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A content analysis on the challenges experienced in implementing technology in physical education in Indonesia

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ABSTRACT

Background: The lack of studies that specifically examines the challenges of implementing technology in physical education, with a content analysis approach using NVivo 12 Plus prompted this study to be carried out. **Research Objective:** This study identifies strategies to overcome these obstacles and provides recommendations for policymakers and educators. The aim is to increase the effectiveness of the learning process through more effective use of technology. This research is also encouraged because the related findings are one of the few studies that have been conducted, especially in Indonesia, so this can fill the research gap. **Methods:** This method combines qualitative research with content analysis. It used Nvivo 12 Plus software to discover and analyse the main themes. The units of analysis used are text search queries and case classification. **Finding/Result:** The findings of this study reveal that the employment of technological aids in physical education is beneficial as it allows greater access and flexibility in learning, enhances students' motivation and participation, and offers innovative teaching-learning tools. Nonetheless, inside the Indonesian education sector, there are still identified issues regarding constrained access to technology in many places, considering gaps in the deployment of digital infrastructure and the development of students' and educators' digital skills. **Conclusion:** Improvements in telecommunications infrastructure, better digital literacy among the teaching and student populations, and opportunities for closer governmental cooperation with industry will be vital to addressing these hurdles more effectively. Although there are still some struggles, this research highlights how technology should be implemented in physical education in the digital age. This study helps identify and analyse the main challenges to developing strategies for improving technology use in physical education, especially among students and educators.

Keywords: Digital competence; physical education; teaching innovation; technology adoption

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INTRODUCTION

Technology integration in education leads to several substantial advantages for learning. There are several ways that technology enables such high performance: it enables faster and broader access to information (material), making more learning resources available for students and teachers (Axhami & Axhami, 2023). Students learn anything and anytime worldwide through e-learning platforms, followed by educational applications and digital libraries (Karanth et al., 2024; Dhamdhere, 2012; Xue & Li, 2024). Currently, there are several experiences of physical education teachers also

adopting technology into their teaching (Culajara et al., 2023). Technology enables the creation of more interactive and intriguing ways, such as videos, simulations or educational games, which can increase learner motivation to learn (Ji, 2023; Nikolopoulou, 2022). Technology allows personalised learning, too, through an adaptive learning system that can adjust the material and pace of learning depending on each student's needs (Hamzah et al., 2024).

As this is the digital age, the need for tech in education is also increasing. Given the fast pace of technological innovation and the changing nature of work, students need digital skills. By incorporating technology in education, students become future-ready as these solutions will enable them to learn necessary skills like digital literacy, problem-solving, and critical thinking (Mikhaylovsky et al., 2021; Pombo et al., 2016; Wohlfart et al., 2024). Furthermore, the reality we experienced with COVID-19 in the last years revealed how vital technology is for keeping education alive. By this way, distance learning is a product of the physical limitations, an immediate solution that enables entrapped education to move under even in crisis conditions (Gupta et al., 2023; Kennedy & Gill, 2024). It is a fact that technology in pedagogy is no longer a choice but is imperative now to foster the coming of digitally conscious generations.

Another study determined that technology had led to a drastic change when applied to teaching and learning physical education (Almusawi et al., 2021). Technology implementations such as apps and wearables to track students' physical activity and fitness (Almusawi et al., 2021; Lin et al., 2023). Using fitness apps on devices such as smartwatches or pedometers, educators can track live data of students' physical activities and give immediate feedback to correct errors in exercise targeting specific needs (Goad et al., 2019; Sargent & Calderón, 2021). Further supporting the students' learning development are instructional videos and even sports simulations, which provide visual guidance on how techniques or movements should be performed (Palao et al., 2015).

Furthermore, technology assists with analysing students' performance and progress in physical education. For instance, motion analysis videos permit teachers to record and analyse every movement of the students in detail to point out mistakes and correct them accordingly (Lobo et al., 2024; Ryskaliyev et al., 2024). The real-life practice of augmenting reality (AR) and virtual reality (VR), used in learning scenarios, are beginning to enable students to experience immersive experiences. These technologies are increasingly favoured, making it possible for the element to use headwear that generates a fictitious environment in top maniacal settings (Bo & Yang, 2024; Rassy & Mokmin, 2023). By incorporating this technology, physical education is more fun and interactive and helps students reach their fitness and health goals.

In Indonesia, the application of technology in physical education has existed for a very long time, and this has become visible more during the COVID-19 pandemic. As physical activity in schools currently has limitations, digital platforms, and fitness apps are becoming helpful tools for physical education educators to conduct exercise classes online (Papastergiou et al., 2021). Apps such as Zoom and Google Meet are used to conduct group live sessions, and instructional videos are uploaded to YouTube or any e-learning platform to provide dance movements that children can follow from home (Cahyono, 2021; Nurulfa et al., 2021; Taufik et al., 2022). Finally, many schools are beginning to monitor students' physical activity and health by using wearables like smartwatches. Although this needs to be followed up on in the curriculum, what will mean that technology use remains optional (Nasution & Siregar, 2024; Paramitha et al., 2022). These efforts, however, not only maintain physical education during a pandemic

but also break new ground, which should lead to greater technology integration into the future of physical education.

In the content analysis approach, several studies have applied it to organise and visualise important findings in the field of physical education. These studies use content analysis as an approach to help collect data and to map the findings for easier understanding (Benites et al., 2016; Eyler et al., 2010; Kahan & McKenzie, 2020; Mekic et al., 2019). However, this study does not accommodate how technological challenges are identified in aspects of physical education. Apart from that, this research was not assisted by adequate analytical tools to show content analysis results such as in this research with Nvivo 12 plus. Nvivo 12 Plus is currently considered adequate in content analysis to assist researchers (Zarrett et al., 2012).

From the many previous research results above, findings regarding analysis of the challenges of implementing technology in physical education are one of the few studies conducted, especially in Indonesia. Moreover, analysing it using a content analysis approach maximises the Nvivo 12 Plus analysis tool. This research aims to identify and analyse the main challenges in implementing physical education technology in Indonesia and develop more inclusive and sustainable strategies and implementation models with a content analysis approach. This research also aims to provide practical recommendations for policymakers and educators to overcome the identified challenges and ensure that technology can be used effectively to improve the quality of physical education in Indonesia. This research question maps out several key points. What is the urgency of applying technology in physical education? What are the challenges of implementing technology in physical education in Indonesia? What practical recommendations are needed for policy makers and educators?

METHOD

This study uses a qualitative research method to understand the problems faced by an obstacle in implementing technology in physical education in Indonesia. A qualitative design was selected as it permits a detailed examination of complex and context-dependent phenomena that are not easily quantified. A content analysis approach was chosen in this research to explore and understand the meaning and patterns in the identified documents (Táboas-Pais & Rey-Cao, 2012). The analytical tool employed in this research is Nvivo 12 Plus software. Nvivo 12 Plus systematically allows researchers to manage and organise qualitative data. Nvivo allows the researcher to code this data, to have the central theme, and to have thematic analysis (Apriyanti et al., 2023; Zarrett et al., 2012). In addition, Nvivo is a way for the researcher to visualise the qualitative data, which helps to see the interaction of the emerging and related themes and issues based on the data. Analytical tools like Nvivo 12 Plus use the most efficient data analysis and management of the qualitative research data and discover the findings deeper via a find and explore of the key theme areas.

Data Extraction

In this study, data extraction was performed by identifying and gathering 26 documents relevant to the use of technology in physical education in Indonesia. These documents were found by conducting keyword searches using "Technology AND Physical Education" via Google Search. The documents consisted of government policies, previous research reports, literature reviews, and online news articles related to the topic. There was no year limit for document selection, as the primary focus was on the relevance of the content to the research topic.

Data Collection

The documents collected for the study served as the primary data sources. These sources included government regulations on education and technology, prior studies with similar findings, relevant literature reviews, and educationalists' official reports. The data was then organised and prepared for analysis using qualitative research tools.

Inclusion and Exclusion

The inclusion criteria for the documents were based on their relevance to the keywords "Technology AND Physical Education." Documents that directly addressed the integration or challenges of using technology in physical education were included, regardless of their publication year. Irrelevant documents or those not directly discussing physical education or technology implementation in Indonesia were excluded from the analysis.

Data Coding

Once the documents were transferred into the Nvivo 12 Plus software, the data coding process began. Thematic coding was conducted, with data being categorised into key themes based on the content related to the use of technology in physical education. Nvivo 12 Plus facilitated the systematic organisation of data into nodes, representing emerging patterns, themes, and issues.

Data Analysis

Thematic analysis was performed using Nvivo 12 Plus to identify relationships and interactions between the emerging themes. Themes were generated based on patterns found within the data, and these themes were analysed to uncover central issues. Finally, the findings were compared with relevant literature to provide a broader understanding of the specific context of technology use in physical education in Indonesia. The analysis informed the development of recommendations and implementation strategies for enhancing technology integration in this field. The following are the collection and analysis stages in this research which specifically adopt the flow diagram stages from previous research (Benites et al., 2016), although there are changes following the context of this research.

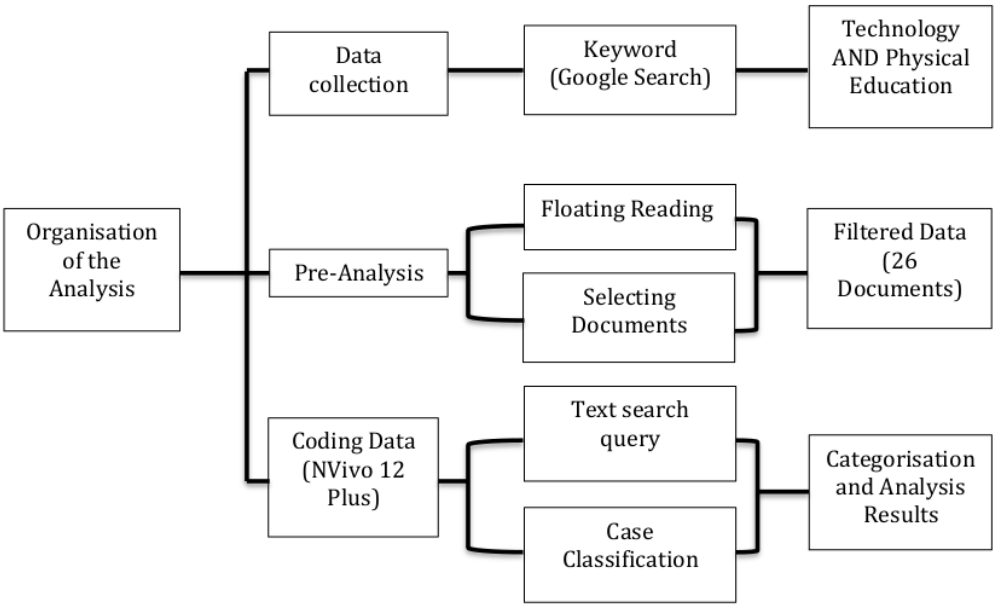

Figure 1. Collection and Analysis Stages

Figure 1 shows the analysis stages starting with data collection using keyword searches on Google, with a focus on the combination of the keywords "Technology AND Physical Education" Next, pre-analysis was carried out using floating reading techniques and document selection, which resulted in 26 relevant documents after the filtering process. The selected data was then analysed using NVivo 12 Plus software, where text searches and case classification were carried out. The final stage involves categorisation of data and analysis of results to draw comprehensive conclusions regarding the application of technology in physical education.

Data analysis occurs in several steps. Data previously extracted from documentation sources are transcribed and imported into NVivo 12 Plus. Secondly, thematic coding was done based on the data. Step 3: Themes were generated, followed by a thematic analysis to determine relationships between these themes. Fourth, the output of this analysis was compared with relevant literature to support the essential findings further and provide an understanding of its specific context in Indonesia. The results of the analysis are then used to develop recommendations and implementation strategies that could enhance technology use in Indonesia's physical education.

RESULTS AND DISCUSSION

This section explores the urgency of implementing technology in physical education, identifies key challenges that need to be addressed, and proposes practical recommendations for policy makers and educators. To help provide brief results for readers in understanding the contents of this section, it can be seen in Table 1.

Table 1. Summary of research findings

The urgency of applying technology in physical education	Increased Access and Flexibility, Increase Motivation and Participation, Monitoring and Evaluation, Innovation in Learning
Challenges of implementing technology in physical education in Indonesia	Gaps in access to technology, Limited digital infrastructure, Digital skills, Procurement costs
A practical recommendation for policy makers and educators	Strengthening investment, digital skills training (Teachers and students), budget management

Table 1 maps the highlights of this section to help provide a concise summary of the overall results and discussion.

The urgency of applying technology in physical education

The use of technology in physical education is urgent to put into practice, which, when viewed from the strategic role of sports to student health (physical/mental/social), the adoption of technology can be more considerate and immediate. In the digital age, technology can provide opportunities for higher-quality physical learning regardless of mobility challenges or physical limitations. Moreover, with the transition to technology-enhanced physical education instruction, tracking students' fitness progress and providing immediate feedback while personalising their exercise according to individual requirements will become easier. It contributes to higher student involvement in sports and helps create an inclusive and sustainable learning environment. Moreover, this study successfully mapped the urgency of technology in physical education, as presented in Figure 2.

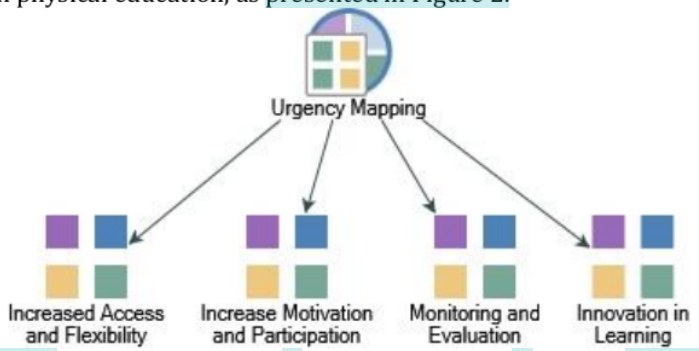

Figure 2. Mapping the urgency of applying technology in physical education

Technology in physical education is instrumental in making learning more accessible and flexible. It no longer works out of the box: with platforms like e-learning tools, instructional videos, and fitness apps, students no longer depend on their geolocation or time to access any learning material (Almusawi et al., 2021; Cahyono, 2021; Lin et al., 2023; Nurulfa et al., 2021). This means the same educational resources can be used anywhere in any urban/rural region without needing to come to class. For instance, students across remote areas can take physical classes for physical classes through fitness apps tied to their wearable devices. Urban area students could use instructional videos in addition to more activities. Within the constraints of regular business or busyness, it opens new doors to encourage more sporting activities amongst students and increases chances for better lifestyles.

On the other hand, physical education is an important area which must implement strategies designed to make students more motivated and participate in sports

activities. With technology integration such tutorials, games and movement analysis; it is not only an interesting learning but also students participate more actively (He & Chen, 2024; Lindberg et al., 2016; Varga & Révész, 2023). In a sport, simulations can offer an experience in the safety of the lab that would put students at risk of injury otherwise whilst getting hands-on understanding how different tactics should be applied. Another interesting way in which are educational games can help students get fitter and healthier is to transform physical movement [exercise] into a playful engaging experience thus making student genuinely interested in their fitness and health.

It also helps teachers with granular movements, which were previously handled only by trained instructors or another expert in person. Teachers can observe and correct moves when students practice techniques through video analysis or sensory tools (Lobo et al., 2024; Ryskaliyev et al., 2024). This not only enhances learning outcomes, but students also get some positive reinforcement to excel further in sports. This technology, on the other hand, allows students to participate in physical activities during class and can make learning even more dynamic and interactive in person.

Technology is also essential for educators to monitor and evaluate our students' physical progress more accurately by evaluating regularly. Connected Wearable Devices: smartwatches or fitness trackers) along with connected fitness apps so that teachers can track real-time physical activity from their students (Almusawi et al., 2021; Goad et al., 2019; Lin et al., 2023; Sargent & Calderón, 2021). Technology can more accurately measure the number of steps, heart rate, or time students have exercised and quantitatively track their fitness levels. Based on real-time data, teachers can give prescriptive advice to their students as they complete tasks and encourage them when things are going well, enabling immediate reinforcement or remedial support.

Technology also helps educators assess students' physical development more thoroughly (Liang, 2024; Liu & Liu, 2020). Teachers can record data and compare it to other training sessions, enabling them to view progress over time and look for possible trends or patterns. It is to promote the outcome of measuring individual students' achievement and planning targeted instruction more properly with each student and monitoring physical education, along with the evaluation in a data role, enable objective final results, which should make more productive by concentrating on progressing students physically.

Augmented Reality (AR) and Virtual Reality (VR) are only some of the technologies that have been innovating methods to teach better and learn more. These technologies have the great possibility of changing the paradigm of physical education (Bo & Yang, 2024; Rassy & Mokmin, 2023). AR offers students a more immersive experience as it overlays virtual objects onto the real world so that they can see everything directly in their surroundings. For instance, students could use AR apps to see three-dimensional models of the human body while studying anatomy or learn correct sports motions. This helps them recall what is being taught, and the learning experience will also become fun and interactive.

In contrast, VR sometimes brings fully into a sports setting or scenario. This means that students can practice through field simulations or sports competitions within their classrooms and in settings close to real-life situations. In physical education, VR can allow students to experience safer circumstances when practising sporting skills. It also gives them a chance at more experimentation and immersive learning that they might not be willing to try out of fear of physical harm. 1) This helps spark students' interest in their learning process and makes them master essential skills quickly. In this sense, technological innovations like AR and VR elevate physical education classes among students as the subject becomes more instigating. It improves their learning experience with a dynamic and impactful strategy that meets such a particular audience well.

In general, technology in physical education offers several significant advantages, from enhancing learning accessibility and flexibility to leveraging innovative teaching methods to boost student motivation by developing new participation opportunities. Moreover, given longer-term physical gains, the more precise use of technology for monitoring and evaluation makes a learning environment reactive to students' needs. By exploiting the promise of this technology, physical education can be more inclusive, efficient, and effective. In conclusion, the use of technology in physical education will change the way learning has traditionally been done, making it more inclusive, quick and effective.

Comparing the findings with previous work, previous research also highlights that in the current educational era, technology integration has become very important to increase learning effectiveness (Almusawi et al., 2021; Cahyono, 2021; Lin et al., 2023; Nurulfa et al., 2021). The findings suggest that fitness apps and fitness tracking tools enable students to engage in physical activity in a more flexible and scalable way, without being hindered by time or location. This includes e-learning and instructional videos increasing the accessibility of learning materials, making them available to students in various regions, including remote areas. These findings are consistent with recent research results that emphasise the role of technology in modernising physical education and increasing students' participation, showing that the use of technology not only supports flexibility and accessibility, but also enriches the learning experience through more interactive and personalised methods.

After considering these findings, the new understanding that emerges regarding the problem is that the integration of technology in physical education not only increases the accessibility and flexibility of learning, but also modernises the teaching approach in a highly interactive and personalised way. Technology such as fitness apps, instructional videos, and fitness tracking tools enable students to engage in physical activity without being hindered by location or time of day, while providing accurate data to monitor and improve their physical development. Additionally, innovations such as Augmented Reality (AR) and Virtual Reality (VR) offer a more immersive and safe learning experience, enriching the learning process with simulations and educational games. In conclusion, technology in physical education opens up new opportunities for student motivation and participation, as well as enabling learning adjustments that are more responsive to individual needs, changing the physical education paradigm to be more inclusive, efficient and effective.

Challenges of implementing technology in physical education in Indonesia

While the application of technology in physical education has already promised many things, such as increasing accessibility and providing a variety of innovative processes for learning success, challenges still need solutions, especially within educational circumstances throughout Indonesia. This study will map some of the main challenges facing Indonesia, as seen in Figure 3.

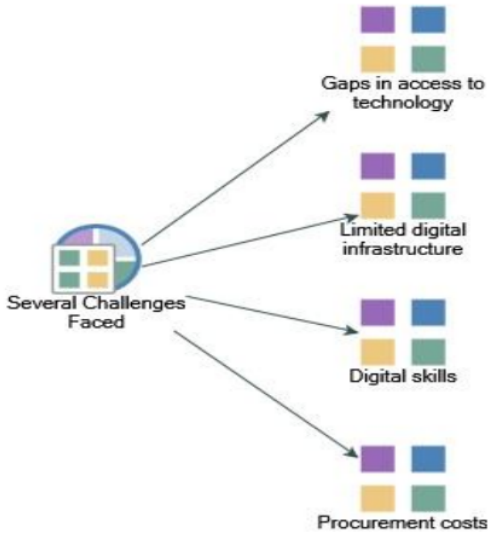

Figure 3. Challenges of implementing technology in physical education in Indonesia

Indonesia faces crucial aspects in implementing technology development for physical education and shared some prediction-solving methods to ensure the implementation will work adequately. The biggest challenge is the digital divide regarding technology access across regions. Indonesia is improving its internet penetration, but the gap between rural and urban areas has long existed. This is also because only significant cities have vast digital infrastructures, and far-off places need more internet connection (Iwana et al., 2022; Sujarwoto & Tampubolon, 2016). This influences the availability of technology tools in rural schools and students, who are also demographically found within these areas where physical learning could benefit from e-learning applications or instructional video-based devices like wearables that require a reliable internet connection. Students in outlying areas faced obstacles accessing relevant and tech-enabled resources without regular access (Nurulfa et al., 2021).

The lack of access and resource-poor digital infrastructure in Indonesia's schools for physical education is directly connected to the 4G availability gap between densely populated urban areas versus sparsely-populated rural regions. The data shows that urban places with a density of more than 1.000 people per square kilometre enjoy having their phones connected to the internet using 4G almost nine out of ten times they have a mobile device switched on, while in rural areas where there are only around or less than 50 inhabitants across every square kilometre is no better off obtaining as little as three quarters (76%) connection (Pertiwi & Yusuf, 2019). This shows a 13 per cent gap, indicating that digital infrastructure is more densely concentrated in urban areas and lags behind the outskirts of some learning outcomes on improved interactive physical education technology.

Moreover, a significant challenge is the development of digital skills by teachers and students. Even though the internet is a domain of younger generations, Indonesian teachers still need more digital skills. The use of technology in educational settings is an area in which many teachers still need to be competent (Nopembri et al., 2022; Rahman et al., 2021). In addition, students must also be supported in acquiring a good amount of digital literacy so that they can use technology in a way that is related to physical learning (Afriliandhi et al., 2022; Wicahyani et al., 2021). This will need ongoing professional learning for teachers, including increased attention to media and digital literacy across the curriculum.

Finally, the acquisition costs of technology represent another big hurdle. Even if some schools can afford the initial cost of hardware and software licences or internet subscription fees, which prove something even more prohibitive, where can installation best fall? A correct view of the allocation strategy for education funds is also needed to ensure that schools can have fair access to the technology necessary for enhancing physical quality. Through the following steps in a structured manner, Indonesia will be able to make better use of technology for physical education and thereby become an inclusive adaptive learning institution by reaching out to students everywhere.

Then the Ministry of Education, Culture, Research and Technology explained that funding for school digitalisation will eventually fall t, totalling IDR 3 trillion (Kemdikbud, 2020). The amount of money needed to digitise this school is actually IDR 15 trillion, but there are only IDR 3 trillion available per year. This also shows a budget constraint on purchasing technology devices in Indonesia, making education quality distribution difficult across schools.

Although technology has great potential to improve physical education in Indonesia, significant challenges remain that require concrete solutions. The digital divide between urban and rural areas is a major issue affecting technology accessibility, with large differences in internet penetration and digital infrastructure between dense and remote areas. This inequality hinders the effective implementation of technologies, such as e-learning and video-based applications, which rely heavily on stable internet connections. Additionally, limitations in digital skills in both teachers and students exacerbate the situation, as a lack of adequate training hinders the optimal use of technology in physical education. This shows the need for greater investment in digital infrastructure development and skills training to maximise the potential of technology in improving the quality of physical education.

Argumentatively, it can be emphasised that even though the government has allocated funds for school digitalisation, the existing budget is far from sufficient compared to actual needs. With an allocation of IDR 3 trillion per year out of a total requirement of IDR 15 trillion, there is a significant funding shortfall, resulting in unequal distribution of technology across schools. To overcome this challenge, a more efficient funding allocation strategy is needed as well as collaboration between the public and private sectors to support technology procurement and maintenance. With a structured and comprehensive approach, Indonesia can overcome these obstacles and utilise technology effectively to improve the quality of physical education in all regions, both urban and rural.

A practical recommendation for policy makers and educators

This shortage of access and limited digital infrastructure reveals the need for more investment in the pooled development of telecommunications and internet frameworks in remote areas. This would make sure that all students, no matter geography, have quite access to physical learning era-less than support (Lembani et al., 2020). Further, to address some of the challenges around digital skills development, a comprehensive approach is required for training teachers and embedding a more expansive, across-the-board programme into education on digital literacy (Huang, 2024). This will increase teachers' tech literacy and train the future to deal with more complex technological requirements later on.

Another thing is the challenges of regions with costs, which also need to be a joint solution for other related governments and families in using funds because education must proceed sustainably (Tien et al., 2020). Budget Management: Athletic directors

should deploy best practices around budget management so that investments in physical education technology can yield the most excellent possible results for student learning. So, the above challenges have to be addressed comprehensively in order for Indonesia to be able to create a physical education which is more inclusive, innovative and adaptive towards each of their students that seeks them an opportunity to maximize their potential as they enter this digital era.

Exploiting technology in physical education has proven time and relentless dedication to the cause from a host of stakeholders. Access to telecommunications and internet infrastructure in remote regions cannot be reduced, not only because of the enormous financial investment required for its construction but also due to proper planning necessary between government initiatives- the private sector and civil society. In addition, the adaptation of digital skills with both teachers and students underlines the continued mobilisation in training and professional development while ensuring a holistic approach to embracing digital literacy across all academic curriculum areas (Huang, 2024; Lembani et al., 2020; Tien et al., 2020). It is a long-term investment by the physical education sector to build a baseline for whatever emerging complex technology comes into the future.

In policy terms, this research provides an important foundation for future studies by highlighting the need for strategic investment in digital infrastructure and digital skills development in physical education. The findings from this research underline that to achieve more inclusive and adaptive physical education in the digital era, it is important for policymakers to design policies that support technology development in remote areas and improve teachers' digital skills. By utilising practical recommendations on budget management and collaboration between government, the private sector and civil society, the policies developed will be able to address cost and access challenges and ensure that investments in physical education technology provide optimal results. This research paves the way for further studies that could dig deeper into the implementation of specific policies, the effectiveness of training programs, and the long-term impact of technology on the quality of physical education. Thus, this research serves as a strong basis for developing innovative and strategic policies for improving physical education in Indonesia.

CONCLUSION

Technology in physical education increases access to learning by providing flexibility and student motivation and allows for more participation. Technology allows for more efficient monitoring and evaluation and brings innovation in teaching-learning methods. Even though technology in physical education has been applied and offers many benefits, some obstacles still need to be addressed, particularly in the educational context in Indonesia. The study flagged significant challenges like the need for more technology access in different areas, insufficient digital infrastructure, and trouble teaching computer-related skills to educators and students. Besides that, the problem of costs related to procurement technologies is also significant in improving technology effectiveness in physical education in Indonesia. Indonesia has encountered several obstacles in applying technology in physical education. A significant investment in the telecommunications infrastructure and internet networks in remote areas, as well as attention to digital competence for teachers and students. To maximise the impact, they must work with the government and private sectors for an all-inclusive land market as well-integrated technology. Therefore, Indonesia always keeps on the ideals of its heroes and is committed to advancing physical education in an inclusive, creative, and adaptive way for all students today as a part of this digital era.

The limitations of this research are seen in the researcher's inability to carry out an initial set of data from the results of in-depth interviews with related parties. It is necessary to see a broad perspective. The recommendation of this research for future research is that more exploration is needed by paying attention to the methodological side, such as collecting interview data. On the other hand, recommendations from the findings of this study to overcome the identified challenges are also outlined. Recommendations for overcoming the challenges identified in this research include the need for greater investment in telecommunications and internet infrastructure in remote areas, as well as increasing digital competency for teachers and students through comprehensive training programs. The implications of this study indicate that to achieve effective implementation of technology in physical education, collaboration between government, the private sector, and civil society is essential. These recommendations include the development of policies that support broader technology access and budget efficiency for educational technology.

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CONFLICT OF INTEREST

There is no conflict of interest.

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