



## Optimizing Pencak Silat Learning with a Digital Audio Approach

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### Abstract

Audio digital Pencak Silat learning maintains traditional Indonesian values and improves physical skills. Students can be more motivated to learn Pencak Silat because this technology allows them to learn in a more interesting and interactive way. It is hoped that this step can improve Pencak Silat learning in elementary schools, encourage a healthy lifestyle, and preserve national culture. This study utilizes quantitative and qualitative descriptive surveys. A total of 65 of them are students, trainers and stakeholders in the field. After the survey was completed, most participants stated that they wanted to use additional media to teach pencak silat. As many as 80% of students, 65% of coaches and all sports education experts say that digital audio can be a great tool to enhance the learning experience. In terms of views on digital audio, 85% of students, 70% of trainers and all education experts stated that in pencak silat learning, 70% of students and 50% of trainers said This shows that although digital audio is not new, there are still opportunities to introduce and teach a wider range of people to use this technology. Learning sports, especially pencak silat, is assisted by digital audio media. The use of digital audio as a medium for learning pencak silat has great potential to answer various challenges, especially in terms of flexibility and attractiveness of learning. This could be applied more widely across schools

## INTRODUCTION

Physical education in Indonesia has experienced significant development in the last few decades. Awareness of the importance of health and fitness is increasing, reflected in schools which are now more serious about providing better physical education facilities and programs. Teachers are starting to adopt innovative teaching methods, integrating technology and interactive approaches to increase student engagement. However, challenges such as lack of facilities, limited resources, and the need for a more inclusive approach are still obstacles that need to be overcome so that physical education can provide maximum benefits for students. (Sucipto et al., 2021)

The development of Pencak Silat learning in elementary schools also reflects an increase in efforts to preserve culture and physical education (Ihsan et al., 2022). Recognized as part of the national education curriculum, Pencak Silat is taught in a structured manner, covering basic techniques, history and cultural values such as discipline and cooperation. Schools have developed special curricula and trained teachers to teach Pencak Silat effectively. The teaching methods used vary, from demonstrations to physical exercises, helping students understand the movements and philosophy behind this martial art (Ilham et al., 2023).

However, student participation in Pencak Silat learning often decreases due to several factors. Students are often more interested in other, more modern activities, lack self-confidence due to high competition, and limited training facilities at school. Apart from that, academic pressure and other activities make it difficult for students to find time to practice Pencak Silat. This challenge shows the need for new approaches to increase student interest and participation, such as by improving facilities and

adopting more teaching methods. (Gandasari et al., 2023)

To overcome these challenges, optimizing digital audio-based learning media is a potential solution (Rizki, 2019). The use of digital audio can provide clear and dynamic instruction, helping students better visualize movement (Yasin et al., 2023). This technology also allows students to access materials anytime and anywhere, so that learning becomes more flexible and inclusive. Research shows that the use of digital media such as audio applications has high effectiveness in increasing student engagement and making it easier to understand basic Pencak Silat techniques (Efendi Pohan, 2020).

Digital audio-based Pencak Silat learning not only focuses on improving physical skills, but also supports the preservation of traditional Indonesian values. With this technology, students can learn in a more interesting and interactive way, so that their motivation to learn Pencak Silat can increase. This step is expected to be able to strengthen Pencak Silat learning in elementary schools, promote healthy lifestyles, and preserve the nation's cultural heritage (Pustikayasa et al., 2023).

Pencak silat is a traditional martial art originating from the archipelago, including Indonesia, Malaysia, Brunei, Singapore, and the southern part of the Philippines (Nurhadi, 2022). This martial art contains four main aspects: mental-spiritual, cultural arts, self-defense, and sports. Pencak silat has its roots in different local traditions in each region, such as Minangkabau, Java, Sunda and Bali, which each developed their own unique styles and techniques. (Wilson, 2020). In the beginning, pencak silat was used as a way to defend oneself and part of traditional ceremonies, as well as being a cultural and spiritual expression of society. In the 1970s and 1980s, pencak silat began

to be modernized and promoted as a competitive sport, with the establishment of the International Pencak Silat Fellowship (PERSILAT ) in 1980 (Nurhanifa et al., 2021). Since then, pencak silat has been recognized as an official sport in international events such as the SEA Games and Asian Games. In the digital era, pencak silat utilizes technology to expand its distribution, including through social media, learning applications and online tutorials, which facilitate access and attract the interest of the younger generation and the international community. (Zuhaida, 2023)

In , UNESCO recognized pencak silat as an Intangible Cultural Heritage, strengthening its position as an important part of the world's cultural heritage. This recognition not only increases national pride, but also motivates the preservation of pencak silat as a symbol of cultural identity. The basic techniques of pencak silat include stances, stances, step patterns, punches, kicks and parries. In competition, kicks are often the main attack, with speed and power being the determining factors for success. The mental-spiritual aspect is also highly emphasized, teaching character development, discipline and calm. (Fadhilah, 2024)

The four aspects of ak silat complement each other. The cultural arts aspect reflects aesthetic values and local traditions, while the martial arts aspect teaches attack and self-defense techniques. The sporting aspect involves physical training and competitions which are professionally organized by federations such as IPSI and PERSILAT. Overall, pencak silat not only teaches physical skills but also ethical, cultural and spiritual values, making it a way of life that emphasizes balance between the physical and spiritual. (Kencana & Romadhoni, 2024)

Physical education in elementary schools is an integral part of the educational curriculum which aims to develop students' physical, mental, emotional and social development through physical activity, sports and games (Lengkana & Sofa, 2017). The main goal is to help students understand the importance of an active and healthy lifestyle and improve motor skills, physical fitness, and teamwork (Kanahaya et al., 2024). Through physical education, students learn about basic concepts such as coordination, balance, strength, flexibility, and endurance, while also developing knowledge of the rules and strategies in various sports and games (Suherman, 2018). Physical education in elementary schools is also a means of teaching values such as cooperation, sportsmanship, discipline, responsibility, and respect for diversity in physical abilities (Susiana et al., 2019). Apart from that, physical education also plays a role in promoting enjoyable physical activities and making students feel confident in participating in physical activities inside and outside school (Dahlan et al., 2022).

Physical education learning is a process that involves developing motor skills, increasing physical fitness, and understanding the importance of a healthy lifestyle through physical activity (Candra et al., 2023). This definition includes various activities designed to improve students' physical health, such as various sports, games, gymnastics and other physical exercises (Bangun, 2016). Apart from that, physical education learning also aims to shape students' character, such as self-confidence, cooperation and a sense of responsibility. Overall, physical education learning plays an important role in forming a generation that is physically, mentally and emotionally healthy (Syafuruddin et al., 2022).

Digital audio is a representation of sound that is recorded, stored and

processed in digital form, which means the sound is converted into binary code that can be understood by a computer or other electronic device (Bowo et al., 2024). This digitization process involves measuring sound at certain time intervals and converting it into a digital signal consisting of a series of binary numbers (Setiyanto et al., 2023). In digital representation, sound is represented as a collection of sound samples that measure the amplitude of sound waves at certain points in time (Febriani, 2019).

Digital audio has a number of advantages compared to analog audio, including better sound quality, the ability to be copied and distributed easily via digital media, and the ability to be corrected and manipulated using sound processing software (Priyatna & Fatahillah, 2023). The use of digital audio has revolutionized the music, recording, broadcasting and entertainment industries, enabling the production of higher quality sound, wider distribution and continued development of audio technology innovation (Dr. Jokhanan Kristiyono, 2023).

## METHODS

This research uses a survey method with a quantitative and qualitative descriptive approach to get an in-depth picture of the need and potential for using digital audio in learning pencak silat. The data collected was a questionnaire aimed at identifying respondents' experience needs and views on the use of digital audio with 65 respondents whose backgrounds were students, coaches and stakeholders in the field of sports education. With questions related to learning experiences, access to technology, and learning media preferences. Apart from that, it uses

literature studies that review research and best practices in technology-based learning, especially digital audio. And scientific articles, books, and reports related to education and technology in martial arts.

Type of Respondent	Amount	Age Range	Experience
Pencak Silat Students	50	15-25 years	1-3 years
Pencak Silat trainer	10	30-50 years	>5 years
Sports Education Expert	5	35-60 years old	>10 years

## RESULT

In Optimizing Pencak Silat Learning with a Digital Audio Approach, after conducting a survey, most respondents expressed the desire to use additional media in learning pencak silat. As many as 80% of students, 65% of coaches and 100% of sports education experts stated that digital audio can be an effective tool to improve the learning experience. This shows that digital audio media has a strong appeal to enrich the traditional learning process.

Respondent Category	Wanting Additional Media	Don't Want Additional Media
Pencak Silat Students	80%	20%

<b>Pencak Silat trainer</b>	65%	35%
<b>Education Specialist</b>	100%	0%

On views towards digital audio. From the survey, as many as 85% of students, 70% of trainers and 100% of education experts gave a positive view of the use of digital audio in learning pencak silat. Respondents stated that this technology could help improve understanding of the material, especially in terms of movement techniques and pencak silat philosophical values.

<b>Respondent Category</b>	<b>Positive towards Digital Audio</b>	<b>Negative or Neutral</b>
<b>Pencak Silat Students</b>	85%	15%
<b>Pencak Silat trainer</b>	70%	30%
<b>Education Specialist</b>	100%	0%

In Experience with digital audio technology, as many as 70% of students and 50% of trainers stated that they were familiar with this technology. This shows that although digital audio is not new, there is still an opportunity to introduce and train the use of this technology more widely among coaches.

<b>Respondent Category</b>	<b>Familiar with Digital Audio</b>	<b>Not Familiar</b>
<b>Pencak Silat Students</b>	70%	30%
<b>Pencak Silat trainer</b>	50%	50%

In previous research by (Sucipto et al., 2021) regarding Use Technology in Learning Pencak Silat This research discusses the use of technology in learning martial arts, including pencak silat. This research identifies ways technology, such as audio and video-based applications, can help in improving understanding and skills in pencak silat, especially for beginners. This technology provides movement simulations that can be repeated by students.

Based on research conducted (Harahap, 2022) Effectiveness of Self-Defense Learning through Audio Visual. This research examines the effectiveness of audio-visual media, including digital audio, in self-defense learning. The research results show that the use of sound to explain certain techniques in pencak silat can improve understanding and physical performance, because students can hear explanations and instructions more clearly, even when unable to see a live demonstration.

Apart from that, from previous research conducted by (Gandasari et al., 2023) on the Use of Audio in Learning Pencak Silat Movements, this research examines how digital audio can be used to provide verbal instructions regarding the steps or sequence of movements in pencak silat. Digitally produced audio can reduce reliance on physical instructors and enable independent practice for students, as well as increasing awareness of body movements more effectively.

## DISCUSSION

The digital audio media developed has a positive impact on the physical education learning process, especially on pencak silat material. Potential to be implemented on a wider scale in various schools. In addition, the advantage of this media lies in its ability

to provide uniform and repetitive instructions, so that students can learn and master pencak silat techniques independently by listening to the audio repeatedly. The use of digital audio as a learning medium in pencak silat has great potential to answer various challenges, especially in terms of flexibility and attractiveness of learning. From the survey findings, it appears that most students want innovation in learning methods. Digital audio technology is considered capable of meeting this need by providing a learning experience that is easily accessible anytime and anywhere.

However, implementing this technology requires attention to several aspects. Key challenges, such as limited access to technology in certain areas, mean that implementation strategies need to include offline options to increase inclusivity. In addition, special training for trainers is an important step so that they can make maximum use of technology.

The importance of media combinations is also highlighted. Sports education experts suggest that digital audio should not stand alone, but be complemented by visual media such as video to provide a more comprehensive understanding with the addition of Audio Content Development. The material should cover basic techniques, philosophy, and concentration exercises and use engaging narratives and background music to increase interest. Apart from that, involve trainers, students and in content development with access to devices and supporting networks.

## CONCLUSION

Optimizing pencak silat learning through a digital audio approach shows great potential in improving the quality and attractiveness of learning. However, successful implementation requires synergy between trainers, students, and technology providers. With the right strategy, pencak silat can continue to develop as a relevant cultural heritage in the modern era. By utilizing audio technology, the learning process becomes more interesting, interactive, and can be accessed at any time, making it easier for children to learn pencak silat movements independently outside of school hours. This approach also supports the development of students' creativity and memory through a deeper understanding of the philosophy, basic techniques and movements of pencak silat, while introducing the cultural values contained therein. Thus, digital audio-based learning has the potential to be an effective alternative for introducing and preserving the martial art of pencak silat among the younger generation.

## REFERENCES

- Bangun, S. Y. (2016). The Role of Physical Education and Sports in Educational Institutions in Indonesia. *Educational Publications*, 6(3). <https://doi.org/10.26858/publikan.v6i3.2270>
- Candra, O., Pranoto, N. W., Ropitasari, R., Cahyono, D., Sukmawati, E., & Cs, A. (2023). The Role of Physical Education in Gross Motor Development in Early Childhood.

- Journal of Obsession: Journal of Early Childhood Education*, 7, 2538–2546.
- Dahlan, F., Mahyuddin, R., & Muslim, M. (2022). The Role Of Schools And Physical Education In Supporting Sports Achievement: Literature Review. *Jp.Jok (Journal of Physical Education, Sports and Health)*, 6(1), 117–128.  
<https://doi.org/10.33503/Jp.Jok.V6i1.2058>
- Dr. Jokhanan Kristiyono, S. T. M. M. K. (2023). *Media Convergence: Transformation of Communication Media in the Digital Era*. Prenada Media.
- Efendi Pohan, A. (2020). Online Learning Concept Based on a Scientific Approach - Albert Efendi Pohan, S. In *CV. Sarnu Untung*. Cv Publisher. Sarnu Untung.
- Fadhilah, M. E. (2024). Development of Gamification-Based Digital Learning Media Innovation in Healthy Living Culture Learning Materials for Students in Junior High Schools. *Attadib: Journal Of Elementary Education*, 8(3).
- Gandasari, M. F., Yosika, G. F., Suwanto, W., Purnomo, E., Perdana, R. P., & Purnamasari, A. D. (2023). The Influence of Audio Visual Media on the Results of Single Art Pencak Silat Movements. *Physical Activity Journal (Paju)*, 4(2), 231–244.
- Harahap, F. Y. (2022). *Effectiveness of Physical Education, Sports and Health Learning Using Audio Visual Media in Class V Min 1 Padangsidimpuan*. Iain Padangsidimpuan.
- Ihsan, N., Sasmita, W., & Suwirman, S. (2022). *Technology in Pencak Silat Learning*. Rajawali Press.
- Ilham, W., Musa, N. M., & Amin, R. M. (2023). Pencak Silat as Cultural Heritage: Local Identity of the Ulu Ambek Silat Art in Pariaman, West Sumatra. *Al Mabhats: Journal of Social Research of Religion*, 8(1), 37–54.  
<https://doi.org/10.47766/Almabhat.s.V8i1.1046>
- Kanahaya, D., Khaerunisa, H., Hakiki, I. N., & Mujahadah, N. (2024). Harmonizing Body and Mind: The Cognitive Benefits of Incorporating Gymnastics into Physical Education. *Karimah Tauhid*, 3(3), 3669–3684.
- Kencana, M. M. T., & Romadhoni, W. N. (2024). Determination of Emotional Quotient (Eq) in Pencak Silat Athletes. *Kinesthetics: Scientific Journal of Physical Education*, 8(4), 738–748.
- Lengkana, A. S., & Sofa, N. S. N. (2017). Physical Education Policy in Education. *Sports Journal*, 3(1), 1–12.  
<https://doi.org/10.37742/Jo.V3i1.67>
- Nurhadi, A. (2022). *The Influence of Islamic and National Education Values in Pagar Nusa Gasmi Pencak Silat in Polbayem Village, Sumber District, Rembang Regency*. Iain Holy.
- Nurhanifa, Junaedi, S., & Prasetya, W. (2021). Sman 1 Garum Blitar's active work in preserving and developing Pencak Silat has an impact on achievements in 2018-2020. In *Sinkesjar* (Vol. 1, Issue 1, Pp. 525–532). Nusantara University PGRI Kediri.
- Priyatna, H., & Fatahillah, M. L. (2023). *Information and Communication Technology Dictionary*. Scholarly Nuance.
- Pustikayasa, I. M., Permana, I., Kadir, F., Zebua, R. S. Y., & ... (2023). *Educational Transformation: A Practical Guide to Technology in the Learning Space*. Pt. Sonpedia Publishing Indonesia.

- Rizki, A.P. (2019). *The Effect of Zig-Zag Run and Shuttle Run Training on the Agility of Pencak Silat Athletes at Muhammadiyah 1 Pringsewu High School in 2018*.
- Sucipto, A., Adrian, Q. J., & Kencono, M. A. (2021). Martial Art Augmented Reality Book (Arbook) as a learning medium for the Indonesian martial art Pencak Silat. *Sisfokom Journal (Information and Computer Systems)*, 10(1), 40–45.
- Suherman, A. (2018). Physical Education Learning Curriculum. In *Upi Sumedang Press*. Upi Sumedang Press.
- Susiana, R., Pradana, D., & Juntara, P. E. (2019). Value Transformation Through Physical Education Learning in Building the Character of 21st Century Students. *National Seminar on Education, Faculty of Education*, 192–200.
- Syafruddin, M. A., Jährir, A. S., Yusuf, A., Ikadarny, & Yusuf, A. (2022). The Role of Physical Education and Sports in Forming National Character. *Medan Stock Building Scientific Journal*, 10(2), 73–83.
- Wilson, I. D. (2020). *Energy Politics in Pencak Silat Practice in West Java*. Indonesian Obor Library Foundation.
- Yasin, M., Kelrey, F., Ghony, A. M., Syaiful, M., Karuru, P., Pertiwi, A., Abadi, A., Ardiansyah, W., Kabanga', T., & Aryanti, N. (2023). *Innovative Learning Media: Applying Creative Learning Media to Welcome Education in the Era of Society 5.0*. Pt. Sonpedia Publishing Indonesia.
- Zuhaida, A. (2023). Learning Stem-Project Based Learning Based on Used Materials in IPA Learning. *Actualization and Problems in Learning*, 117.