



## The Effect of Using Traditional Songs in Locomotor Learning on Students' Physical Literacy

Mia Rahmawati<sup>1\*</sup>, Agus Mahendra<sup>1</sup>, Lenggani<sup>2</sup>

<sup>1</sup>Indonesia University of Education, Indonesia

<sup>2</sup>Public Elementary School 2 Cibogo, Indonesia

### Article Info

*Article History:*

*Received August 2024*

*Revised August 2024*

*Accepted September 2024*

*Available Online October 2024*

*Keywords:*

*Locomotor, Physical Literacy, Traditional Songs*

### Abstract

This study is based on the observation that students tend to be less active in engaging in physical activities and lack a comprehensive understanding of physical literacy. The aim of this research is to examine the effect of incorporating traditional songs into locomotor learning on the physical literacy of students at SDN 2 Cibogo. The study employed a quantitative approach with a one-group pre-test–post-test design, in which an experimental treatment was administered to the sample. A purposive sampling technique was used to select 32 participants who met specific criteria. The instrument used to measure physical literacy was the Canadian Assessment of Physical Literacy–2 (CAPL-2). The post-test results in the domains of knowledge, understanding, and physical competence were categorized as excellent. The paired sample t-test results showed a significance value of  $< 0.05$  across all domains, indicating that the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_a$ ) was accepted. The findings can be summarized as follows: (1) the use of traditional songs in locomotor learning significantly influenced students' knowledge and understanding within the domain of physical literacy; (2) there was a significant effect on students' physical competence; and (3) overall, the use of traditional songs had a positive impact on students' physical literacy.

\*Correspondence Address : Jl. Dr. Setiabudhi No. 229, Bandung. , Indonesia  
E-mail : miaarhmwtii@upi.edu

## INTRODUCTION

Physical literacy must be cultivated from an early age, particularly through physical education in elementary schools, as it supports the development of fundamental movement skills and fosters motivation, confidence, and enjoyment in maintaining physical activity. Such engagement contributes to immune system enhancement and promotes overall physical health and well-being (Rosiana et al., 2023). Zhang et al. (2020) investigated the relationship between self-perception and actual levels of physical literacy among elementary school students in China using the Canadian Assessment of Physical Literacy – Second Edition (CAPL-2). Their findings revealed that motivation and confidence were significantly associated with physical competence and student participation in physical activities, indicating that physical literacy is holistic in nature, with affective components playing a crucial role in sustaining long-term physical engagement.

The concept of physical literacy has evolved beyond being understood as merely an individual skill. It is now recognized as a life-long learning process shaped by cultural, social, and environmental contexts. Whitehead and Durden-Myers (2022) emphasized that implementing physical literacy in physical education requires the integration of physical capabilities with participatory values that foster active behaviors. Building upon this, Asante et al. (2024) proposed a decolonized approach to physical literacy that accounts for the diverse backgrounds of learners while emphasizing human well-being and planetary sustainability. This perspective positions physical literacy not only as a means to achieve physical fitness but also as a tool for broader social and ecological transformation. A lack of adequate physical activity to meet the body's movement needs increases the risk of chronic diseases. Therefore, the development of physical literacy is expected to foster awareness of the importance of physical activity in everyday life, such as engaging in simple, consistent movements like walking or running.

Movement is a fundamental human element required for daily activities, ranging from basic to complex tasks. This notion is supported by research on the application of movement and music in early childhood, demonstrating that structured activities significantly enhance gross motor skills (Rohimah & Prianti, 2024). Furthermore, motor intelligence, which includes mobility, balance, and coordination, is a key indicator of one's physical readiness for activity (Oktriyeni, 2021).

Locomotor movement is a critical foundation in children's motor development and is essential for acquiring more complex motor skills in the future (Sugiarto, 2021). Mastery of locomotor skills enhances children's confidence to participate in various physical activities and sports, thereby contributing to overall physical fitness. In physical education, locomotor skill instruction aims not only to build physical capabilities but also to develop coordination, rhythm, and spatial orientation. Activities such as traditional games, basic gymnastics, and music-based rhythmic movements have been proven effective in stimulating the mastery of basic locomotor movements (Widiastuti & Kurniawan, 2020). Moreover, reinforcing movement concepts through thematic and contextual approaches contributes to a more enjoyable and meaningful learning process.

Deficiencies in locomotor skills can negatively impact children's participation in physical activities, both in school and the broader community. Therefore, physical education holds a strategic role in detecting, stimulating, and evaluating locomotor movement skills from an early age through appropriate pedagogical approaches. Initial observations in a study by Mashudi & Nurrochmah (2020) on basic locomotor and manipulative movements among Grade IV students revealed that 90% of respondents were unfamiliar with the meaning of basic locomotor movements. Similarly, Arisandi & Indahwati (2022) found in their study on improving fundamental movements through net games that students lacked mastery and proficiency in basic movements and were less ac-

tive, attributed to the use of unengaging teaching models.

To support the development of fundamental movements, learning models must be engaging and accessible to students. Programs that integrate music, dance, and movement have been proven to enhance coordination, balance, and both gross and fine motor skills in early childhood (Santi & Darnis, 2024; Zahra et al., 2024). Research by Paramitha, Susilawati, and Lubay (2017) demonstrated that student engagement in traditional games at SDN 2 Kayuambon, West Bandung, improved physical fitness from a “low” to a “moderate” category, showing the effectiveness of such methods in gradually enhancing fitness.

Music, including traditional songs, can serve as a valuable medium in school learning due to its multiple benefits: (1) enhancing memory retention, (2) fostering a calming learning environment, (3) reducing anxiety and discomfort, and (4) facilitating student comprehension of the learning material (Ilmi et al., 2021). However, with the progression of time, children are becoming increasingly unfamiliar with traditional Indonesian songs. Thus, schools play a critical role in preserving and promoting traditional music.

A study by Warnengsih (2022) on the interest in learning traditional songs among Grade IV students at SD Negeri Malahayu 03, Banjarharjo District, revealed a general lack of enthusiasm for traditional music. Therefore, the integration of traditional songs into locomotor learning could serve as a cultural preservation tool, while simultaneously instilling moral, social, and cultural values embedded in the song lyrics (Safiuddin et al., 2023). Songs accompanied by music can stimulate student enthusiasm for movement, thereby increasing motivation, confidence, and environmental interaction in line with the principles of physical literacy.

Previous studies have explored related themes. Mukarromah et al. (2022) found that the use of traditional games positively influenced locomotor learning. Jannah et al. (2022) demonstrated that psychomotor gymnastics in-

fused with traditional songs encouraged 90% of students to actively and joyfully engage in movement. However, neither study explicitly employed the concept of physical literacy to emphasize the lifelong application of physical activity. Rosiana et al. (2023) developed physical literacy learning tools for elementary students—such as posters, pamphlets, and bulletin boards—but did not incorporate locomotor movements through traditional songs in practice.

In light of these considerations, this study aims to examine the extent to which traditional songs integrated into locomotor learning influence the physical literacy of students at SDN 2 Cibogo.

## METHOD

This study employed an experimental research design using a one-group pretest–posttest design, in which a single group was selected without assessing the stability or equivalence of the group prior to the intervention. The aim was to determine the impact of an experimental treatment administered to the group before and after the intervention.

### Participants and Sample

The participants in this study comprised third-grade students at SDN 2 Cibogo, which consisted of two classes: Class A and Class B, totaling 59 students. The final sample consisted of 32 students (18 boys and 14 girls) from Class 3-A. The sample was selected based on the following inclusion and exclusion criteria: (a) aged between 8 and 12 years; (b) willing to participate in the research; (c) in good health and physically capable of taking the test; (d) obtained parental and school permission to participate. (e) belonged to the class taught by the researcher; and (f) had no more than three absences during the study.

Exclusion criteria: (a) aged below 8 or above 12 years; (b) declined to participate in the study; (c) in poor health during the test period; (d) did not obtain parental or school consent; (e) not part of the class taught by the researcher; and

(f) had more than three absences during the study.

### Materials and Apparatus

This study used two types of instruments: a questionnaire and a physical competence test. Physical literacy was measured using the Canadian Assessment of Physical Literacy – Second Edition (CAPL-2) (Longmuir et al., 2018). The CAPL-2 is designed to assess physical literacy in children aged 8–12 years and includes four domains: daily behavior, knowledge and understanding, motivation and confidence, and physical competence. The physical competence domain includes tests such as CAMSA (Canadian Agility and Movement Skill Assessment), PACER shuttle run, and torso plank.

### Procedure

Prior to data collection, permission was obtained from the school principal and parents. Participants completed consent forms before taking part in the study. The data collection procedure involved the following steps: Pre-test Phase: Students completed the CAPL-2 questionnaire to assess the knowledge and understanding domain (10 questions) and participated in physical competence tests (CAMSA, PACER shuttle run, torso plank). Intervention: Students received learning treatment integrating traditional Indonesian songs into locomotor activities. Each locomotor movement was paired with a specific traditional song: Skipping (Cik-Cik Periuk), Sliding (Rasa Sayange), Galloping (Gemu Fa Mi Re), Hopping (Sajojo), Leaping (Ampar-Ampar Pisang), and Jumping (Tokecang). Physical literacy concepts were explicitly taught during each lesson. Post-test Phase: After the treatment, the students retook the CAPL-2 knowledge and understanding questionnaire and repeated the physical competence tests to measure changes in their physical literacy.

### Data Collection and Analysis

Data analysis was conducted using SPSS version 21. Preliminary tests were carried out to

examine the normality of the data distribution. Upon confirming that the data followed a normal distribution, paired sample t-tests were performed to test the research hypothesis and determine the significance of the changes in physical literacy before and after the intervention.

### RESULTS

This study aimed to determine the effect of using regional songs in locomotor learning on students' physical literacy. To examine this, a pre-test and post-test were administered to measure three domains of physical literacy: knowledge and understanding, physical competence, and overall physical literacy. The statistical analysis was conducted using a paired sample t-test, and the findings are presented in the following tables:

**Table 1.** t-test Results for the Knowledge and Understanding

Test	Mean	N	Sig.
Pre-test vs. Post-test	4.219	32	0.000

The results indicate a significant difference in students' knowledge and understanding before and after the intervention. This suggests that the use of regional songs in locomotor activities contributes positively to students' comprehension and awareness related to physical literacy concepts.

**Table 2.** t-test Results for the Physical Competence

Test	Mean	N	Sig.
Pre-test vs. Post-test	10.000	32	0.000

The findings demonstrate an improvement in students' physical competence after engaging in locomotor movements accompanied by regional songs. This includes better movement coordination, endurance, and muscular strength as measured by the CAMSA, PACER shuttle run, and plank tests.

**Table 2.** t-Test Results for Overall Physical Literacy

Test	Mean	N	Sig.
Pre-test vs. Post-test	2.563	32	0.000

Overall, the intervention significantly enhanced students' physical literacy levels,

showing measurable progress across both cognitive and motor domains.

## DISCUSSION

### **The Use of Regional Songs in Locomotor Learning on Physical Literacy (Knowledge and Understanding Domain)**

Integrating regional songs into locomotor learning has proven to be an engaging and culturally relevant strategy that enriches students' understanding of physical literacy. By incorporating local musical elements, students become more connected to the learning material, which in turn fosters better cognitive engagement and comprehension of the principles underlying physical activity.

This result aligns with the study conducted by

Rosiana et al. (2023), which emphasized the role of physical literacy in equipping students with essential knowledge for sustaining an active lifestyle. Through increased understanding of the importance of physical activity—such as the benefits, appropriate intensity, and duration—students are more likely to participate consistently. Thus, implementing regional songs not only introduces cultural values but also reinforces critical knowledge and awareness that support lifelong physical engagement.

### **The Use of Regional Songs in Locomotor Learning on Physical Literacy (Physical Competence Domain)**

The inclusion of regional songs within movement-based activities appears to stimulate students' enthusiasm and improve their motor coordination and control. The rhythm and familiarity of regional music create a natural context for movement, encouraging students to explore a variety of motor patterns with confidence and enjoyment.

These findings are in line with previous research by Putri et al. (2024), which noted that individuals with a strong grasp of physical literacy tend to move more confidently and efficiently. The combination of music and movement promotes body awareness, enhances physical skills, and cultivates a sense of mastery. In this way, regional songs serve not only as a cul-

tural medium but also as an effective instructional tool for developing physical competence.

### **The Use of Regional Songs in Locomotor Learning on Overall Physical Literacy**

When implemented holistically, regional songs can support multiple dimensions of physical literacy, from cognitive understanding to physical capability. The multisensory experience offered through music and movement facilitates deeper learning and sustained motivation among students.

This approach is supported by the findings of Saputra et al. (2022), who demonstrated that incorporating traditional games in physical education significantly improved students' physical literacy. Similarly, this study reaffirms the value of culturally embedded pedagogies in promoting physical engagement while preserving local traditions. Regional songs, in this context, serve not only as a vehicle for physical development but also as a means of instilling cultural identity and fostering lifelong appreciation for active living.

## CONCLUSION

Based on the findings of this study, it can thus be concluded that the implementation of an intervention has a significant impact on improving physical literacy. Physical literacy serves as a fundamental foundation for the physical, mental, and social development of elementary school students. An individual's physical literacy can be considered improved in the domains of knowledge and physical competence when they are able to consistently apply physical activity in their daily lives.

## REFERENCE

- Arisandi, I. L., & Indahwati, N. (2022). Peningkatan Gerak Dasar Siswa Sekolah Dasar Melalui Aktivitas Net Game. *Bima Loka: Journal of Physical Education*, 2(2), 40-47.
- Asante, C. K., Yalley, E., & Amissah, G. (2024). Climate Change Education, Globalisation and the Nation State: A Commentary on Ghana's Science Curriculum. *Australian Journal of Environmental Education*, 40(1), 55-64.

- Ilmi, F., Respati, R., & Nugraha, A. (2021). Manfaat lagu anak dalam meningkatkan minat belajar peserta didik sekolah dasar. *PEDADIDAKTIKA: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 8(3), 675-683.
- Jannah, P. D., Nugraha, U. N., & Muzzafar, A. (2022). Kreasi senam psikomotor pada siswa sekolah dasar bernuansa lagu daerah. *Jurnal Pion*, 2(1), 9-21.
- Longmuir, P. E., Gunnell, K. E., Barnes, J. D., Belanger, K., Leduc, G., Woodruff, S. J., & Tremblay, M. S. (2018). Canadian Assessment of Physical Literacy Second Edition: a streamlined assessment of the capacity for physical activity among children 8 to 12 years of age. *BMC public health*, 18, 1-12.
- Mashudi, A., & Nurrochmah, S. (2020). Survei Gerak Dasar Lokomotor dan Manipulatif Siswa Kelas IV SD. *Sport Science and Health*, 2(8), 415-421.
- Mukarromah, O., Maesaroh, T., & Imtihanudin, D. (2022). Konservasi Permainan Tradisional Terhadap Perkembangan Gerak Lokomotor Anak Usia Dini. *Jurnal Elementary: Kajian Teori dan Hasil Penelitian Pendidikan Sekolah Dasar*, 5 (1), 1-5.
- Oktriyeni, H. (2021). Kecerdasan gerak dalam pendidikan jasmani. *Halaman Olahraga Nusantara: Jurnal Ilmu Keolahragaan*, 4 (2), 107-114.
- Paramitha, A. T., Susilawati, D., & Lubay, L. H. (2017). Pengaruh permainan tradisional dalam meningkatkan kebugaran jasmani siswa kelas V SDN 2 Kayuambon, Kecamatan Lembang, Kabupaten Bandung Barat. *Motion: Jurnal Riset Physical Education*, 8(1), 90-99.
- Putri, S. M. D., Septiadi, F., & Saleh, M. (2024). Identifikasi literasi fisik dalam partisipasi aktivitas fisik: Studi kualitatif mahasiswa PJKR di kota dan kabupaten Sukabumi. *Jurnal Educatio FKIP UNMA*, 10(3), 307-320.
- Rohimah, S., & Prianti, N. (2024). Penerapan gerak dan lagu dalam mengembangkan kemampuan motorik kasar anak. *JIP: Jurnal Ilmiah Ilmu Pendidikan*, 7(12), 13961-13965.
- Rosiana, W., Angga, P. D., & Tahir, M. (2023). Pengembangan Media Literasi Fisik (Melifis) bagi Siswa Sekolah Dasar. *Jurnal Educatio FKIP UNMA*, 9(2), 964-975.
- Safiuddin, S., & NL, S. (2023). Pemanfaatan Lagu Daerah dalam Pendidikan Karakter Siswa Kelas V SD Negeri 2 Ambeua. *Jurnal Pendidikan Tambusai*, 7 (1), 4644-4649.
- Santi, S. R. Y., & Darnis, S. (2024). Analisis pembelajaran musik dan gerak untuk meningkatkan perkembangan fisik motorik anak usia 5-6 tahun. *Jurnal Caksana: Pendidikan Anak Usia Dini*, 7(1), 209-221
- Saputra, N. A., Haetami, M., & Hidasari, F. P. (2022). Meningkatkan Physical Literacy Melalui Permainan Tradisional Pada Peserta Didik Sekolah Dasar. *Jurnal Pendidikan Jasmani Khatulistiwa*, 3(2), 157-166.
- Setyawan, D. (2018). Mengenalkan alat musik tradisional melalui kegiatan ekstrakurikuler suling bambu di SD inpres Rutosoro. *Jurnal Akrab Juara*, 3(3), 10-21.
- Sugiarto, S. (2021). Pengembangan keterampilan gerak lokomotor melalui permainan edukatif pada anak usia sekolah dasar. *Jurnal Pendidikan Jasmani Indonesia*, 11 (2), 145-154.
- Warnengsih, M., & Nurpratiwiningsih, L. (2022). Analisis Minat Belajar Lagu Daerah Bagi Peserta Didik Kelas IV SD Negeri Malahayu 03 Kecamatan Banjarharjo. *Jurnal Ilmiah Wahana Pendidikan*, 8(19), 406-413.
- Whitehead, M., & Durden-Myers, E. J. (2022). Operationalizing physical literacy: Special issue editorial. *Journal of Teaching in Physical Education*, 41(2), 234-238.
- Widiastuti, P. A., & Kurniawan, D. A. (2020). Pembelajaran gerak dasar lokomotor berbasis permainan tradisional untuk meningkatkan aktivitas fisik anak. *Jurnal Ilmu Keolahragaan*, 9(1), 65-72
- Zahra, S., Nabila, S., Afifah, H. U. N., & Lubis, H. Z. (2024). Strategi guru dalam mengembangkan kemampuan motorik anak melalui pembelajaran seni tari dan musik di TK Miftahul Jannah. *Jurnal Pendidikan Tambusai*, 8(2), 26967-26971.
- Zhang, T., Chen, S., Gu, X., & Xiang, P. (2020). Associations between perceived and actual physical literacy levels in Chinese primary school children. *BMC Public Health*, 20, 1-9