



Improving Rhythmic Gymnastics Learning Outcomes with Audio Visual Media

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ABSTRACT

Physical Education, Sports, and Health (PJOK) learning plays an important role in developing students' motor skills, physical fitness, and overall learning competencies. However, rhythmic gymnastics learning in elementary schools often encounters challenges, particularly among young learners who experience difficulties in understanding movement sequences, maintaining balance, coordinating body movements, and following rhythm accurately. This study aimed to improve rhythmic gymnastics learning outcomes through the use of audio visual media among Grade I students at SDN 1 Landasan Ulin Selatan. This research employed a Classroom Action Research (CAR) design conducted in two cycles. The participants consisted of 26 Grade I students, including 10 boys and 16 girls. Data were collected through observation, performance tests, and documentation. Each cycle included planning, acting, observing, and reflecting stages. Audio visual media in the form of rhythmic gymnastics instructional videos were utilized to support the learning process and enhance students' understanding of movement patterns. The results revealed a significant improvement in students' learning outcomes. Learning mastery increased from 31% in the pre-cycle stage to 42% in Cycle I and further improved to 88% in Cycle II. In addition, students demonstrated higher levels of participation, motivation, confidence, and enthusiasm during learning activities. Improvements were also observed in motor skill components, including movement coordination, balance, flexibility, and rhythm accuracy. The classroom atmosphere became more active, interactive, and student-centered throughout the implementation of the intervention. In conclusion, the use of audio visual media effectively improved rhythmic gymnastics learning outcomes and motor skill performance among Grade I elementary school students. Therefore, audio visual media can be recommended as an innovative and effective instructional medium for movement-based learning in Physical Education, Sports, and Health classes.

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INTRODUCTION

Physical Education, Sports, and Health (PJOK) is an integral component of elementary education that contributes significantly to the holistic development of



children. Through structured physical activities, PJOK promotes physical fitness, motor competence, cognitive development, social interaction, emotional regulation, and character building (Mustafa & Dwiyoogo, 2020; Casey & Goodyear, 2019). In contemporary educational paradigms, PJOK is expected to facilitate meaningful learning experiences that actively engage students and foster lifelong participation in physical activity (Kirk, 2020; UNESCO, 2021).

One of the essential learning materials taught in elementary schools is rhythmic gymnastics. Rhythmic gymnastics combines body movements with rhythm, music, coordination, flexibility, and balance, making it an effective medium for developing fundamental motor skills among young learners (Logan et al., 2018; Barnett et al., 2022). At the elementary school level, particularly in Grade I, rhythmic gymnastics serves as an important foundation for children's motor development because it integrates locomotor, non-locomotor, and manipulative movement patterns into coordinated activities (Robinson et al., 2019).

Motor skill development during early childhood and elementary school years has been identified as a crucial determinant of future physical activity participation and health outcomes (Lubans et al., 2021). Children with higher levels of motor competence tend to demonstrate greater confidence, improved physical literacy, and stronger engagement in physical activities compared to those with lower motor competence (Barnett et al., 2022). Therefore, effective rhythmic gymnastics instruction is necessary to ensure that students acquire fundamental movement competencies.

Despite its importance, the implementation of rhythmic gymnastics learning in elementary schools often encounters various challenges. Teachers frequently rely on conventional teaching approaches that emphasize verbal explanations and direct demonstrations without utilizing innovative instructional media (Putri & Suryadi, 2022). Such approaches may be insufficient for young learners who require concrete visual representations and repeated movement demonstrations to understand and imitate movement patterns effectively (Mayer, 2021).

Observations conducted at SD Negeri 1 Landasan Ulin Selatan revealed several learning difficulties among Grade I students during rhythmic gymnastics lessons. Many students experienced problems in following movement sequences, synchronizing movements with rhythm, maintaining balance, and demonstrating coordination. Furthermore, students exhibited low enthusiasm and limited confidence when participating in learning activities. Initial assessment results indicated that only 31% of students achieved the Minimum Mastery Criterion (KKM), while 69% failed to meet the expected learning standards. This condition demonstrates a substantial discrepancy between curriculum expectations and actual learning outcomes.

The integration of technology and multimedia into physical education has become a growing area of interest in educational research. Advances in educational technology have transformed traditional teaching approaches by providing more interactive, engaging, and student-centered learning environments (Goodyear et al., 2021). Among various technological innovations, audio visual media has emerged as one of the most

effective instructional tools for enhancing learning outcomes across different educational contexts.

Audio visual media refers to instructional materials that combine visual elements, such as images and videos, with auditory components, including narration, music, and sound effects (Arsyad, 2021). According to Mayer's Cognitive Theory of Multimedia Learning (2021), students learn more effectively when information is presented through both visual and auditory channels because it facilitates deeper cognitive processing and improves information retention.

Several studies have demonstrated the effectiveness of audio visual media in physical education settings. Sari et al. (2023) reported that video-based learning significantly improved students' motor skill performance and learning achievement in elementary school PJOK classes. Similarly, Rahmawati (2021) found that audio visual learning resources increased students' motivation, participation, and understanding of movement concepts during physical education lessons.

International studies have also highlighted the positive impact of multimedia learning on motor skill acquisition. Chen et al. (2022) found that instructional videos enhanced movement accuracy and learning efficiency among primary school students. Likewise, Palmer et al. (2021) reported that video-assisted learning improved students' ability to observe, analyze, and reproduce complex motor movements.

Research conducted by González-Calvo et al. (2020) further demonstrated that digital learning media could create more engaging and enjoyable physical education experiences. Children exposed to multimedia-supported instruction showed higher levels of attention, enjoyment, and active participation than those taught through traditional methods. Similar findings were reported by Hyndman and Pill (2022), who concluded that technology-enhanced physical education contributes positively to both cognitive and psychomotor learning outcomes.

Within rhythmic gymnastics specifically, visual demonstration plays a critical role in helping students understand movement sequences, timing, and rhythm synchronization (Bobo-Arce & Méndez-Rial, 2021). Repeated exposure to movement demonstrations through video allows students to observe details that may not be fully captured during live demonstrations, thereby facilitating motor learning and movement correction (Schmidt et al., 2019).

Although previous studies have established the effectiveness of audio visual media in enhancing learning outcomes and motor skills, several limitations remain evident in the existing literature. First, most studies have focused on upper elementary, junior high, or secondary school students, while research involving Grade I elementary school students remains relatively limited (Sari et al., 2023; Rahmawati, 2021). Second, many studies have examined the use of audio visual media in general physical education contexts without specifically investigating its application in rhythmic gymnastics learning. Since rhythmic gymnastics requires the integration of rhythm, coordination, balance, and movement synchronization, its instructional characteristics differ substantially from other physical education activities (Bobo-Arce & Méndez-Rial, 2021).

Third, previous research has primarily concentrated on cognitive achievement and general motor skill development, with limited attention given to comprehensive learning outcomes encompassing psychomotor performance, student engagement, confidence, and participation during rhythmic gymnastics activities (Palmer et al., 2021; Hyndman & Pill, 2022). Fourth, there is still a scarcity of classroom action research examining how audio visual media can directly address specific instructional challenges faced by teachers in elementary school rhythmic gymnastics classes, particularly within Indonesian educational settings. Consequently, empirical evidence regarding the effectiveness of audio visual media for improving rhythmic gymnastics learning outcomes among Grade I students remains insufficient. These gaps indicate the necessity for further investigation to determine whether audio visual media can effectively improve rhythmic gymnastics learning outcomes in early elementary education while simultaneously increasing student motivation, participation, and movement competence.

Based on the identified problems and research gaps, this study aims to improve rhythmic gymnastics learning outcomes through the implementation of audio visual media among Grade I students at SD Negeri 1 Landasan Ulin Selatan. Specifically, the study seeks to examine how audio visual media influences students' mastery of rhythmic gymnastics movements, coordination, balance, rhythm synchronization, participation, and overall learning achievement. The novelty of this study lies in several aspects. First, it focuses specifically on Grade I elementary school students, a population that has received limited attention in previous PJOK multimedia learning research. Second, the study investigates the application of audio visual media within rhythmic gymnastics learning, a specialized physical education content area requiring strong visual and rhythmic understanding. Third, the research adopts a classroom action research approach that directly addresses authentic classroom problems and provides practical solutions for teachers. Fourth, it contributes empirical evidence regarding the effectiveness of multimedia-assisted instruction in improving psychomotor learning outcomes in Indonesian elementary school settings.

In conclusion, the integration of audio visual media into rhythmic gymnastics instruction represents a promising pedagogical strategy for addressing learning difficulties among young learners. By providing clear visual demonstrations, auditory guidance, and engaging learning experiences, audio visual media may facilitate more effective motor learning and enhance students' overall achievement. Therefore, investigating its implementation in Grade I rhythmic gymnastics learning is both theoretically relevant and practically important for improving the quality of PJOK instruction in elementary schools.

METHODS

This study used Classroom Action Research (CAR). Classroom action research is a research method aimed at improving learning quality through systematic and reflective actions. The study was conducted in two cycles, and each cycle consisted of planning,

acting, observing, and reflecting stages. The research subjects were 26 Grade IA students of SD Negeri 1 Landasan Ulin Selatan in the 2025/2026 academic year, consisting of 10 boys and 16 girls.

Data collection techniques used in this study were observation, tests, and documentation. Observation was conducted to monitor students' participation and motor skill development during learning activities. Tests were used to measure students' rhythmic gymnastics learning outcomes. Documentation was used to collect supporting data such as photos, lesson plans, and students' scores. The instruments used in this research included lesson plans, observation sheets for teacher and student activities, and practical assessment sheets. Data analysis was conducted descriptively by comparing students' learning outcomes in the pre-cycle, Cycle I, and Cycle II. The success indicators of the study were determined as follows: (1) at least 85% of students achieved the minimum mastery score of 75, (2) students' learning participation reached the "good" category, and (3) students' motor skills improved in each cycle.

RESULTS AND DISCUSSION

Result

Pre-Cycle Results

The preliminary observation conducted before the implementation of the action indicated that students' rhythmic gymnastics learning outcomes were still relatively low. Most Grade I students experienced difficulties in understanding and performing rhythmic gymnastics movements correctly. Several students lacked confidence when demonstrating movements, while others showed low enthusiasm and participation during the learning process. Learning activities were predominantly conducted using conventional teaching methods, where the teacher relied mainly on verbal explanations and direct demonstrations without utilizing attractive instructional media. Consequently, students found it difficult to observe movement details, follow movement sequences, and synchronize their movements with rhythm.

The results of the initial assessment are presented in Table 1.

Table 1.
Pre-Cycle Learning Outcomes

Criteria	Number of Students	Percentage
Mastery	8	31%
Not Mastery	18	69%
Total	26	100%

Table 1 shows that only 8 out of 26 students (31%) achieved the minimum mastery criteria (KKM), while 18 students (69%) failed to reach the expected standard. These findings indicate that students' rhythmic gymnastics learning outcomes were unsatisfactory and required improvement through the implementation of more innovative and engaging learning strategies.

Cycle I Results

Planning

At the planning stage of Cycle I, the researcher prepared lesson plans, observation sheets, assessment instruments, and audio visual learning media in the form of rhythmic gymnastics instructional videos. Supporting facilities, including television displays, speakers, and learning materials, were also prepared to facilitate the learning process.

Acting

The learning activities began with an introduction to rhythmic gymnastics concepts and movement techniques. The teacher then presented instructional videos demonstrating simple rhythmic gymnastics movements. Students were asked to observe the movements carefully and subsequently practice them together. During the practice sessions, the teacher provided guidance, feedback, and additional demonstrations to help students perform the movements correctly.

Observation

Observation results revealed positive changes in students' learning behavior. Students appeared more interested and actively involved in the learning process. They enthusiastically watched the videos and attempted to imitate the demonstrated movements. Nevertheless, several students still encountered difficulties in coordinating body movements, maintaining balance, and synchronizing their movements with the rhythm.

The learning outcomes achieved in Cycle I are presented in Table 2.

Table 2.
 Cycle I Learning Outcomes

Criteria	Number of Students	Percentage
Mastery	11	42%
Not Mastery	15	58%
Total	26	100%

Table 2 demonstrates that students' learning outcomes improved compared to the pre-cycle stage. The number of students achieving mastery learning increased from 8 students (31%) to 11 students (42%). Although improvement was evident, the percentage of mastery learning had not yet reached the predetermined success indicator.

Reflection

Based on the reflection conducted after Cycle I, several weaknesses were identified. Some students still lacked confidence when performing rhythmic gymnastics movements. In addition, several students had difficulty following the movement tempo because the instructional videos were considered too fast for their level of understanding. The teacher also recognized the need to provide more intensive guidance, motivation, and opportunities for movement repetition. Therefore, improvements were planned for implementation in Cycle II.

Cycle II Results

Planning

Based on the reflection results from Cycle I, several improvements were implemented in Cycle II. Simpler instructional videos with slower movement tempos

were selected to facilitate students' understanding. Additional audio equipment was utilized to improve rhythm clarity. Furthermore, the teacher prepared more structured learning instructions and increased the amount of guided movement practice.

Acting

The implementation of Cycle II proceeded more effectively. Students appeared more enthusiastic, active, and confident during learning activities. The teacher provided step-by-step explanations and intensive assistance throughout the movement practice sessions. Students were encouraged to practice repeatedly until they mastered each movement sequence.

Observation

Observation results indicated substantial improvements in students' performance. Most students demonstrated better movement coordination, balance, flexibility, and rhythm synchronization. Students were able to imitate movements more accurately and showed greater confidence when performing rhythmic gymnastics activities. The classroom atmosphere became more interactive, enjoyable, and student-centered.

The learning outcomes obtained in Cycle II are presented in Table 3.

Table 3.

Cycle II Learning Outcomes

Criteria	Number of Students	Percentage
Mastery	23	88%
Not Mastery	3	12%
Total	26	100%

Table 3 shows a substantial increase in learning achievement. A total of 23 students (88%) achieved mastery learning, while only 3 students (12%) remained below the minimum mastery criterion. These results indicate that the research success indicator was successfully achieved.

Reflection

The implementation of audio visual media in Cycle II effectively improved students' rhythmic gymnastics learning outcomes. Students demonstrated higher levels of motivation, participation, confidence, and movement competence. Since the mastery learning percentage exceeded the predetermined success criterion, the classroom action research was concluded in Cycle II.

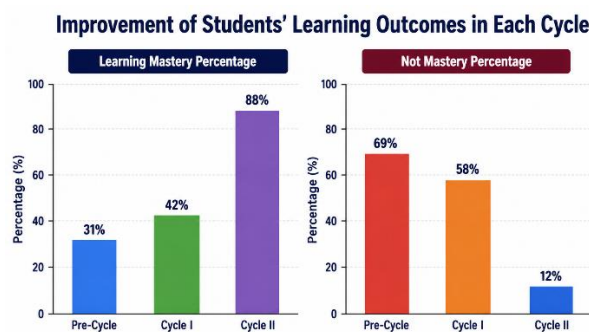
Improvement of Students' Learning Outcomes

To provide a clearer overview of the improvement achieved across all research stages, the comparison of learning outcomes from the pre-cycle, Cycle I, and Cycle II stages is presented in Table 4.

Table 4.

Improvement of Students' Learning Outcomes

Stage	Not Mastery	Mastery
Pre-Cycle	69%	31%
Cycle I	58%	42%
Cycle II	12%	88%



Graph 1.

Improvement of Students' Learning Outcomes in Each Cycle

Based on Table 4 and Graph 1, students' rhythmic gymnastics learning outcomes improved consistently throughout each cycle of the classroom action research. The percentage of students achieving mastery learning increased from 31% during the pre-cycle stage to 42% in Cycle I, representing an improvement of 11 percentage points. A more substantial improvement occurred in Cycle II, where mastery learning reached 88%, indicating an increase of 46 percentage points compared to Cycle I and 57 percentage points compared to the pre-cycle stage.

Conversely, the percentage of students who did not achieve mastery learning decreased progressively from 69% in the pre-cycle stage to 58% in Cycle I and further declined to only 12% in Cycle II. These findings demonstrate that the implementation of audio visual media successfully enhanced students' understanding of rhythmic gymnastics movements, increased learning participation, and improved overall learning outcomes among Grade I elementary school students.

Discussion

The findings of this classroom action research demonstrate that the implementation of audio visual media significantly improved rhythmic gymnastics learning outcomes among Grade I students at SD Negeri 1 Landasan Ulin Selatan. The improvement can be observed from the progressive increase in mastery learning from 31% in the pre-cycle stage to 42% in Cycle I and finally reaching 88% in Cycle II. Simultaneously, the percentage of students who did not achieve mastery learning decreased substantially from 69% in the pre-cycle stage to only 12% in Cycle II. These results indicate that audio visual media served as an effective instructional tool for enhancing students' psychomotor performance, learning engagement, and movement comprehension.

From a motor learning perspective, rhythmic gymnastics requires students to coordinate body movements, maintain balance, synchronize actions with rhythm, and execute movement sequences accurately. Such skills are often difficult for young learners to master through verbal instruction alone because elementary school children are still in the concrete operational stage of cognitive development and require visual representations to understand movement concepts effectively (Piaget, 2019; Robinson et al., 2019). The use of audio visual media provided students with clear movement demonstrations that could be repeatedly observed and imitated, thereby facilitating the acquisition of motor skills. This

finding is consistent with Schmidt et al. (2019), who emphasized that visual modeling enhances motor learning by providing learners with accurate movement patterns that can be encoded into memory and reproduced during practice.

The improvement observed in Cycle I indicates that the integration of instructional videos increased students' attention and motivation during learning activities. Students appeared more enthusiastic and actively participated in movement practice compared to the pre-cycle stage. According to Mayer (2021), multimedia learning theory suggests that learners process information more effectively when visual and auditory stimuli are presented simultaneously. The combination of movement demonstrations, music, rhythm, and teacher explanations in the instructional videos enabled students to utilize multiple sensory channels, resulting in better understanding and retention of movement concepts. Similar findings were reported by Goodyear et al. (2021), who found that digital learning resources positively influence student engagement and participation in physical education settings.

Although improvement occurred in Cycle I, several students still experienced difficulties coordinating movements and following rhythm accurately. This condition is understandable because fundamental motor competence develops progressively and requires repeated practice opportunities (Barnett et al., 2022). Consequently, modifications implemented in Cycle II, including slower video tempo, clearer rhythm cues, and more structured guidance, significantly enhanced students' performance. The substantial increase in mastery learning from 42% to 88% demonstrates that age-appropriate multimedia content is crucial for maximizing learning effectiveness among young children.

The results also highlight the important role of audio visual media in improving movement coordination and balance. Rhythmic gymnastics emphasizes the integration of locomotor and non-locomotor movements within rhythmic patterns, requiring students to develop neuromuscular coordination and body control (Bobo-Arce & Méndez-Rial, 2021). Through repeated observation of video demonstrations, students were able to recognize correct movement techniques and adjust their body positions accordingly. This finding aligns with research conducted by Palmer et al. (2021), which concluded that video modeling significantly improves motor skill accuracy and movement execution among elementary school students.

Furthermore, the increase in student confidence observed during Cycle II suggests that audio visual media contributed positively to students' affective development. Confidence is an important factor influencing participation and performance in physical education activities (Lubans et al., 2021). Initially, many students were hesitant to perform rhythmic gymnastics movements because they feared making mistakes. However, repeated exposure to movement demonstrations allowed students to gain a better understanding of the required skills, thereby reducing anxiety and increasing self-confidence. Similar findings were reported by Rahmawati (2021), who found that video-based learning media improve students' self-efficacy and willingness to participate in physical education activities.

The findings of this study are also consistent with previous research demonstrating the effectiveness of multimedia-assisted learning in improving psychomotor outcomes.

Sari et al. (2023) reported that audio visual media significantly enhanced students' motor skills and learning achievement in PJOK classes. Likewise, Chen et al. (2022) found that instructional videos improved movement precision and learning efficiency among primary school learners. Research by González-Calvo et al. (2020) further revealed that technology-supported physical education creates more engaging learning environments, leading to increased motivation and participation.

From an educational perspective, the success of audio visual media can be explained through constructivist learning theory. Constructivist approaches emphasize that learners actively construct knowledge through interaction with learning experiences and instructional resources (Kirk, 2020). The instructional videos provided authentic movement examples that enabled students to build their understanding through observation, imitation, practice, and reflection. Consequently, learning became more student-centered and meaningful than conventional teacher-dominated instruction.

Moreover, the findings support UNESCO's (2021) recommendation that quality physical education should integrate innovative teaching approaches that promote active engagement and inclusive learning opportunities. The use of audio visual media allowed students with varying levels of motor competence to learn at their own pace while receiving consistent movement demonstrations. Such flexibility is particularly important in elementary education, where individual differences in motor development are often substantial (Logan et al., 2018).

Overall, the findings confirm that audio visual media effectively improved rhythmic gymnastics learning outcomes among Grade I elementary school students. The improvement was evident not only in mastery learning achievement but also in students' movement coordination, rhythm synchronization, confidence, motivation, and classroom participation. Therefore, audio visual media can be considered an innovative and effective instructional strategy for enhancing the quality of rhythmic gymnastics learning in elementary school physical education programs.

CONCLUSION

The findings of this classroom action research demonstrate that the implementation of audio visual media effectively improved rhythmic gymnastics learning outcomes among Grade I students at SDN 1 Landasan Ulin Selatan. The use of instructional videos created a more engaging and interactive learning environment, enabling students to observe, understand, and imitate rhythmic gymnastics movements more easily. As a result, students became more active, motivated, enthusiastic, and confident throughout the learning process.

Empirically, the improvement in learning outcomes was evident across each research cycle. Learning mastery increased from only 31% in the pre-cycle stage (8 out of 26 students) to 42% in Cycle I (11 students), and further increased significantly to 88% in Cycle II (23 students). At the same time, the percentage of students who had not achieved mastery learning decreased from 69% in the pre-cycle stage to only 12% in

Cycle II. These results indicate that the predetermined success indicators of the research were successfully achieved.

In addition to improving learning achievement, audio visual media contributed positively to the development of students' motor skills. Students demonstrated better movement coordination, balance, flexibility, and rhythm synchronization during rhythmic gymnastics activities. Conceptually, the combination of visual demonstrations and auditory stimulation facilitated more effective motor learning and movement comprehension. Therefore, audio visual media can be recommended as an effective and innovative instructional medium in Physical Education, Sports, and Health (PJOK), particularly for movement-based learning materials that require observation, imitation, and repeated practice.

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REFERENCES

- Arsyad, A. (2021). *Media pembelajaran* (Revised ed.). Rajawali Pers.
- Barnett, L. M., Lai, S. K., Veldman, S. L. C., Hardy, L. L., Cliff, D. P., Morgan, P. J., Zask, A., Lubans, D. R., Shultz, S. P., Ridgers, N. D., Rush, E., Brown, H. L., & Okely, A. D. (2022). Correlates of gross motor competence in children and adolescents: A systematic review and meta-analysis. *Sports Medicine*, 52(3), 533–556. <https://doi.org/10.1007/s40279-021-01565-9>
- Bobo-Arce, M., & Méndez-Rial, B. (2021). Determinants of performance in rhythmic gymnastics: A systematic review. *Journal of Human Sport and Exercise*, 16(2), 356–369. <https://doi.org/10.14198/jhse.2021.162.10>
- Casey, A., & Goodyear, V. A. (2019). *Digital technologies and learning in physical education: Pedagogical cases*. Routledge. <https://doi.org/10.4324/9780429052747>
- Chen, W., Mason, S., & Hammond-Bennett, A. (2022). The effects of video-based instruction on motor skill acquisition in primary education. *Physical Education and Sport Pedagogy*, 27(4), 421–435. <https://doi.org/10.1080/17408989.2021.1886263>
- Goodyear, V. A., Kerner, C., & Quennerstedt, M. (2021). Young people's uses of digital media in physical education. *European Physical Education Review*, 27(3), 658–675. <https://doi.org/10.1177/1356336X20985763>
- González-Calvo, G., Varea, V., & Martínez-Álvarez, L. (2020). Health and digital technology in physical education. *Sport, Education and Society*, 25(9), 1051–1064. <https://doi.org/10.1080/13573322.2019.1672140>
- Hyndman, B., & Pill, S. (2022). Digital technology in physical education: Future directions and challenges. *Curriculum Studies in Health and Physical Education*, 13(2), 109–124. <https://doi.org/10.1080/25742981.2021.1989415>
- Kirk, D. (2020). *Precarity, critical pedagogy and physical education*. Routledge. <https://doi.org/10.4324/9780429261446>
- Logan, S. W., Robinson, L. E., Wilson, A. E., & Lucas, W. A. (2018). Getting the fundamentals of movement: A meta-analysis of motor skill interventions in children. *Child Development Perspectives*, 12(2), 93–98. <https://doi.org/10.1111/cdep.12264>
- Lubans, D. R., Morgan, P. J., Cliff, D. P., Barnett, L. M., & Okely, A. D. (2021). Fundamental movement skills and physical activity in children and adolescents: A systematic review. *Sports Medicine*, 51(5), 889–907. <https://doi.org/10.1007/s40279-020-01413-8>
- Maksum, A. (2008). *Metodologi Penelitian dalam Olahraga*. Surabaya: Unesa University Press.

- Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press.
<https://doi.org/10.1017/9781316941359>
- Mustafa, P. S., & Dwiyoogo, W. D. (2020). Curriculum implementation in Indonesian physical education learning. *Jurnal Pendidikan Jasmani Indonesia*, 16(2), 101–112.
<https://journal.uny.ac.id/index.php/jpji>
- Palmer, K. K., Chinn, K. M., & Robinson, L. E. (2021). The effect of video modeling on motor skill acquisition. *Journal of Motor Learning and Development*, 9(1), 56–71.
<https://doi.org/10.1123/jml.2020-0028>
- Prasetyo, Y., & Komaini, A. (2022). Peningkatan hasil belajar PJOK melalui media audio visual pada siswa sekolah dasar. *Jurnal Pendidikan Jasmani dan Olahraga*, 7(1), 33–41.
- Putri, N., & Suryadi, D. (2022). The influence of teaching methods on student motivation in physical education learning. *Jurnal Pendidikan Olahraga*, 11(1), 44–53.
<https://journal.ikipgripta.ac.id/index.php/olahraga>
- Rahmawati, E. (2021). Video-based learning media to improve students' learning motivation in physical education. *Jurnal Pendidikan Jasmani dan Olahraga*, 6(2), 156–165. <https://ejournal.upi.edu/index.php/penjas>
- Robinson, L. E., Stodden, D. F., Barnett, L. M., Lopes, V. P., Logan, S. W., Rodrigues, L. P., & D'Hondt, E. (2019). Motor competence and its effect on positive developmental trajectories of health. *Sports Medicine*, 49(5), 721–735.
<https://doi.org/10.1007/s40279-019-01082-3>
- Samsudin. (2019). *Pembelajaran Pendidikan Jasmani Olahraga dan Kesehatan SD/MI*. Jakarta: Prenadamedia Group.
- Sari, D., Nugroho, A., & Wahyuni, S. (2023). The effectiveness of audio visual media in improving motor skills and learning outcomes in physical education. *Jurnal Keolahragaan*, 11(2), 178–190. <https://journal.uny.ac.id/index.php/jolahraga>
- Sari, N. P., Hidayat, T., & Nugroho, A. (2023). Pengaruh media audio visual terhadap hasil belajar senam irama siswa sekolah dasar. *Jurnal Keolahragaan*, 11(1), 55–63.
<https://doi.org/10.21831/jk.v11i1.00000>
- Schmidt, R. A., Lee, T. D., Winstein, C., Wulf, G., & Zelaznik, H. (2019). *Motor control and learning: A behavioral emphasis* (6th ed.). Human Kinetics.
<https://us.humankinetics.com>
- UNESCO. (2021). *Quality physical education guidelines for policymakers*. UNESCO Publishing. <https://unesdoc.unesco.org>
- Wahyuni, S., & Arifin, Z. (2021). Efektivitas penggunaan media audio visual dalam pembelajaran senam irama sekolah dasar. *Jurnal Sport Science*, 6(2), 88–96.
- World Health Organization. (2020). *Guidelines on physical activity and sedentary behaviour*. World Health Organization.
<https://www.who.int/publications/i/item/9789240015128>