

CULTURALLY RESPONSIVE PHYSICAL EDUCATION: INTEGRATING INDIGENOUS GAMES TO FOSTER CULTURAL IDENTITY AND ENGAGEMENT

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Abstract

As schools seek culturally responsive approaches to make physical education more meaningful, the integration of indigenous games has become increasingly relevant as a strategy to strengthen both student engagement and cultural identity. This study examined the effects of integrating indigenous games into culturally responsive physical education classes on students' cultural identity engagement, observed classroom engagement, and knowledge and appreciation of local indigenous games. The study employed a quantitative quasi-experimental one-group pretest–posttest design involving 200 students enrolled in physical education classes at a public secondary school in Pangasinan. Data were gathered through a researcher-made survey questionnaire, structured observation checklists, and pre-test and post-test instruments. Descriptive statistics, including weighted means and standard deviations, were used to describe respondents' levels of cultural identity engagement and classroom engagement.

In contrast, a paired-samples t-test was used to determine the significance of differences in knowledge and appreciation before and after the intervention. Findings revealed that students demonstrated a high level of perceived cultural identity engagement (mean = 4.49) and a very high level of observed student engagement (mean = 4.54). Results further showed a substantial improvement in knowledge and appreciation scores, from a pre-test mean of 18.20 to a post-test mean of 26.85, yielding a mean gain of 8.65. The paired-sample t-test confirmed that this increase was statistically significant ($t = 15.72$, $p < .05$). The study concluded that integrating indigenous games into culturally responsive physical education effectively enhances cultural identity, promotes active engagement, and improves students' knowledge and appreciation of local cultural heritage, thereby supporting the development of a teacher training program for sustainable implementation.

Keywords: Culturally Responsive Physical Education, Indigenous Games, Cultural Identity Engagement, Student Engagement, Knowledge And Appreciation, Quasi-Experimental Study

1. Introduction

Physical education (PE) is no longer viewed solely as a school subject for exercise and recreation; it is increasingly understood as a curriculum space in which health, movement competence, values formation, and social learning are cultivated together. In the Philippine basic education system, this broader view is explicitly supported by policy. Republic Act No. 10533 requires a learner-centered, culture-sensitive, and contextualized curriculum. At the same time, DepEd's implementation frameworks emphasize localization and indigenization, making learning more meaningful through the use of local knowledge, community experiences, and culturally grounded materials. The K to 12 PE curriculum likewise frames physical education as a domain for developing values, knowledge, skills, and experiences related to movement, play, and social interaction, rather than as a purely technical training field. Taken together, these policy directions suggest that PE should not be detached from learners' cultural worlds; rather, it should be designed to recognize identity, context, and community as legitimate dimensions of learning.

This policy orientation aligns closely with the international discourse on safeguarding intangible cultural heritage through education. The 2003 UNESCO Convention identifies education, awareness-raising, and community participation as key means of preserving living heritage, including traditional practices transmitted across generations. UNESCO's current education resources further emphasize that intangible cultural heritage can be integrated into teaching and learning across relevant disciplines, thereby supporting more inclusive, culturally meaningful, and sustainable education. Notably, UNESCO's Asia-Pacific guidance for educators includes adaptable lesson models that use traditional games within school instruction, including physical education. These positions are important for the present study because they frame indigenous games not as nostalgic extras, but as legitimate cultural resources that can function pedagogically in formal schooling. In this sense, integrating indigenous games into PE responds simultaneously to educational goals and to the broader responsibility of cultural preservation.

Within the Philippine context, this argument is particularly compelling because traditional games remain deeply associated with local memory, community interaction, and childhood socialization. DepEd learning materials explicitly identify *Laro ng Lahi* as traditional Filipino games played across generations, often using native or improvised materials, thereby locating them within the nation's cultural inheritance. Contemporary Philippine evidence also suggests that these games possess educational value beyond mere amusement. A recent study on indigenous games reported strong perceived contributions to physical, cognitive, socio-emotional, and socio-cultural development, including their role in supporting Filipino social identity. At the same time, the same body of work warns that indigenous games are increasingly threatened by cyber-technology, modernization, and changing leisure patterns, all of which reduce their everyday visibility among younger learners. This dual reality creates a curricular urgency: if schools do not intentionally create spaces for indigenous games, an important form of embodied cultural knowledge risks becoming progressively marginalized.

The educational significance of this issue becomes even clearer when viewed through the lens of culturally relevant and culturally sustaining pedagogy. Ladson-Billings' recent reflection on three decades of culturally relevant, responsive, and sustaining pedagogy underscores that meaningful teaching must engage students' cultural worlds rather than treat them as peripheral to academic work. In physical education and sport pedagogy, this principle has generated a growing literature showing that culturally relevant approaches can reformulate practice so that instruction better reflects students' lives, histories, and communities. Research on culturally relevant PE and community-based sport pedagogy has shown that when pedagogy is grounded in learners' cultural experiences, participation becomes more meaningful and the learning environment more responsive. These arguments are especially important in PE because the subject is inherently social, participatory, and embodied: learners do not merely hear about knowledge, they enact it. When that enactment includes culturally familiar forms such as indigenous games, PE can become a site for both movement learning and identity affirmation.

Even so, the literature shows that integrating indigenous games into health and physical education remains uneven and underexamined. A recent systematic review on Indigenous games in physical education teacher education identified both enabling factors and significant constraints in bringing such games meaningfully into curriculum practice. Related scholarship has argued that Indigenous knowledges and games have often been marginalized or omitted in mainstream health and physical education, despite their clear pedagogical and cultural value. This gap matters because much of the existing discourse still emphasizes broad principles of inclusion and cultural responsiveness without generating enough localized, measurable evidence on actual student outcomes. For Philippine schools, the issue is even more pronounced: while indigenous games are culturally recognizable and policy-aligned, there is limited quantitative evidence on whether their integration into PE strengthens outcomes such as cultural identity engagement, classroom engagement, and knowledge and appreciation of heritage-based practices. Thus, the need is not

simply for advocacy, but for empirical work capable of demonstrating educational impact under actual school conditions.

It is within this curricular, cultural, and research context that the present study becomes timely and significant. More specifically, the study examined students' perceived cultural identity engagement, observed engagement during class, and their knowledge and appreciation of indigenous games before and after exposure to the intervention, with the results intended to inform a teacher training program for sustainable implementation. This focus is important because it translates the broad ideals of culturally responsive and heritage-sensitive education into measurable school-based evidence. Rather than assuming that indigenous games are beneficial simply because they are traditional, the study asks a more rigorous educational question: whether deliberate integration of such games in PE can produce observable gains in identity, engagement, and learning. In doing so, the research contributes to the growing effort to position culturally responsive physical education not only as a value-oriented practice, but also as an evidence-based instructional approach.

2. Method

2.1 Research Design

The study employed a quantitative quasi-experimental research design, specifically a one-group pre-test–post-test design, to determine the effects of integrating indigenous games into culturally responsive physical education on students' cultural identity engagement, overall classroom engagement, and knowledge and appreciation of local games. This design was appropriate because it enabled the researcher to generate numerical evidence on change over time by observing the same group of learners before and after the intervention, thereby allowing a focused examination of the instructional effect of indigenous-game integration within an authentic school setting. The design began with a pre-test to establish students' baseline knowledge and appreciation of indigenous games, followed by a structured intervention comprising several culturally responsive PE sessions in which selected indigenous games were introduced, contextualized, and implemented in alignment with curricular objectives. After the intervention, the same participants completed a post-test to determine measurable gains. At the same time, additional data on cultural identity engagement and observed student engagement were collected through a standardized survey instrument and structured observation checklists completed by teachers and peer observers. By combining repeated measurement with multiple quantitative indicators, the design provided a systematic and empirically defensible framework for assessing whether culturally grounded PE instruction could significantly influence students' cognitive, affective, and participatory outcomes.

2.2 Participants

The study included 200 student respondents enrolled in Physical Education classes at a public secondary school in Pangasinan, specifically drawn from Grades 7 to 10, thereby providing a developmentally diverse yet contextually coherent sample for examining the educational effects of integrating indigenous games into culturally responsive PE instruction. The participants were selected through purposive sampling, a procedure that enabled the researcher to include learners who were directly exposed to the intervention and therefore capable of providing meaningful data on cultural identity engagement, classroom engagement, and knowledge and appreciation of indigenous games. This participant structure was methodologically appropriate because the study sought to evaluate change within an actual school-based instructional setting rather than to compare randomized groups across multiple institutions. By focusing on officially enrolled PE learners within a single school context, the study ensured curricular consistency, shared exposure to the intervention, and sufficient statistical power for pre-test–post-test analysis. At the same

time, the inclusion of students across several grade levels strengthened the practical relevance of the findings, as it enabled the study to reflect on how culturally responsive physical education may function across a broader range of junior secondary learners while remaining grounded in a single institutional environment.

2.3 Instrumentation

The study employed a multi-instrument quantitative data-gathering system carefully developed to capture the cognitive, affective, and behavioral outcomes of integrating indigenous games into culturally responsive physical education. The principal instruments consisted of a pre-test and post-test, a standardized survey questionnaire on cultural identity engagement, and a structured observation checklist. The pre-test and post-test served as the primary measures of students' knowledge and appreciation of indigenous games, containing multiple-choice, identification, and short-response items designed to assess both factual knowledge—such as rules, equipment, and origins of the games—and conceptual understanding of their cultural significance. These test instruments underwent content validation by a panel composed of a licensed Physical Education teacher, a curriculum development specialist, and a local historian, followed by pilot testing, item analysis, and reliability screening through Cronbach's alpha to ensure acceptable internal consistency. To examine the affective dimension of the intervention, the researcher used a five-point Likert-scale survey questionnaire to measure students' perceived cultural pride, belongingness, and heritage connection after exposure to culturally grounded PE lessons. In addition, a structured observation checklist was utilized to record real-time indicators of behavioral, emotional, and cognitive engagement, with teachers and peer observers undergoing prior calibration to improve inter-rater consistency. Collectively, these instruments provided a robust, validated, and methodologically coherent means of measuring the impact of indigenous-game integration on students' learning, engagement, and cultural identity outcomes.

2.4 Data Analysis

The study employed a quantitative data analysis framework designed to generate both descriptive and inferential evidence on the effects of integrating indigenous games into culturally responsive physical education. After all responses and test results were collated, encoded, tabulated, and double-checked for accuracy, the researcher used descriptive statistics—particularly frequency, percentage, mean, weighted mean, and standard deviation—to summarize the students' pre-test and post-test scores, their perceived level of cultural identity engagement, and the observed classroom engagement ratings gathered through the survey questionnaires and structured observation checklists. To determine whether the intervention produced a statistically significant change in students' knowledge and appreciation of indigenous games, the study employed the paired-samples t-test, an inferential procedure appropriate for comparing the scores of the same group of participants before and after the intervention. This procedure enabled the researcher to determine whether the observed gains were merely chance variations or could be attributed to the culturally responsive PE lessons that integrated indigenous games. Through this combination of descriptive and inferential treatment, the analysis provided an objective, systematic, and methodologically sound basis for interpreting the extent to which the intervention influenced students' cognitive, affective, and participatory outcomes.

3 Results

The study found that integrating indigenous games into culturally responsive physical education led to a high level of cultural identity engagement among the 200 student participants. The findings indicated that students did not merely participate in the activities as routine physical tasks; rather, they developed a stronger sense of pride, belongingness, and connection to their Filipino cultural heritage. The highest-rated aspect of this outcome was the students' appreciation

for the value and significance of traditional games, suggesting that the intervention succeeded in transforming physical education into a culturally meaningful learning experience. This result implies that indigenous games functioned not only as movement activities but also as cultural texts through which learners could reconnect with community traditions and local identity.

A second major result concerned the students' overall engagement during culturally responsive PE classes, which was described as very high. The observation data showed that behavioral engagement received the highest rating ($M = 4.60$), indicating active participation, cooperation, and collaborative involvement during the games. This was followed by emotional engagement ($M = 4.55$), reflecting enjoyment, enthusiasm, and positive affect during the lessons. Cognitive engagement was likewise rated high ($M = 4.48$), suggesting that students remained attentive, strategic, and mentally involved in the learning tasks. The overall mean engagement score of 4.54 confirmed that the integration of indigenous games stimulated participation across behavioral, emotional, and cognitive dimensions, thereby making PE classes more interactive, meaningful, and learner-centered.

The third set of findings focused on students' knowledge and appreciation of indigenous games before and after the intervention. Results showed a substantial increase in scores, with the pre-test mean of 18.20 ($SD = 3.15$) rising to a post-test mean of 26.85 ($SD = 2.80$). The mean gain of 8.65 indicated a significant improvement in the learners' understanding of the rules, mechanics, and cultural relevance of indigenous games. This result suggests that the culturally responsive PE lessons were effective not only in increasing student participation but also in enhancing both cognitive learning and affective appreciation. In practical terms, students did not simply play the games; they also came to understand their heritage value more deeply through structured instructional exposure.

This gain was further validated by the paired-sample t-test, which revealed a highly significant difference between the pre-test and post-test scores ($t = 15.72$, $p = 0.000$). Since the computed p-value was below the 0.05 level of significance, the null hypothesis was rejected, confirming that the increase in students' knowledge and appreciation was not due to chance. This statistical outcome provides strong empirical evidence that integrating indigenous games into culturally responsive physical education was an effective intervention. The result established that the instructional strategy had a measurable positive effect on students' learning outcomes and justified the continued inclusion of indigenous games in PE as a culturally grounded educational practice.

Taken together, the results present a coherent pattern: the intervention strengthened cultural identity engagement, generated very high classroom engagement, and produced a statistically significant improvement in knowledge and appreciation of indigenous games. Because these outcomes were consistently positive across affective, behavioral, cognitive, and achievement-related measures, the study justified the development of a proposed teacher training program centered on game familiarization, culturally responsive pedagogy, and appropriate assessment strategies. Thus, the results demonstrate that indigenous games can serve as effective pedagogical tools for making physical education more culturally affirming, engaging, and educationally meaningful in the school setting.

4. Discussion

The present study found that integrating indigenous games into culturally responsive physical education was associated with high cultural identity engagement among the 200 student-participants, with an overall mean of 4.49, and the highest indicator centered on appreciation of the value of local indigenous games. This pattern aligns well with the broader literature on culturally relevant pedagogy, which argues that learning becomes more powerful when students' cultural resources are treated as legitimate foundations for classroom meaning-making. Ladson-Billings' reflection on culturally relevant, responsive, and sustaining pedagogy emphasizes that

schooling should engage, not sideline, learners' cultural worlds, while UNESCO's heritage-in-education framework explicitly states that intangible cultural heritage can provide context-specific content and pedagogy that increase the relevance and quality of education and improve learning outcomes. In the Philippine context, Dizer et al. (2022) likewise describe *Laro ng Lahi* as reflecting cultural heritage and social identity, with empirical value for holistic development and for the revival of traditional play in schools. Read together, these sources support the interpretation that the study's gains in cultural identity were not incidental; they are consistent with what would be expected when PE is redesigned to affirm learners' heritage through embodied, familiar, and socially meaningful practices.

A second major finding of the study was the very high overall student engagement score ($M = 4.54$), with behavioral engagement rated highest ($M = 4.60$). This result is also strongly corroborated by current scholarship. Bonato et al.'s systematic review of Indigenous games in physical education teacher education identifies culturally relevant pedagogy as a major enabler of the effective implementation of Indigenous perspectives in curriculum and notes that it emerged repeatedly across the literature as a key factor in classroom-level success. In parallel, self-determination research in PE shows that students' adaptive outcomes are positively associated with supportive learning environments that strengthen autonomy, competence, and relatedness; those motivational pathways are especially relevant to indigenous games, which are usually cooperative, participatory, and socially interactive. The present study's very high behavioral and emotional engagement is therefore consistent with the view that indigenous games do more than "add activity"; they can satisfy students' need to belong and participate in a culturally resonant learning space, thereby enhancing the quality of engagement during PE lessons.

The study also demonstrated a substantial increase in knowledge and appreciation of indigenous games, with the mean score rising from 18.20 in the pre-test to 26.85 in the post-test, and with the paired-sample t-test confirming a highly significant difference ($t = 15.72$, $p = 0.000$). This result is consistent with research suggesting that traditional games can generate cognitive as well as affective learning gains. A recent school-based intervention on traditional games reported statistically significant improvements in children's movement competence and motivation. In contrast, a recent review of traditional games in PE concluded that such games can positively influence cognitive, affective, and psychomotor outcomes. UNESCO's education program on intangible cultural heritage likewise states that learning and teaching with and about heritage can be integrated across relevant disciplines, as heritage-based pedagogies enhance educational relevance and support learning. Against that backdrop, the present study's pre-post improvement can be interpreted not merely as increased familiarity with game rules but as evidence that culturally grounded PE can deepen both conceptual understanding and appreciation of heritage when students learn through structured, repeated, and socially mediated participation.

Finally, the study's proposal for a teacher training program focused on game familiarization, culturally responsive pedagogy, and assessment strategies is strongly justified by the literature. Bonato et al. identify professional development as one of the important enablers in implementing Indigenous perspectives, while UNESCO's education initiative stresses that safeguarding intangible cultural heritage through schooling depends on active transmission, formal and non-formal education, and pedagogical support for teachers. UNESCO also notes that traditional and indigenous games express a rich cultural heritage and should be protected and promoted. From this perspective, the training component recommended by the study is not an optional add-on but a practical requirement for sustainability. The discussion, therefore, suggests that the study's contribution lies not only in showing positive student outcomes but also in pointing toward the institutional conditions needed to sustain them: teachers must know the games accurately, understand their cultural significance, and assess both participation and heritage-related learning in ways that preserve educational rigor and cultural respect.

References

- Bonato, G., Dinan-Thompson, M., & Salter, P. (2024). Investigating Indigenous games as Indigenous knowledges and perspectives in PETE: A systematic literature review. *Curriculum Studies in Health and Physical Education*, 15(2), 182–201. Retrieved from: <https://doi.org/10.1080/25742981.2023.2218350>
- Department of Education. (2016). *DepEd Order No. 35, s. 2016: The Learning Action Cell as a K to 12 Basic Education Program school-based continuing professional development strategy for the improvement of teaching and learning*. Retrieved from: https://www.deped.gov.ph/wp-content/uploads/2016/06/DO_s2016_035.pdf
- Department of Education. (2016). *K to 12 physical education curriculum guide*. Retrieved from: <https://www.deped.gov.ph/wp-content/uploads/2019/01/PE-CG.pdf>
- Department of Education. (n.d.). *Physical education 2 (Sports and dance)*. Retrieved from: <https://www.deped.gov.ph/wp-content/uploads/Physical-Education-2-Sports-and-Dance-1.pdf>
- Dizer, R., Logan, I. L. N., & Raval, K. M. R. (2022). *Laro ng lahi: A study on the perceived benefits of playing indigenous games on the holistic development of Filipinos born in the '80s*. *Philippine Journal of Social Sciences and Humanities*, 27, 91–114. Retrieved from: https://pjssh.upv.edu.ph/wp-content/uploads/2024/05/91-114-PJSSH-22-27-D01_Laro-ng-Lahi.pdf
- Ladson-Billings, G. (2021). Three decades of culturally relevant, responsive, and sustaining pedagogy: What lies ahead? *The Educational Forum*, 85(4), 351–354. Retrieved from: <https://doi.org/10.1080/00131725.2021.1957632>
- Luguetti, C., Singehebhuve, L., & Spaaij, R. (2022). Towards a culturally relevant sport pedagogy: Lessons learned from African Australian refugee-background coaches in grassroots football. *Sport, Education and Society*, 27(4), 449–461. Retrieved from: <https://doi.org/10.1080/13573322.2020.1865905>
- Meston, T., Whatman, S., & Bargallie, D. (2025). (Re)positioning Indigenous games in HPE: Turning to criticality. *Sport, Education and Society*, 30(3), 281–293. Retrieved from: <https://doi.org/10.1080/13573322.2023.2300353>
- Republic of the Philippines. (2013, May 15). *Republic Act No. 10533: Enhanced Basic Education Act of 2013*. Retrieved from: <https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/2/55631>
- UNESCO. (2024). *Basic texts of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage* (2024 version). Retrieved from: https://ich.unesco.org/doc/src/2003_Convention_Basic_Texts_2024_version_EN.pdf
- UNESCO. (n.d.). *Learning with intangible heritage for a sustainable future*. Retrieved from: <https://ich.unesco.org/en/project-education/learning-with-intangible-heritage-for-a-sustainable-future-00429>

- UNESCO. (n.d.). *Safeguarding intangible cultural heritage in education*. Retrieved from: <https://ich.unesco.org/en/education>
- UNESCO. (n.d.). *Traditional sports and games*. Retrieved from: <https://www.unesco.org/en/sport-and-anti-doping/traditional-sports-and-games>
- Vasconcellos, D., Parker, P. D., Hilland, T., Cinelli, R., Owen, K. B., Kapsal, N., Antczak, D., Lee, J., Ntoumanis, N., Ryan, R. M., & Lonsdale, C. (2020). Self-determination theory applied to physical education: A systematic review and meta-analysis. *Journal of Educational Psychology*, 112(7), 1444–1469. Retrieved from: <https://doi.org/10.1037/edu0000420>
- Wicahyani, S., Williyanto, S., Nur Muhammad, H., Hidayat, T., Wibowo, S., Prasetyo, A., & Andrijanto, D. (2025). The role of traditional games in the physical education learning process: A systematic review. In *Proceedings of the International Seminar of Sport and Exercise Science (ISSES 2024)* (pp. 65–75). Atlantis Press. Retrieved from: https://doi.org/10.2991/978-94-6463-593-5_5
- Çinar, M., & Hassani, F. (2026). The effects of traditional games on physical literacy among school-aged children. *Frontiers in Sports and Active Living*, 7, 1759890. Retrieved from: <https://doi.org/10.3389/fspor.2025.1759890>