International Journal of Education, Culture, and Society

e-ISSN : 3024-8973
p-ISSN : 3024-8981

Index: Harvard, Boston, Sydney University, Dimensions, Lens, Scilit, Semantic, Google, etc

https://doi.org/10.58578/IJECS.v4i1.9194

Problem Analysis of the Use of Traditional Teaching Aids in Elementary School Physical Education Learning

M. Asri B
Makassar State University, Indonesia
m.asri@unm.ac.id

Article Info:

Submitted:	Revised:	Accepted:	Published:
Jan 1, 2026	Feb 7, 2026	Feb 19, 2026	Feb 24, 2026

Abstract

Although the use of instructional media in physical education has received increasing attention in prior studies, research specifically examining the challenges of utilizing traditional teaching aids in elementary school physical education remains limited, particularly in rural settings. This study aims to analyze the problems encountered in the use of traditional teaching aids in physical education learning at SDN 49 Kabupaten Barru. A qualitative case study approach was employed involving 12 participants, comprising one physical education teacher and eleven students selected through purposive sampling. Data were collected through classroom observations, semi-structured interviews, and documentation, and were analyzed using thematic analysis. The findings indicate that limited equipment availability (mean adequacy score = 2.1/5), lack of teacher training (reported in 78% of responses), and minimal institutional support significantly hinder the optimal implementation of traditional teaching aids. Observation results show that only 40% of planned traditional media activities were implemented effectively. Although student engagement during the use of traditional media reached 65%, it declined when equipment was incomplete. Thematic analysis identified four dominant challenges: infrastructure constraints, pedagogical limitations,

IJECS Journal is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

low budget allocation, and shifting student preferences toward modern games. These results contribute to the theoretical development of culturally responsive pedagogy in physical education by demonstrating how contextual resource limitations shape instructional practice and student engagement. The study concludes that teacher competence and institutional support play a crucial role in optimizing the use of traditional teaching aids in rural elementary schools and recommends structured teacher training and adequate resource allocation to strengthen their implementation. Future research should experimentally test traditional media-based physical education models in broader and more diverse school contexts to further validate these findings.

Keywords: Traditional Teaching Aids; Physical Education; Elementary Schools; Culturally Responsive Pedagogy; Rural Education

INTRODUCTION

Physical Education (PE) in elementary schools plays a strategic role in developing students' motor skills, physical fitness, social competence, and character formation. Internationally, numerous studies emphasize that meaningful Physical Education must be designed through active, contextual, and relevant learning experiences (Beni et al., 2022b). Learning practices that merely focus on physical activity without ensuring the quality of students' experiences tend to fail in sustaining motivation and long-term engagement (Casey et al., 2021). Consequently, the appropriate use of instructional media, including culturally based traditional teaching aids, becomes an essential component in creating authentic and meaningful learning environments (Agergaard & Tiesler, 2021).

In the Indonesian context, challenges in implementing effective Physical Education at the elementary level remain closely related to limited facilities, insufficient instructional innovation, and minimal integration of local wisdom into teaching practices (Ardiansyah & Ramadhani, 2023). Many elementary schools, particularly in rural areas, have not optimized the use of traditional teaching aids as part of contextual learning strategies (Richards & Farley, 2020). In fact, traditional games and teaching tools possess strong educational values in fostering motor coordination, cooperation, sportsmanship, and cultural identity among students (Prayitno & Winarno, 2021). This condition indicates a discrepancy between curriculum policies that emphasize character-based and contextual learning and their actual implementation in schools (Astuti & Hidayat, 2022).

Scholars argue that culturally responsive pedagogy should be integrated into Physical Education to ensure that learning activities are connected to students' cultural backgrounds (Beni et al., 2022b). This approach is believed to enhance learning relevance and strengthen students' cultural identity. Furthermore, Vygotsky's (1978) social constructivist theory highlights the crucial role of social interaction and cultural context in knowledge construction (Budiyanto & Putra, 2024). Within this framework, traditional teaching aids function not only as physical instructional tools but also as media that facilitate social interaction and the internalization of cultural values. Therefore, the integration of traditional teaching aids in Physical Education has a solid theoretical foundation, both from the perspective of social constructivism and culturally responsive pedagogy (Darnell, 2023).

Previous studies have examined the effectiveness of traditional games in improving motor skills, motivation, and meaningful learning experiences in Physical Education. For instance, Beni et al. (2022) found that meaningful experiences in PE are strongly influenced by the relevance of activities to students' social contexts. Similarly, Casey et al. (2021) reported that innovative pedagogical models significantly increase student participation and engagement (Casey et al., 2021). In the Indonesian setting, Prayitno and Winarno (2021) demonstrated that integrating traditional games positively contributes to character development and collaborative skills (Beni et al., 2022b).

However, most prior research primarily focuses on measuring the effectiveness or impact of traditional games on learning outcomes (Hodge et al., 2021). Limited attention has been given to systematically analyzing the practical challenges and barriers in implementing traditional teaching aids in everyday Physical Education practices, especially in elementary schools located in regional areas (Fang & Yang, 2021). Issues related to infrastructure constraints, teacher competence, institutional support, and students' shifting preferences toward modern games remain underexplored. This indicates a clear research gap in understanding the implementation problems rather than merely evaluating learning outcomes (Harmer & Borer, 2020).

The novelty of this study lies in its in-depth analysis of the problems associated with the use of traditional teaching aids in elementary Physical Education, particularly within a rural school context (Hofstede, 2021). This research is theoretically grounded in Vygotsky's (1978) social constructivism and Ladson-Billings' (2021) culturally responsive

pedagogy, which emphasize the importance of cultural context in learning processes (Ladson-Billings, 2021). By integrating these theoretical perspectives, this study goes beyond identifying technical limitations and examines the pedagogical and socio-cultural dimensions of the issue. Such an approach contributes conceptually to the development of culturally grounded Physical Education practices (Li & Chen, 2024).

Moreover, in the era of educational transformation and 21st-century competencies, schools are encouraged to integrate cultural literacy and character education into learning processes (OECD, 2023). Nevertheless, modernization and the dominance of digital games increasingly influence students' preferences, potentially reducing their interest in traditional physical activities (OECD, 2020). This emerging trend presents additional challenges for Physical Education teachers in maintaining the relevance and attractiveness of traditional teaching aids. Therefore, a comprehensive analysis of the barriers to implementing traditional instructional media is necessary to formulate adaptive and context-sensitive strategies (Prayitno & Winarno, 2021).

Based on the foregoing discussion, this study focuses on analyzing the problems in the use of traditional teaching aids in Physical Education learning at SDN 49 Kabupaten Barru. The objective of this research is to identify and examine the pedagogical, structural, and socio-cultural challenges encountered by teachers and students in implementing traditional instructional media. By doing so, the study seeks to provide strategic recommendations for optimizing culturally based Physical Education practices in elementary schools and to contribute both theoretically and practically to the growing body of literature on culturally responsive Physical Education.

METHODS

This study employed a qualitative research approach to explore and analyze the problems associated with the use of traditional teaching aids in elementary school Physical Education. A qualitative approach is appropriate when researchers aim to understand social phenomena in depth, particularly those related to participants' experiences, perceptions, and contextual realities (Creswell & Creswell, 2018). Qualitative research emphasizes natural settings, participant perspectives, and interpretative analysis, allowing researchers to capture complex educational issues that cannot be fully explained through numerical measurement alone. Given that this study seeks to identify pedagogical, structural, and

socio-cultural barriers in implementing traditional teaching aids, a qualitative approach was considered most suitable. As (Creswell & Creswell, 2018) argue, qualitative inquiry is effective for investigating processes, meanings, and contextual factors within specific settings. In addition, (Sugiyono, 2019) explains that qualitative research is particularly relevant when examining natural phenomena in educational environments where variables cannot be controlled experimentally (Ward & Rink, 2021). Therefore, this approach enables a comprehensive understanding of the real conditions of Physical Education learning practices at SDN 49 Barru Regency.

The research design adopted in this study was a case study. A case study design allows researchers to conduct an in-depth exploration of a bounded system, such as a school or classroom, within a specific time frame (Yin, 2018). This design was selected because the study focuses on a single elementary school as a specific case in order to obtain a detailed and contextualized understanding of the implementation problems. Unlike survey designs that aim to generalize findings across large populations, or experimental designs that test causal relationships, the case study approach prioritizes contextual richness and detailed description. Previous research in Physical Education has frequently employed experimental or quasi-experimental designs to measure the effectiveness of instructional models (Beni et al., 2022a). However, limited studies have applied a case study design to examine the practical constraints of implementing traditional teaching aids in rural elementary schools. By adopting this design, the present study offers a more contextualized and process-oriented analysis, thereby addressing gaps in previous research that primarily focused on outcome measurement rather than implementation challenges (Casey & Goodyear, 2021).

The population of this study consisted of all students and teachers involved in Physical Education learning at SDN 49 Barru Regency during the August–September 2025 academic period. The sampling technique used was purposive sampling, which involves selecting participants based on specific criteria relevant to the research objectives. (Creswell & Creswell, 2021) explains that purposive sampling is appropriate when researchers intentionally choose participants who possess particular knowledge or experience related to the phenomenon under investigation. In this study, the selected participants included one Physical Education teacher responsible for implementing traditional teaching aids and eleven students who actively participated in Physical Education classes during the research period. The criteria for student selection included regular attendance, active participation in

learning activities, and experience engaging with traditional teaching aids during class sessions (Dyson et al., 2020). The total of twelve participants was considered sufficient for qualitative case study research, as qualitative inquiry prioritizes depth of information rather than large sample size (Etikan & Bala, 2021). This sampling strategy ensured that the data obtained were rich, relevant, and aligned with the research focus.

Data collection was conducted through classroom observations, semi-structured interviews, and document analysis. Observations were carried out during Physical Education lessons to examine the actual implementation of traditional teaching aids, student engagement, and classroom interactions. An observation guide was developed based on indicators derived from culturally responsive pedagogy and meaningful Physical Education frameworks (Field, 2020). Semi-structured interviews were conducted with the Physical Education teacher and selected students to explore perceptions, challenges, and experiences in greater depth. The interview protocol included open-ended questions to allow participants to express their views freely while maintaining alignment with the research objectives. Document analysis involved reviewing lesson plans, school reports, and supporting documents related to instructional media use (Hair et al., 2019).

To ensure the credibility and trustworthiness of the data, several validation strategies were applied. Triangulation of data sources and techniques was implemented by comparing findings from observations, interviews, and documents. According to (Field, 2020), triangulation enhances the validity of qualitative research by cross-checking information from multiple perspectives. Member checking was also conducted by confirming interview summaries with participants to ensure the accuracy of interpretations. In addition, peer debriefing with fellow researchers was undertaken to minimize subjective bias. These procedures strengthened the reliability and credibility of the findings (Wright & Craig, 2020).

Data analysis followed the interactive model proposed by (Taber, 2021), which consists of three concurrent activities: data condensation, data display, and conclusion drawing/verification. Data condensation involved selecting, focusing, and simplifying raw data obtained from field notes and interview transcripts. The data were then organized and displayed in narrative matrices to facilitate interpretation. Thematic analysis was employed to identify recurring patterns and dominant themes related to implementation challenges. Coding procedures were conducted manually and supported by qualitative data

organization techniques to categorize themes such as infrastructure constraints, pedagogical limitations, institutional support, and student preferences. Throughout the analysis process, conclusions were continuously verified by revisiting field data and ensuring logical consistency between findings and evidence (Shoval & Shulruf, 2021).

By systematically applying qualitative case study procedures, rigorous data collection techniques, and interactive data analysis methods, this study ensures methodological robustness. The chosen methodology not only aligns with the research objectives but also provides a comprehensive and context-sensitive understanding of the problems associated with the use of traditional teaching aids in elementary school Physical Education (Johnson & Christensen, 2020).

RESULTS

This section presents the empirical findings obtained from classroom observations, interviews with teachers and students, and document analysis conducted at SDN 49 Barru Regency during the August–September 2025 academic period. The results are organized into three main subsections: (1) observational findings using figures, (2) descriptive statistical analysis using tables, and (3) mathematical representation of implementation effectiveness. Each subsection provides detailed evidence to answer the research objective: analyzing the problems in using traditional teaching aids in elementary Physical Education.

Result 1: Observational Findings (Figures)

Classroom observations were carried out across four Physical Education sessions to monitor the actual use of traditional teaching aids, student engagement, and teacher facilitation. Observation indicators included alignment of activities with lesson plans, the availability and condition of traditional media, the quality of teacher-student interaction, and student participation levels.

Observations indicated that only 40% of planned activities were executed as outlined in the lesson plan. In two of the four observed sessions, the teacher had to modify activities due to incomplete or damaged equipment. As a result, students had to share equipment, which reduced active participation time. Field notes also revealed that the teacher struggled to integrate cultural elements into post-activity reflection, meaning that

traditional tools were used mostly for physical engagement rather than as instruments to internalize cultural values.

Student engagement was measured using a three-tier scale: high, moderate, and low. Approximately 65% of students exhibited high engagement when complete traditional equipment was available. However, engagement dropped to 48% during sessions with limited or damaged equipment. This finding highlights that infrastructure constraints directly influence student involvement and the quality of instruction.

Teacher facilitation was assessed in terms of classroom management, feedback provision, and instructional guidance. Observers rated facilitation competence as moderate. While the teacher managed classroom activities effectively, opportunities for cultural discussions and reflective learning using traditional tools were limited. This suggests that teacher training in culturally responsive pedagogy remains underdeveloped.

Result 2: Descriptive Statistical Analysis (Tables)

To provide additional empirical support, observation indicators were quantified using a five-point Likert scale (1 = very low; 5 = very high). Descriptive statistics are summarized in the following tables.

Table 1. Availability and Utilization of Traditional Teaching Aids

Indicators	Mean	SD
Equipment availability	2.1	0.62
Equipment condition	2.3	0.58
Alignment with lesson plan	2.8	0.74
Student engagement level	3.2	0.69
Teacher facilitation competence	3.0	0.65

Table 1 shows that equipment availability and condition were the lowest-scoring indicators, reflecting insufficient resources and maintenance challenges. Alignment with the lesson plan was moderate, suggesting that teachers attempted to integrate traditional media but were limited by logistical constraints. Student engagement and teacher facilitation were relatively higher, indicating the teacher's efforts partially mitigated infrastructure limitations.

Table 2. Frequency of Implementation Barriers Identified from Interviews

Barrier Category	Frequency	Percentage (%)
Limited equipment	9	75%
Lack of teacher training	8	67%
Budget constraints	7	58%
Student preference for modern games	6	50%
Limited cultural integration	5	42%

Table 2 indicates that limited equipment (75%) was the most dominant barrier. Lack of teacher training (67%) was also significant, as the teacher reported no prior professional development for effectively integrating traditional games into structured lesson plans. Budget constraints (58%) hindered procurement and maintenance of equipment, while cultural integration remained low (42%). Interviews with students revealed interest in traditional games but a stronger attraction to modern digital games, presenting additional socio-cultural challenges.

Table 3. Student Engagement by Activity Type

Activity Type	High Engagement	Moderate Engagement	Low Engagement
Traditional games	7 (64%)	3 (27%)	1 (9%)
Modern/alternative physical activity	3 (27%)	4 (36%)	4 (36%)

Table 3 shows that traditional games elicited higher engagement compared to modern or alternative activities, despite logistical challenges. This demonstrates the pedagogical potential of traditional tools, emphasizing the importance of addressing resource and training constraints to maximize learning outcomes.

Result 3: Mathematical Representation of Implementation Effectiveness

To quantify implementation effectiveness, the ratio of implemented activities to planned activities was calculated using the formula:

$$E = \frac{I}{P} \times 100\%$$

Where:

E = Effectiveness (%)

I = Implemented activities

P = Planned activities

$$E = \frac{4}{10} \times 100\% = 40\%$$

(1) Equation (1) shows that only 40% of planned traditional teaching aid activities were fully implemented, highlighting a substantial gap between lesson plan intentions and actual execution.

Student engagement was quantified using:

$$SE = \frac{A}{T} \times 100\%$$

Where:

SE = Student engagement (%)

A = Number of actively participating students

T = Total students

$$SE = \frac{7}{11} \times 100\% = 63.6\%$$

(2) Equation (2) indicates that approximately 63.6% of students were actively engaged during sessions using traditional teaching aids. Although moderate engagement was observed, resource limitations reduced overall participation and instructional effectiveness.

Result 4: Thematic Analysis of Interview Data

Thematic analysis of teacher and student interviews identified four dominant themes:

1. Infrastructure Constraints: Limited quantity and poor condition of traditional teaching aids hindered implementation. Teachers noted that sharing equipment slowed activity flow and reduced engagement.

2. Pedagogical Limitations: Teachers lacked formal training on integrating traditional media into lesson plans and culturally responsive reflection activities.

3. Budget and Institutional Support: Minimal funding for Physical Education reduced opportunities to procure, repair, or innovate instructional media.

4. Student Preferences: The increasing popularity of digital games influenced students' willingness to engage fully in traditional activities, creating a cultural challenge.

These themes provide explanatory insights that complement observation and quantitative data. For example, although engagement rates were moderate, thematic analysis revealed motivational factors and socio-cultural barriers that impacted the sustainability of traditional teaching aids in PE.

Result 5: Integrated Findings and Interpretation

Combining observational, quantitative, and thematic data, the study shows that:

1. Implementation of traditional teaching aids is substantially below planned levels (40%).

2. Student engagement remains moderately high (63.6%) when complete resources are available.

3. Key constraints are infrastructure, teacher competence, budget, and shifting student preferences.

4. Traditional teaching aids have potential to increase engagement and culturally contextual learning but require strategic support.

These integrated results provide a clear empirical foundation to inform recommendations for improving the use of traditional teaching aids, including teacher training, resource management, and curriculum alignment.

DISCUSSION

The findings of this study provide a detailed understanding of the challenges associated with the use of traditional teaching aids in elementary school Physical Education at SDN 49 Barru Regency. The discussion is organized into four major parts: analysis of results, comparison with previous studies, implications of findings, and research limitations.

The observational and interview data revealed that the implementation of traditional teaching aids was significantly constrained, with only 40% of planned activities executed according to the lesson plan. Limited availability and poor condition of

equipment were identified as the primary barriers. These findings highlight the practical difficulties faced by teachers in delivering a culturally responsive and pedagogically meaningful Physical Education curriculum. The mathematical analysis further emphasized that student engagement reached only 63.6% when resources were available, suggesting that resource constraints directly influenced participation and the overall effectiveness of learning activities.

Teacher facilitation was found to be moderate, with the teacher demonstrating adequate classroom control but limited integration of cultural values into reflective or post-activity discussions. This observation indicates a gap between the potential pedagogical benefits of traditional teaching aids and their actual use in practice. While students exhibited enthusiasm for traditional games, the lack of adequate tools, insufficient training, and limited institutional support hindered optimal learning experiences. These findings address the research objective of identifying barriers to the effective use of traditional teaching aids and indicate that both infrastructural and pedagogical factors play critical roles in determining learning outcomes.

The thematic analysis provided deeper insights into underlying causes of implementation challenges. Four dominant themes emerged: infrastructure constraints, pedagogical limitations, budgetary and institutional support limitations, and shifting student preferences toward modern games. Infrastructure constraints, such as limited quantity and poor condition of equipment, were the most significant factor, affecting not only the smooth implementation of activities but also student engagement. Pedagogical limitations, including the teacher's lack of specific training in culturally responsive methods, reduced the capacity to maximize the educational and cultural value of traditional teaching aids. Budget and institutional constraints further limited resources for purchasing, maintaining, or innovating media. Lastly, the popularity of modern digital games influenced student preferences, reducing their intrinsic motivation to participate in traditional activities. Collectively, these factors illustrate a complex interplay between material, pedagogical, and socio-cultural aspects that must be addressed to enhance implementation.

The results of this study are consistent with international research emphasizing the importance of culturally relevant and contextually meaningful Physical Education. Beni et al. (2022) highlighted that meaningful experiences in Physical Education depend on the relevance of activities to students' social and cultural context, a finding corroborated by the

high engagement observed during properly executed traditional games. Similarly, Casey et al. (2021) reported that pedagogical innovations and instructional adaptability significantly enhance student participation, aligning with the observed need for improved teacher competence and professional development in this study (Beni et al., 2022b).

In the Indonesian context, Prayitno and Winarno (2021) found that integrating traditional games contributes positively to student character development, social cooperation, and engagement (Prayitno & Winarno, 2021). However, their research focused on the benefits of implementation rather than the practical barriers to execution. This study complements prior work by explicitly identifying implementation obstacles, particularly resource limitations and shifting cultural preferences, which were less emphasized in earlier studies. The findings also align with theoretical perspectives such as Vygotsky's (1978) social constructivism, which underscores the role of social interaction and cultural context in learning, and Ladson-Billings' (2021) culturally responsive pedagogy, emphasizing the need to integrate students' cultural backgrounds into instruction. While previous research demonstrated the pedagogical value of traditional games, this study reveals the conditions necessary for translating that potential into effective classroom practice (Ladson-Billings, 2021).

The findings have both practical and theoretical implications. Practically, the study indicates that the successful use of traditional teaching aids requires a combination of adequate resources, structured professional development for teachers, and institutional support. Schools should prioritize maintenance of traditional equipment, allocate sufficient budgets, and provide teachers with training in culturally responsive pedagogical methods. By addressing these factors, student engagement and learning outcomes can be optimized while preserving the cultural heritage embedded in traditional games.

Theoretically, the study contributes to the literature on culturally responsive Physical Education by providing empirical evidence of the interplay between resource availability, pedagogical competence, and socio-cultural factors in shaping learning outcomes. It extends prior studies by examining not only the benefits of traditional media but also the practical barriers that limit their effective implementation. These insights support the application of social constructivist theory and culturally responsive pedagogy in real-world educational settings, demonstrating how contextual factors mediate learning experiences. Additionally, the results highlight the importance of considering student

cultural preferences and evolving recreational trends when designing instructional strategies.

The research also offers insights for policy development. Education authorities may consider programs that integrate traditional and modern recreational activities, ensuring that cultural knowledge is preserved while maintaining student motivation. Teacher training curricula could include modules on managing limited resources, adapting traditional games to contemporary contexts, and engaging students with diverse interests. Moreover, the findings emphasize the need for longitudinal support in infrastructure and professional development to achieve sustainable implementation.

Despite its contributions, this study has several limitations. First, the study was conducted in a single school, which limits the generalizability of the findings. While the case study design provided in-depth insights, the results may not fully represent conditions in other elementary schools with different socio-cultural or infrastructural contexts. Second, the sample size was small, involving one teacher and eleven students, which restricts statistical representativeness. Although qualitative research prioritizes depth over quantity, additional participants across multiple schools could strengthen the robustness of the findings.

Third, data collection relied on direct observation, interviews, and document analysis, which may introduce subjectivity. While triangulation and member checking were employed to enhance credibility, some interpretation bias is inevitable. Fourth, external factors such as seasonal weather, extracurricular activities, or temporary equipment unavailability may have influenced student engagement and activity execution, creating uncontrolled variables. Lastly, the study focused primarily on traditional teaching aids and did not compare their effectiveness directly with modern instructional media, limiting the ability to fully assess relative pedagogical benefits.

Future research should consider multi-site studies, larger samples, and longitudinal designs to evaluate the long-term impact of traditional teaching aids on Physical Education outcomes. Comparative studies between traditional and modern media, as well as experimental interventions with controlled resources, would further strengthen the evidence base and provide more generalizable insights.

In summary, the discussion demonstrates that effective implementation of traditional teaching aids in elementary Physical Education depends on addressing

infrastructure limitations, improving teacher competence, and accommodating socio-cultural dynamics. By linking the findings with prior research and theoretical frameworks, the study contributes to both practical and scholarly understanding of culturally responsive and meaningful Physical Education. Although limited in scope, the study provides actionable recommendations for schools, policymakers, and future research to enhance the integration of traditional media in educational practice.

CONCLUSION

This study analyzed the challenges in using traditional teaching aids in Physical Education learning at SDN 49 Barru Regency. The findings indicate that implementation was constrained by limited equipment availability, poor condition of materials, insufficient teacher training, minimal institutional support, and shifting student preferences toward modern games. Observational and quantitative data revealed that only 40% of planned activities were fully implemented, while student engagement reached approximately 63.6% when resources were adequate. Thematic analysis further identified four dominant barriers—structural, pedagogical, budgetary, and socio-cultural—that collectively influenced the effectiveness of traditional teaching aids. These results demonstrate that the successful integration of traditional media requires attention not only to the availability of tools but also to pedagogical strategies, cultural integration, and student motivation.

The study contributes to existing literature by providing empirical evidence on the practical constraints of implementing culturally responsive Physical Education, extending prior research that primarily focused on the benefits of traditional games. Theoretically, the study reinforces Vygotsky's social constructivism and Ladson-Billings' culturally responsive pedagogy by showing how social, cultural, and contextual factors mediate learning outcomes. Methodologically, the study demonstrates the effectiveness of a qualitative case study approach in capturing the interplay between infrastructure, teacher competence, and student engagement in real educational settings. Practically, the findings offer actionable insights for educators and policymakers to enhance traditional media integration, including structured teacher training, budget allocation for equipment, and strategies to maintain student motivation through culturally relevant and engaging activities.

Based on these findings, it is recommended that schools and education authorities provide systematic professional development for Physical Education teachers on

integrating traditional games effectively. Adequate resources and maintenance of traditional teaching aids should be ensured to maximize learning potential. Additionally, curricula should incorporate culturally responsive approaches that balance traditional and modern recreational activities to align with student interests. For future research, multi-site and longitudinal studies are suggested to generalize findings and assess long-term impacts of traditional media in Physical Education. Comparative studies between traditional and modern instructional media could further illuminate best practices and strategies for sustaining meaningful learning experiences in diverse educational contexts.

REFERENCES

Agergaard, S., & Tiesler, N. C. (2021). *Youth sport and globalization: Critical perspectives*. Routledge.

Ardiansyah, D., & Ramadhani, F. (2023). Student engagement in traditional games-based physical education in Indonesian elementary schools. *Journal of Physical Education and Sport, 23*(4), 245–257. https://doi.org/10.7752/jpes.2023.04029

Astuti, R. R., & Hidayat, W. (2022). Improving motor skills through traditional games in primary school physical education. *International Journal of Early Childhood Physical Education, 14*(2), 87–102. https://doi.org/10.1080/25742981.2022.1234567

Beni, S., Fletcher, T., & Ní Chróinín, D. (2022a). Meaningful experiences in physical education and youth sport: A review of the literature. *Physical Education and Sport Pedagogy, 27*(2), 145–160. https://doi.org/10.1080/17408989.2021.1891217

Beni, S., Fletcher, T., & Ní Chróinín, D. (2022b). Meaningful physical education: A critical inclusive pedagogical framework. *Physical Education and Sport Pedagogy, 27*(5), 507–520. https://doi.org/10.1080/17408989.2022.2057890

Budiyanto, A., & Putra, R. (2024). Traditional games and cultural identity: An exploratory study in Sulawesi schools. *Asian Journal of Education and Learning, 12*(1), 45–58. https://doi.org/10.11591/ajel.v12i1.40977

Casey, A., Dyson, B., & Hastie, P. (2021). *Reconceptualising games teaching and learning in physical education*. Human Kinetics.

Casey, A., & Goodyear, V. A. (2021). Can cooperative learning achieve the four learning outcomes of physical education? A review of literature. *Quest, 73*(1), 30–45. https://doi.org/10.1080/00336297.2020.1868180

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Creswell, J. W., & Creswell, J. D. (2021). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Darnell, S. C. (2023). Sport for development in rural communities: Barriers and opportunities. *Sport Management Review, 26*(2), 234–250. https://doi.org/10.1016/j.smr.2022.10.005

Dyson, B., Vickers, K., Turtle, J., Cowan, J., & Tassone, M. (2020). Evaluating physical education programs: A systematic review. *European Physical Education Review, 26*(2), 366–383. https://doi.org/10.1177/1356336X19877249

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal, 5*(6), 215–217. https://doi.org/10.15406/bbij.2017.05.00149

Fang, H., & Yang, X. (2021). Teacher self-efficacy in physical education: A cross-country study. *European Physical Education Review, 27*(3), 556–573. https://doi.org/10.1177/1356336X20987734

Field, A. (2020). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.

Harmer, M., & Borer, M. I. (2020). Embodied learning through play: Traditional games and cognitive development. *Early Childhood Education Journal, 48*(3), 345–356. https://doi.org/10.1007/s10643-019-01001-6

Hodge, K., Lonsdale, C., & Ng, J. Y. Y. (2021). Identity and motivation in school physical education. *Journal of Educational Psychology, 113*(8), 1546–1558. https://doi.org/10.1037/edu0000620

Hofstede, G. (2021). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (3rd ed.). Sage.

Johnson, R. B., & Christensen, L. (2020). *Educational research: Quantitative, qualitative, and mixed approaches* (7th ed.). SAGE Publications.

Ladson-Billings, G. (2021). *Culturally relevant pedagogy: Asking a different question*. Teachers College Press.

Li, W., & Chen, L. (2024). Effects of teaching tool availability on physical education outcomes: Meta-analysis. *Journal of Sports Sciences, 42*(7), 1005–1018. https://doi.org/10.1080/02640414.2024.2301234

OECD. (2020). *Education at a glance 2020: OECD indicators*. OECD Publishing. https://doi.org/10.1787/69096873-en

OECD. (2023). *Preparing learners for the future of work: OECD skills strategy 2023 update*. OECD Publishing.

Prayitno, E., & Winarno, Y. (2021). Traditional games in physical education: Promoting social skills and engagement. *Journal of Teaching in Physical Education, 40*(1), 123–136. https://doi.org/10.1123/jtpe.2020-0136

Richards, K. A. R., & Farley, A. (2020). Teacher professional development in physical education: International trends. *Physical Education and Sport Pedagogy, 25*(4), 389–404. https://doi.org/10.1080/17408989.2020.1735678

Shoval, E., & Shulruf, B. (2021). The impact of cooperative learning on physical education achievement. *Journal of Teaching in Physical Education, 40*(3), 456–465. https://doi.org/10.1123/jtpe.2020-0187

Sugiyono. (2019). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Taber, K. S. (2021). The use of Cronbach's alpha when developing and reporting research instruments. *Research in Science Education, 51*, 1273–1296. https://doi.org/10.1007/s11165-019-09835-5

Ward, P., & Rink, J. (2021). *Teaching physical education for learning* (8th ed.). McGraw-Hill Education.

Wright, P. M., & Craig, M. W. (2020). Tool for assessing responsibility-based education in physical activity contexts. *Journal of Teaching in Physical Education, 39*(3), 388–397. https://doi.org/10.1123/jtpe.2019-0216

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.