). PE can have a significant impact on a student’s socio-emotional intelligence by fostering skills such as teamwork, communication, emotional regulation, self-awareness, and empathy. By fostering a sense of teamwork and collaboration, PE classes can also help students build positive relationships with their peers and address issues such as bullying and social isolation. Luna et al. (2021) and Goudas et al. (2006) point out that physical activity and sports can promote, both directly and indirectly, student’s social and emotional well-being. School physical education is suitable context for student to learn physical and socio-emotional skill simultaneously. This due to several reasons: First, physical and socio-emotional skill can be taught together through demonstration and practice. Second, various skills learned in sports can be applied to social context. The skills including: the abilities to perform under pressure, problem solving, teamwork, communication and to deal with success and failure. Third, sports and physical activity is part of the school curriculum that applies from elementary to secondary education. Therefore, students are likely to be familiar with PE learning environment.

PE teacher should understand that there is intrapersonal dan interpersonal aspect of socio-emotional skill. Not only physically healthy and skilled, through PE, students are educated to be able to manage emotions (intrapersonal) and build good social relationships (interpersonal) with those around them (Jiménez-Parra et al., 2022; Rillo-Albert et al., 2021). Cañabate et al. (2020) conducted research to improve emotional awareness on student’s practicing Yoga and Taichi. They investigate whether Yoga, Taichi, and other introjective practices give an impact to student’s emotional intelligence. The result stated that there is a significant effect of those practices toward the improvement of student’s intrapersonal skill including emotional attention, clarity of feeling and emotional repair. Incorporated SE education to PE lesson is recommended to be done since primary education. This is because in the preadolescent period it is important to form a strong personality through the development of SE intelligence which includes social competences and self-esteem. Jiménez-Parra et al. (2022) added that SE intelligence benefit children and later in their life as an adult to avoid risk of having social and mental disorders. Researchers experimented with educational programs designed to optimize students’ SE skills in PE classes. For example,
Goudas et al. (2006) with programs termed as GOAL (Going for Goal) and SUPER (Sports United to Promote Education and Recreation), are programs run to combine physical skills and life skills in PE classes. As a result, in addition to being able to improve or retain physical fitness, students are also able to increase their life-skills capacity through goal setting orientation. Meanwhile, Luna et al. (2021) initiated an educational intervention based on The Sports Education Model (SEM) to study the effect on social and emotional wellbeing. SEM is a teaching and learning approach that aims to provide students with a more holistic and comprehensive sports experience.

Discussion

Based on the above-mentioned articles, we summarized several factors that can be considered to develop and implement PE educational program to achieve holistic development of students. We proposed a conceptual framework to implement a strategy of holistic education physical education (HEPE) as presented in Fig. 4. Based on the concept of holism (Miller, 2019), generally it can be grouped into 3 parts, they are mind, body, and spirit. Mind refers to cognitive aspect, spirit refers to emotional and social capacities, while body means fitness and motor ability. Based on studies included in this systematic literature review, each has attributes that cannot be neglected if the goal is achieve objectives in every learning domain. For example, in the cognitive domain, it is necessary to ensure that learning activities must contain elements of problem solving and combine physical activity and sports with lessons from other subjects such as math and language (Setyaningsih et al., 2019; Sutama et al., 2022; Wawrzyniak et al., 2022). Through such cognitive-enriched, Physical education can not only benefit health and physical fitness but also for other curricular subject such as math, language, and writing. This is because in its implementation, students not only do physical activity but also indirectly learn to count, read, and write. Although the context of Wawrzyniak et al.'s research, (2022) is for elementary school students, this idea can be applied at higher education levels by incorporating other subjects into PE lessons.

Spirit education is part of holistic education because it involves every part of one’s being including their emotion, their senses, and their relationship with other (Best, 2011; Thambu et al., 2021). In other words, it comprises intrapersonal and interpersonal skills, both of which are important in efforts to interpret oneself and the social environment. Element of spirit education that we propose in the conceptual framework is responsibility dan role-playing. Responsibility is a concept where students must have responsibility for themselves in terms of emotional control and have roles and responsibilities in their social environment. It involves teaching them to be aware of their social and environmental impact, to understand the consequences of their actions, and to be proactive in making positive contributions to their communities. By emphasizing social responsibility in education, students not only become better citizens, but they also develop a sense of empathy, compassion, and respect for others. Role-playing can be a valuable tool in physical education as well. By assuming different roles and scenarios, students can explore topics such as sportsmanship, teamwork, and leadership, especially through involvement in team sports activity. This can help them develop skills such as communication, problem-solving, and decision-making, as well as a better understanding of different perspectives.

Another dimension of holistic education is education of the body, meaning that being committed in regular exercise and physical activity to improve health and fitness. By emphasizing the importance of physical health, students can develop lifelong habits that promote overall wellness. Physical education classes can also help students develop skills such as coordination, balance, and flexibility, as well as promote teamwork and sportsmanship. Element attributed to body or physical education is exercise principle which consist of frequency, intensity, time, and type (FITT). These principles are used to design effective exercise programs. Frequency refers to how often a person exercises, intensity refers to how hard they exercise, time refers to how long they exercise, and type refers to the type of exercise they do. By carefully considering these factors, teachers can design a PE lesson that is safe, effective, and able to improve student health and fitness. Most of the articles in this study following the schedule of PE as in school curriculum. They vary between once a week to three times per week with each duration could last for 90 minutes. The activity thought in the PE class was mostly sports, and aerobic physical exercise with intensity of medium-to-vigorous. Interventional program is also varied between studies. However, Melero-Cañas et al. (2021) and Wawrzyniak et al., (2022) argue that in order to yield significant effect especially on cognitive and psychomotor domain, intervention should be done through whole academic year.

We propose important elements related to the application of HEPE. These elements are based on the holism concept that each learning domain is related to each other (Shroff, 2011). There are the following: gamification, collaboration, competition, and playfulness. Gamification is described as implementing game element into non-game context (Zainuddin et al., 2020). Gamification added joy, create engagement, learning motivation and social influence while making student immerse in experiential learning. Therefore, gamification is suitable to be implemented of this context so that student will perceive the designed activity fun and attractive. Another shared element is collaboration. Given that HEPE is designed toward problem-based learning, student are encourage to work in group. When student work together to learn, their knowledge and classroom involvement improved. In addition to that, by having a collaboration, student can enrich their social interaction to promote development of socio-emotional competence (Kozgalika-Silksa et al., 2021) with a comparison group. ANOVA (2 x 2. Competition is also important element to be considered in HEPE. According
to sports education model (SEM), meaningful competition is necessary to provide stimulation and positive motivation (Luna et al., 2021). The last shared element is playfulness, meaning that learning should be fun and engaging. Gwon & Shin (2023) noted that with playability increase, there will be academic grit that also increase. Academic grit is mediating factor for PE-related attitude. Therefore, we can expect a better learning attitude if students possessing academic grit as a result of lesson playability.

We presented holistic skill as the dependent variable in the conceptual framework, which consist of three components, they are cognitive skill, socio-emotional skill, and psychomotor skill. In holistic education concept, all various learning domain is related. There is relationship between body and mind, as well as relationship between the individual and social environment (Miller, 2019). Without having to put aside one aspect from another, learning design must be able to develop individual potential as a whole. Therefore, it is important for an educator to be able to plan, implement, and evaluate learning activities based on learning outcomes in the cognitive, socio-emotional, and psychomotor domains.

Conclusions

Based on the results and discussion obtained from the 15 reviewed papers, we proposed a conceptual framework to design an approach to implement holistic education on physical education. According to holism principle, we make a proposition of connection between body, mind, and spirit. The body encompasses physical health and fitness, mind is about academic achievement or cognitive performance, and spirit is including intrapersonal skill in form of emotional intelligence, and interpersonal skill in form of social competence. The study can be designed in experimental research with two-group pre-posttest design to investigate the differences. Both sports and physical exercise can be used as a lesson to improve students’ holistic development. However, many studies noted that sports can be more useful to explore student’s prosocial behavior while cognitive enriched activity can improve student’s cognitive ability. All in all, to create engagement during intervention, gamification of learning is needed.

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Conflict of interest

The authors declare no conflict of interest in this study.

References


Effects of aerobic versus cognitively demanding exercise interventions on brain structure and function in healthy children—Results from a cluster randomized controlled trial. *Psychophysiology, 59*(8).
https://doi.org/10.1111/psyp.14034

https://doi.org/10.1007/s10643-019-00968-y

https://doi.org/10.1016/j.physbeh.2016.04.055

https://doi.org/10.3390/healthcare11050774

https://doi.org/10.3390/ijerph20031902

https://doi.org/10.3390/su13115966

https://doi.org/10.1016/j.mhap.2012.04.001

https://doi.org/10.3390/ijerph19031275

https://doi.org/10.1016/j.dcn.2016.07.001

https://doi.org/10.3390/app12168073


https://doi.org/10.1080/1364436X.2011.645024

https://doi.org/10.23917/ijolae.v3i1.10064


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КОНЦЕПТУАЛЬНА СТРУКТУРА ПРИКЛАДНОЇ ЦІЛІСНОЇ ОСВІТИ У ФІЗИЧНОМУ ВИХОВАННІ ТА СПОРТІ: СИСТЕМАТИЧНИЙ ОГЛЯД ЕМПІРИЧНИХ ДАНИХ

Агам Ахмад Шаука́ні1,2ABCDE, Аша Хаснімі Мохд Хашим2ABCD, Нур Субекти1BCDE

1Університет Мухаммадія в Суракарті
2Технологічний університет Малайзії

Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 9 с., 4 табл., 4 рис., 30 джерел.

Історія питання та мета дослідження. Цілісна освіта стає важливим аспектом для досягнення освітніх цілей, які узгоджуються із цілями сталого розвитку (ЦСР). Багато хто вважає, що освіта майбутнього має бути комплексною, прецизною та інклюзивною, тобто цілісною освітою. Фізичне виховання є тією частиною шкільних предметів, яка може бути використана для реалізації освітньої мети цілісного навчання. Завдяки ретельному плануванню та розумінню концептуальної структури фізична активність і спорт у фізичному вихованні можуть бути потужним інструментом для по- кращення розвитку дитини в цілому, що включає когнітивний, соціально-емоційний і фізичний аспекти. На сьогоднішній день існує небагато систематичних оглядів, у яких обговорюється цілісність у контексті освіти, і майже в жодному з них конкретно не обговорюється цілісна освіта в умовах фізичного виховання.

Матеріали та методи. У цій статті систематично викладений звіт про попередні емпірічні дослідження стратегій, які використовують для реалізації цілісної освіти на уроках фізичного виховання. У цьому дослідженні було відібрано 15 статей відповідно до рекомендацій «Переважні елементи звітування для систематичних оглядів і метааналізів» (PRISMA).

Результати. Як результат у цьому дослідженні пропонується концептуальна структура для розробки стратегії викладання фізичного виховання для сприяння всебічному розвитку дитини. Ця структура охоплює навчальний вимір тіла, розуму та духу. Усі ці аспекти обговорюються нижче.

Висновки. На підставі результатів та обговорення 15 розглянутих документів ми запропонували концептуальну структуру для розробки підходу до реалізації цілісної освіти у фізичному вихованні.

Ключові слова: систематичний огляд, цілісна освіта, фізичне виховання, рекомендації PRISMA.

Information about the authors:
Syaukani, Agam Akhmad: aas622@ums.ac.id; https://orcid.org/0000-0002-9557-7456; Department of Physical Education, Universitas Muhammadiyah Surakarta, Jl. A. Yani, Mendungan, Pabelan, Kec. Kartasura, Kabupaten Sukoharjo, Jawa Tengah 57162, Indonesia.

Mohd Hashim, Asha Hasnimy: asha@utm.my; https://orcid.org/0000-0002-1958-4793; Department of Sports Science, Universiti Teknologi Malaysia, Sultan Ibrahim Chancellery Building, Jalan Iman, 81310 Johor Bahru, Johor, Malaysia.

Subekti, Nur: ns584@ums.ac.id; https://orcid.org/0000-0001-5850-3856; Department of Physical Education, Universitas Muhammadiyah Surakarta, Jl. A. Yani, Mendungan, Pabelan, Kec. Kartasura, Kabupaten Sukoharjo, Jawa Tengah 57162, Indonesia.


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