



## Strategies for Improving Students' Mental and Physical Health Through Sports Curriculum in the Digital Era

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### Abstrak

Perkembangan teknologi digital telah membawa perubahan signifikan dalam gaya hidup siswa dan remaja, yang ditandai dengan peningkatan penggunaan gawai serta penurunan aktivitas fisik, sehingga berdampak pada kebugaran jasmani dan kesehatan mental. Penelitian ini bertujuan untuk menganalisis strategi peningkatan kesehatan fisik dan mental siswa melalui kurikulum Pendidikan Jasmani, Olahraga, dan Kesehatan (PJOK) di era digital. Metode yang digunakan adalah penelitian kualitatif dengan pendekatan studi kepustakaan. Hasil penelitian menunjukkan bahwa penguatan kurikulum olahraga perlu dilakukan secara holistik melalui integrasi aktivitas fisik, latihan mindfulness, dan pemanfaatan teknologi digital. Penerapan gamifikasi, video tutorial, dan aplikasi kebugaran meningkatkan motivasi, partisipasi, serta personalisasi pembelajaran PJOK. Kompetensi guru menjadi faktor kunci dalam implementasi kurikulum inovatif, sementara penyediaan fasilitas dan lingkungan pendukung turut menentukan keberhasilan strategi ini. Kesimpulannya, kurikulum PJOK yang adaptif, kreatif, dan relevan dapat membangun gaya hidup aktif, memperkuat kesehatan jasmani dan mental, serta mendukung pembentukan karakter positif siswa di era digital.

**Kata kunci:** Kurikulum Olahraga, Kesehatan Mental, Aktivitas Fisik, Mindfulness, Teknologi Digital, Pendidikan Jasmani

### Abstract

This study explores the integration of traditional art training and digital literacy as a transformative learning approach in modern education. Conducted in Corawali Village, Panca Lautang District, Sidenreng Rappang Regency, the research focuses on the Sanggar Sastra dan Seni Budaya Masumange, a local art and culture community consisting of 35 active members. The study aims to examine how traditional art practices—such as music, dance, and local crafts—can be revitalized and sustained through the application of digital literacy skills, including multimedia documentation, online promotion, and digital content creation. Using a qualitative descriptive method, data were collected through interviews, observation, and participatory involvement in the community's art activities. The findings reveal that integrating digital tools into traditional art training not only enhances members' creativity and technological competence but also strengthens cultural identity and intergenerational knowledge transfer. Moreover, the program fosters community empowerment by enabling members to showcase their art through digital platforms, thereby increasing visibility and potential economic opportunities. The study concludes that combining traditional art education with digital literacy represents an effective strategy for transformative learning, bridging local wisdom with global innovation. This approach can serve as a model for other cultural communities seeking to preserve heritage while adapting to the digital era.

**Keywords:** Sports Curriculum, Mental Health, Physical Activity, Mindfulness, Digital Technology, Physical Education

## Introduction

Amidst the rapid development of digital technology, people's lifestyles, especially among students and adolescents, have undergone drastic changes (Ulfadhilah & Nurkhafifah, 2025). The use of digital devices such as smartphones, computers, and tablets has become part of daily routines (Cockerham, 2023; Andersson, 2022). Although technology provides many conveniences in accessing information and communicating, excessive use leads to increased sedentary habits. Students now spend more time in front of screens than in physical activity, resulting in decreased physical fitness and an increased risk of health problems (He, 2024). This condition also affects psychological aspects. Many adolescents experience anxiety, stress, and even mild symptoms of depression due to social pressure and environmental expectations (Aziz et al., 2024). Social media also contributes to the formation of an unrealistic self-image, thereby worsening mental health (Merino et al., 2024). Therefore, students need a comprehensive approach to maintain physical, mental, and emotional balance amidst high digital exposure (Martín-Rodríguez et al., 2024).

One strategy proven to support mental health is the implementation of mindfulness practice. This approach emphasizes full awareness of the body, mind, and emotions without judgment (Zibin, 2024). When combined with sports activities, such as gymnastics or functional training, mindfulness can improve students' relaxation, focus, and motivation to move (Saputra et al., 2024). Functional training itself involves movements that mimic everyday activities, making it easy to implement at school or at home without the need for special equipment. In the context of a physical education curriculum in the digital age, integrating physical activity and mindfulness can be an innovative strategy to improve students' mental and physical health. The use of technology also opens up opportunities to develop more engaging and adaptive physical education lessons (Ilyasa & Efendi, 2024). Fitness apps, exercise video tutorials, and digital-based activity

monitoring systems can help increase student engagement and facilitate teacher guidance (Riyanto, 2025).

However, strengthening the sports curriculum faces several challenges. One of the most prominent is limited learning time. Amidst a busy academic curriculum, physical education is often considered a low priority, resulting in minimal time for physical activity. This situation needs to be addressed through more strategic planning so that the sports curriculum truly supports the optimal development of students' physical and mental health. Therefore, strategies for improving students' mental and physical health in the digital age require an integrated combination of sports activities, mindfulness training, and technological support. The sports curriculum must be designed to be more flexible, inclusive, and relevant to address students' health challenges while fostering an active and balanced lifestyle (Akbar, 2025).

In the current educational policy context, the learning objectives of Physical Education, Sports, and Health (PJOK) are not fully aligned with the evaluation practices implemented (Oudah et al., 2024). The curriculum tends to emphasize mastery of sports technical skills, while aspects of physical fitness and overall health have not been the primary focus as expected. This situation demonstrates the need for learning innovation to bridge the gap between curriculum objectives and students' health needs in the digital era (Law of the Republic of Indonesia No. 14 of 2005). Innovation in Physical Education (PJOK) learning is crucial, especially following the pandemic, which has led to a decline in students' physical activity and fitness. Teachers are required to act as facilitators capable of designing physical activity-based learning that is more enjoyable, effective, and appropriate to the context of technological developments. A playful approach, the use of digital media, and the integration of more relevant fitness assessments are necessary strategies to support students' physical health (Rahayu et al., 2024).

However, various challenges remain in the field. Many PJOK teachers still rely on traditional instructional methods without optimizing technology and interactive approaches. At the same time, students are more interested in using gadgets than engaging in outdoor physical activities (Kamaruddin et al., 2024). This leads to low student enthusiasm for PJOK learning, despite the subject's crucial role in maintaining their physical health. Lack of sports facilities also poses a significant barrier, particularly in remote schools that lack adequate fields or sufficient sports equipment. This situation makes it difficult to implement technology-based innovations, such as applications.

## Methods

The research approach used in this study is a qualitative method, with an emphasis on descriptive analysis of various written text sources. The choice of qualitative methods is based on the research focus, which is based on literature or library studies. In the process, the researcher reads, reviews, and analyzes various writings directly related to the research issue. This library research method aligns with Rahayu's perspective as explained by Ulfah, Supriani, and Arifudin in Muzakki, et.al. (2024). Data collection was conducted through searching various sources such as theses, dissertations, scientific articles, and e-books accessed through digital media and the internet. The search was conducted using relevant keywords through Google Scholar, then the journals found were selected based on their suitability to the research variables. From this process, the researcher successfully identified 20 journals and reference books which were then analyzed, summarized, and grouped to generate new ideas or concepts that support the research discussion. In this study, data analysis was conducted verbally and descriptively without involving statistical techniques. The qualitative approach allows the researcher to

understand and describe the research problem through narrative presentation. The final result provides in-depth insight into the topic studied based on analysis and synthesis of relevant written sources.

## Result and Discussion

Based on an analysis of various literature collected through a library research method, this study yields several important findings related to strategies for improving students' mental and physical health through a sports curriculum in the digital age. These findings were obtained through a process of identifying, categorizing, and synthesizing journals and books relevant to the research topic. The results of the analysis are then discussed comprehensively to illustrate how the sports curriculum can play a role in addressing student health challenges amidst high exposure to digital technology. The following discussion outlines the main findings and provides an in-depth interpretation of the strategic implications for physical education (PJOK) learning in schools.

### Physical and Mental Health Conditions of Students in the Digital Era

Based on analysis of various recent academic studies, advances in digital technology have brought significant changes to students' lifestyles. The use of digital devices for learning, entertainment, and social interaction has increased substantially, while physical activity has decreased. This sedentary lifestyle is associated with decreased physical fitness, postural problems, and health complaints such as eye strain and muscle tension (Juana et al., 2024; Apriyanti et al., 2024; Ananda, 2024). Mentally, the intensity of social media use and involvement in the digital ecosystem creates significant psychological stress. Adolescents experience anxiety, academic stress, mental fatigue, and even

mild depressive symptoms. The self-image formed through social media is often idealistic and unrealistic, impacting students' self-confidence (Liu, 2022). In addition to negative impacts, the literature also shows the positive potential of technology when used wisely. The use of digital applications in sports learning, such as gamification or mobile applications, can increase students' motivation, participation, and emotional well-being (López et al., 2025). E-health interventions are also effective in improving adolescents' lifestyle habits, including diet and physical activity, through peer-influenced apps and social engagement (Sabaragamuwa, 2025). However, it is important to note that excessive gadget use is associated with decreased physical activity, depending on factors such as sleep quality and daily routines (Ananda, 2024; Juana et al., 2024). Research in Indonesia also revealed a significant association between social media use and increased anxiety and stress in students (Khairunnisa et al., 2024; Asahri & Sartono, 2024). Therefore, strengthening the sports curriculum should be carried out with a holistic approach: encouraging physical activity, providing space for reflection, social support, and healthy digital literacy (Hu, 2023). This strategy can include the use of gamification in sports lessons, integrated mental well-being programs, and mindful screen time management (López et al., 2025; Apriyanti et al., 2024).

### **The Role of Sports Curriculum in Responding to the Challenges of the Digital Era**

Analysis shows that the current Physical Education, Sports, and Health (PJOK) curriculum is not fully capable of meeting students' increasingly complex health needs. The curriculum emphasizes technical sports skills, while the dimensions of mental health, physical fitness, and fostering an active lifestyle remain under-recognized (Widiyatmoko, 2020; Lambung & Mashud, 2024). In practice, PJOK learning faces various obstacles, including: limited

learning time due to a dense academic curriculum; suboptimal use of technology in the learning process; limited sports facilities, particularly in rural schools; and low student health literacy due to a dominant digital lifestyle and minimal physical activity (Widyaningsih, Yulianti, & Setiawan, 2023; Apriliyanto, Hardovi, & Sulaiman, 2025).

Therefore, the PJOK curriculum needs to be strengthened through a more adaptive, collaborative, and technology-based approach (Khemal & Mulyaningsih, 2025), making it more relevant to the needs of today's students. For example, implementing a healthy curriculum model that emphasizes intrinsic student motivation, physical literacy, and the integration of physical activity outside the classroom has been shown to increase student participation and fitness (Widiyatmoko, 2020; Apriliyanto et al., 2025). Furthermore, physical literacy should be the foundation of the curriculum. This concept encompasses cognitive (knowledge), affective (attitude and motivation), and psychomotor (movement) understanding, so that students not only can perform exercise but also understand the importance of long-term fitness (Widyaningsih et al., 2023). Research also shows that physical literacy plays a crucial role in fostering an active lifestyle in children and adolescents (Apriliyanto et al., 2025).

From a technological perspective, the integration of ICT in physical education (PJOK) learning has been shown to extend student motor engagement, provide more tangible feedback, and encourage independent learning (Khemal & Mulyaningsih, 2025). However, the success of this implementation depends on teacher readiness and adequate training (Widyaningsih et al., 2023; Systematic Review, 2023). Regulatory aspects of the Physical Education (PJOK) curriculum also still face gaps in protecting student rights and teacher responsibilities, including aspects of student safety and health. Therefore, curriculum reform must consider

legal and managerial aspects so that sports learning does not only focus on technique but also ensures students' physical, mental, and social health (Qomarrullah, Sokoy, & Wulandari, 2024; Suardipa, 2023). Therefore, strengthening the PJOK curriculum is not simply about increasing sports hours or competitions, but rather reforming the curriculum framework to be more holistic: paying attention to physical, mental, and social health; utilizing technology; building physical literacy; and aligning regulations and implementation management (Mustafa, 2020).

### **Integration of Physical Activity and Mindfulness as a Key Strategy**

Recent literature analysis suggests that the combination of physical activity and mindfulness training offers significant benefits to students' physical and mental health (Mustafa, 2020). For example, a study reported that a combined physical activity and mindfulness intervention synergistically improved mental health: participants showed improved mental health scores and reduced stress levels after the program, with physical activity contributing 30% and mindfulness contributing 25% to the improvement in mental health (Remskaret al., 2025). Experimental research also supports this relationship: Li (2025) found that physical exercise can increase levels of trait mindfulness directly and indirectly through reducing mobile phone addiction, which in turn can improve the psychological well-being of female college students. This combined physical and mindfulness approach, when applied to physical education (PEK) learning, can strengthen students' self-control, reduce emotional reactivity, and create a more positive and reflective learning environment. This helps students not only become more physically fit but also better able to manage stress, understand their emotions, and improve concentration (Tang, 2025). This model is in line with the holistic educational approach which emphasizes

health as a synergy between physical and mental conditions.

### **Utilizing Digital Technology to Support Physical Education Learning**

Various studies confirm that the use of digital technology has enormous potential to increase the effectiveness of physical education (PJOK) learning. Technology can be implemented in various forms, for example:

- a. Fitness apps that allow students to monitor their daily physical activity more accurately.
- b. Video tutorials on gymnastics or functional training used as self-study guides in their free time.
- c. Gamification of physical activity, for example, through step count or fitness point competitions, to increase student motivation to be more active.
- d. Digital learning platforms that help teachers deliver instruction and conduct evaluations in a more interactive and efficient manner.

The use of this type of technology makes PJOK learning more engaging and adaptive, especially for today's digital generation. With gamification and activity tracking systems, students tend to be more motivated because they can see their own progress and engage in learning in a fun way (Fadhilah, Rahayu, Afrinaldi, & Gustiawati, 2024). Furthermore, mobile learning in PJOK allows students to learn anytime and anywhere via smartphones, making learning more flexible and personalized (Syafuruddin, 2023). Furthermore, teachers also benefit significantly: through digital platforms, they can monitor student progress, provide real-time feedback, and adapt materials to individual needs. This opens up opportunities for more adaptive, collaborative, and student-centered learning models, significantly increasing student

participation and commitment to physical education (Ilyasa & Efendi, 2024).

### **Strengthening Teacher Competence as a Key Factor**

The analysis shows that teacher competence is a key determinant of the success of strategies to improve student health through physical education (PJOK). Physical education teachers must be able to utilize digital technology effectively, such as using Google Classroom to design and deliver online or blended physical education lessons. Research by RiwuRohi et al. (2022) indicates that physical education teachers in Kupang City already possess sufficient pedagogical competence to optimize learning through Google Classroom. However, continuous sharpening and training are still essential for smoother technology adaptation. Furthermore, teachers need to develop their capacity to design creative, inclusive, and enjoyable learning, especially when addressing diverse student populations, including students with special needs. For example, a physical education teacher empowerment program in a special school using Integrated Circuit Sport Science technology demonstrated a significant increase in teachers' understanding of the application's use as a teaching aid (Ilahi, Raibowo, Nofrian, & Hiasa, 2024).

Furthermore, teachers are also required to integrate character values, mindfulness, and mental health into sports activities to make learning more holistic and support students' overall development. These skills need to be strengthened through professional training that focuses not only on sports techniques but also on psychosocial aspects (Singh et al., 2025). Furthermore, fitness assessments conducted by teachers must be relevant and sensitive to the needs of each student, not only measuring physical aspects but also taking into account students' mental state and motivation. However, the reality is that the lack of training and mentoring for teachers remains a major obstacle in

implementing this kind of innovative curriculum, especially in the digital era and the Independent Curriculum. Professional development programs such as the Physical Education Teacher Competency Development Program (PKG PJOK) held by the government (Kemendikbudristek, 2024) are very strategic in bridging this gap, as they provide training, mentoring, and collaborative spaces for teachers to improve pedagogical skills, technology, and the holistic nature of learning.

### **Provision of Facilities and Supporting Environment**

Literature shows that the availability of sports facilities is crucial for the success of physical education (PJOK) learning in schools. Schools with limited facilities tend to struggle to implement technology-based learning models or more varied physical activities due to a lack of supporting resources such as sports equipment or flexible spaces (Maulana, Kastrena, & Rochman, 2024). Therefore, strategies to improve student health must include several crucial initiatives: providing simple and versatile sports equipment that can be used for various activities; optimizing school spaces for physical activities; developing partnerships with local sports communities to expand access to facilities; and adapting learning by utilizing digital spaces when physical facilities are limited (Liu, 2022).

Within the framework of implementing a flexible, creative, and relevant sports curriculum, research shows that curricula in the digital era must be designed to adapt to real-world school conditions, student characteristics, and students' physical and mental health needs (Siregar, Ramadani, Situmeang, Sagala, & Naibaho, 2024). An effective physical education (PJOK) learning approach is not limited to traditional sports activities but also integrates various innovative strategies, such as game-based learning, which combines elements of competition and challenge, thereby increasing motivation, active

participation, and providing a fun learning experience for students

Furthermore, light physical activity that can be done at home or in the surrounding environment is an important strategy for facilitating active lifestyles outside of school, especially for students with limited access to sports facilities. Project-based learning, such as health challenges or mental wellness routines, is also highly relevant because it combines physical, cognitive, and affective aspects and teaches students to plan, implement, and evaluate their own fitness activities, ultimately building awareness and personal responsibility for their health (Hu, 2023).

Furthermore, practicing mindfulness before and after physical activity has been shown to improve students' focus, self-control, and emotional regulation, thus maintaining their mental health. Research shows that mindfulness interventions in the context of physical education can reduce stress and anxiety levels, improve concentration, and foster more positive behavioral patterns (Li, 2025). The combination of physical activity and mindfulness also creates a holistic learning experience, integrating students' physical, mental, and social development, thus achieving comprehensive well-being.

Strategies for improving students' physical and mental health in the digital age need to be implemented in an integrated and multidimensional manner, including:

1. Structured physical activity appropriate to the age and condition of students, both at school and at home.
2. Integrating mindfulness to support mental health, increase self-awareness, and reduce stress.
3. Utilizing digital technology, including fitness apps, video tutorials, gamification of physical activity, and digital assessment platforms, to enable learning to be

more adaptive, engaging, and personalized.

4. Increasing teacher capacity to design and implement innovative, creative, inclusive learning that is based on data and individual assessments.
5. Providing adequate supporting facilities, from simple exercise equipment to flexible spaces for various physical activities.

An appropriately adapted sports curriculum not only teaches movement skills or sports techniques but also creates learning experiences that are enjoyable, meaningful, and relevant to the needs of the digital generation. Implementing this approach is expected to foster a sustainable, active lifestyle, improve physical fitness, strengthen mental health, and support the development of positive character and behavior in students. Thus, Physical Education (PJOK) is not only a formal subject but also a strategic tool in preparing a healthy, resilient, and adaptive young generation for the modern era (Siregar et al., 2024).

## Conclusion

Based on the research results, it can be concluded that the implementation of Artificial Intelligence (AI)-based adaptive learning technology through the use of platforms such as ChatGPT and Canva AI in Islamic Religious Education subjects at SMKN 2 Kraksaan has significantly improved the quality of learning. AI technology helps teachers develop more relevant, interactive, and easily understood teaching materials for students. Teachers also have greater flexibility in providing problem-based learning because sources for searching for references are easier to access and require shorter search times. Meanwhile, students also benefit from easy access to information, simpler explanations, and engaging visual support through Canva AI. Students become more active and motivated because they can learn in a way

that suits their characteristics as a digital generation. AI also enables independent learning, allowing students to explore material more broadly according to their interests and needs. However, the implementation of AI also faces several challenges that must be addressed seriously: the low digital literacy of some teachers, the risk of students relying on instant answers without critical thinking, and the need for both teachers and students to be more discerning in processing information provided by AI, to determine whether the information aligns with the teachings they believe in or could be misleading. Furthermore, the absence of school policies specifically regulating the use of AI in

learning has made this implementation uneven. However, opportunities remain wide open for the future. With the support of teacher training, supportive school policies, improved infrastructure, and increased teacher and student awareness in processing the information provided, AI technology can become a crucial part of transforming Islamic Religious Education (PAI) learning to be more relevant to current developments. In conclusion, the use of AI-based technology not only helps accelerate and simplify the teaching and learning process but can also be a strategic tool for instilling Islamic values in a more contextual, creative, and enjoyable way for vocational high school students.

## References

- Apriliyanto, R., Hardovi, B. H., & Sulaiman, A. (2025). The Role of Physical literacy in Improving Fitness and Active Lifestyle. *Journal Sport Area*, 10(1), 86–96.
- Apriyanti, L. S., Mulyana, A., Rahmadewi, A., Tarigan, E. R. P., Zakiyah, H., Sumarni, R., & Nurkamila, R. (2024). Pengaruh Perkembangan Teknologi terhadap Kebugaran Jasmani pada Generasi Alpha. *NUSRA: Jurnal Penelitian dan Ilmu Pendidikan*, 5(2), 618–629.
- Asahri, P. M., & Sartono, S. (2024). Analisis Kesehatan Mental Pelajar di Era Pembelajaran Digital. *Morfologi: Jurnal Ilmu Pendidikan, Bahasa, Sastra dan Budaya*, 3(3), 1–20.
- Aziz, M., Chemnad, K., Al-Harashsheh, S., Abdelmoneium, A. O., Baghdady, A., & Ali, R. (2024). Depression, Stress, and Anxiety Versus Internet Addiction in Early and Middle Adolescent Groups: The Mediating Roles of Family and School Environments. *BMC Psychology*, 12(1), 184.
- He, Q. (2024). *Research on Reforming Physical Education Teaching Strategies Based on Student Needs Perspective*. 6(3), 180–185. <https://doi.org/10.25236/FSR.2024.060326>
- Hu, W. (2023). *Research on the Integration of Physical Education Teaching and Health Education in Practice*. 3(7), 11–15. [https://doi.org/10.53469/jtpss.2023.03\(07\).03](https://doi.org/10.53469/jtpss.2023.03(07).03)
- Ilyasa, M. D., & Efendi, Y. (2024). *Implementasi Program Latihan Kebugaran Jasmani Meningkatkan Kekuatan dan Daya Tahan Siswa di SMP Dharma Karya UT*. Andi 2023, 2003–2008.
- Khemal, A., & Mulyaningsih, E. (2025). *Transformasi Gaya Hidup Aktif di Era Digital: Analisis Literatur pada Pendidikan Jasmani Sekolah*. 24(1), 174–183.
- Liu, J. (2022). *Implementation of Embedded Microprocessor in Optimal Teaching of Physical Health in the Internet Era*. 2022.
- Mustafa, P. S. (2020). *Kontribusi Kurikulum Pendidikan Jasmani , Olahraga , dan Kesehatan di Indonesia dalam Membentuk Keterampilan Era Abad 21*. 4(3), 437–452.



- Mustafa, P. S., Islam, U., Mataram, N., Nusri, A., Asgi, A., Iqbal, M., & Hanim, J. (2021). *Aktivitas Fisik , Pendidikan Jasmani Adaptif , dan COVID-19* (Issue April).
- Oudah, A. Y., Abbood, R. M., Shabib, S. S., Aldewan, L. H., & Ghazi, M. A. (2024). *Developing Physical Education Curricula Within the Framework of Digital Transformation to Achieve Sustainable Development*. 9(3), 86–102.
- Rahayu, A., Setyawan, H., Hendri, N., Yudi, S., Arien, W., Sanjaykumar, S., Padang, U. N., & Maret, U. S. (2024). *Strategies to increase physical activity in elementary school children in the digital age to support a healthy lifestyle Estrategias para aumentar la actividad física de los niños de primaria en la era digital para favorecer un estilo de vida saludable*. 2041, 1410–1421.
- Saputra, S. Y., Kobandaha, F., Annas, A. N., & Fantiro, F. A. (2024). *Inovasi dalam Pembelajaran Pendidikan Jasmani di Sekolah Dasar : Tinjauan Terhadap Literatur*. 4.
- Singh, K., Hill, C., Baisil, S., Orthodox, M., Church, S., Bai, W., Yin, Z., & Education, P. (2025). *Application of digital-intelligent technologies in physical education : a systematic review*. July, 1–17. <https://doi.org/10.3389/fpubh.2025.1626603>
- Tang, C. (2025). *The Impact of Sports Reforms in the New Era on the Physical and Mental Health Development of College Students*. 19(1), 1–16. <https://doi.org/10.4018/IJCINI.368147>
- Ulfadhilah, K., & Nurkhafifah, S. D. (2025). *Kesehatan Mental dalam Transisi Pandemi Covid-19 terhadap Pendidikan Jasmani Anak Usia Dini*. 1(1), 1–10.
- Wijayanto, A., Amiq, F., & Burhaein, E. (n.d.). *MERDEKA BELAJAR PENDIDIKAN JASMANI DAN OLAHRAGA ERA PANDEMI COVID-19*.
- Zibin, W. (2024). *Integrating School Physical Education Into Adolescent Resilience Education in the Context of Integration of Sports and Education in the New Era: A Literature Review Study*. 14(8), 505–519. <https://doi.org/10.17265/2161-623X/2024.08.002>