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## Examining the Results of Integrating Culturally Fit Team Sports in Teaching Physical Education

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### Abstract.

This study examined the integration of traditional Filipino games into senior high school physical education (PE) curricula, focusing on how culturally fit team sports – such as Tumbang Preso, Patintero, Luksong Tinik, Palo Sebo, and Piko – improve students' health-related fitness. A mixed-methods approach, incorporating both quantitative and qualitative data, was used to assess the effectiveness of these games in enhancing cardiovascular endurance, muscular strength, flexibility, and overall well-being. Data were gathered from Grade 11 TVL students at Magallanes National High School. The findings showed significant improvements in students' physical fitness, especially cardiovascular health, and a deeper understanding of the rules and objectives of each game. Students also reported enhanced engagement, social interaction, and cultural pride. The study concluded that incorporating traditional Filipino games into PE fosters physical development and promotes cultural awareness, making the PE experience more engaging, holistic, and culturally integrated.

**Keywords:** Culturally Integrated Physical Education; Filipino Traditional Games; Physical Fitness; Cultural Awareness; Senior High School; Student Engagement

### 1.0 Introduction

Physical fitness is essential to holistic development, particularly during adolescence. It is crucial in enhancing physical, mental, and emotional well-being. Regular physical activity during this period improves cardiovascular efficiency, muscular strength, and flexibility. It also supports better cognitive function and academic performance (Tomkinson et al., 2020). As such, Physical Education (PE) programs in schools serve as critical spaces for promoting physical fitness, offering structured opportunities for students to engage in activities that foster overall development (Department of Education, 2020).

National educational policies in the Philippines will support the role of PE in promoting student health. The K-12 Basic Education Curriculum (BEC) recognizes PE as a core subject that contributes significantly to students' holistic growth. Additionally, the Department of Education (DepEd) Order No. 21, s. 2019, and Republic Act No. 5708 emphasize the integration of sports and physical education into the curriculum, underscoring their importance in promoting lifelong physical health (Garcia & Lopez, 2021). However, many schools, especially those in rural or under-resourced areas, face challenges in effectively implementing PE programs. One major constraint is the limited instructional time available for PE, often relegating it to a single session per week. As noted by Garcia and Johnson (2021), this limitation reduces opportunities for students to fully benefit from physical activity, compromising the effectiveness of PE in improving fitness levels.



While the lack of time is a significant barrier, integrating traditional Filipino games into PE can offer a solution. These games, such as *Tumbang Preso*, *Patintero*, *Luksong Tinik*, *Palo Sebo*, and *Piko*, are physical exercises and tools for preserving cultural heritage and enhancing social interactions (De la Cruz, 2020). Schools can overcome time constraints and engage students meaningfully by incorporating such culturally relevant activities into the PE curriculum. These games allow students to participate in familiar and culturally significant activities, fostering physical fitness and cultural pride (Enriquez, 2019).

This study examines the impact of integrating *Laro ng Lahi* (traditional Filipino games) into the PE curriculum for senior high school students, specifically in schools with limited instructional time. While previous research has explored the benefits of culturally responsive pedagogy in various educational settings (Garcia & Villanueva, 2022; Reyes & De Guzman, 2022), few studies have investigated how traditional Filipino games can be effectively integrated into PE, particularly in time-constrained environments. By focusing on Grade 11 students at Magallanes National High School, this research addresses this gap by evaluating the effectiveness of these culturally integrated games in improving students' physical fitness and their understanding of traditional sports. The findings will provide valuable insights for enhancing PE curricula and fostering a more inclusive and culturally relevant approach to physical education in the Philippines.

In particular, this study seeks to answer the following questions:

1. How do traditional Filipino games affect students' health-related fitness components?
2. How do these games enhance student engagement and participation in PE?
3. What are the cultural and social benefits of integrating *Laro ng Lahi* into the PE curriculum?

By addressing these questions, the research hopes to contribute to the ongoing discussion on the importance of culturally responsive teaching and the potential benefits of integrating cultural heritage into the educational framework, particularly in physical education.

## 2.0 Methodology

### 2.1 Research Design

This study employed a mixed-methods design, combining quantitative and qualitative approaches to assess the effectiveness of integrating traditional Filipino games into Physical Education (PE). The quantitative component involved pre- and post-assessments of students' physical fitness, focusing on key health-related components such as cardiovascular endurance, muscular strength, flexibility, and overall well-being. Physical fitness was assessed using standardized tests for cardiovascular endurance (e.g., a 3-minute step test), muscular strength (e.g., push-ups), and flexibility (e.g., sit-and-reach). These measures are commonly used in physical education research to evaluate improvements in fitness (Gomez & De Ocampo, 2024; Lopez et al., 2022).

The qualitative component consisted of Focus Group Discussions (FGDs) to gather in-depth insights into students' experiences with the integration of traditional Filipino games. These discussions allowed students to reflect on how the games affected their engagement in PE, the social dynamics of gameplay, and their perceptions of the cultural relevance of these activities. This approach is consistent with the work of Birzer and Liggins (2022), who emphasized capturing personal experiences in evaluating culturally responsive teaching strategies.

### 2.2 Research Locale and Participants

The study was conducted at Magallanes National High School in Magallanes, Agusan del Norte, Philippines. The participants were Grade 11 students in the Technical-Vocational-Livelihood (TVL) track. The sample included a total of 169 students from five strands: Caregiving, Cookery, Electrical Installation and Maintenance (EIM), Shielded Metal Arc Welding (SMAW), and Computer Systems Servicing (CSS).

The participants were selected using a census method, meaning all students enrolled in the TVL track were invited to participate. This sampling method comprehensively represented the student body, capturing diverse students from different strands. No exclusion criteria were applied, as the study aimed to assess the impact of the intervention across the entire cohort of Grade 11 students.





### 2.3 Research Instruments

Several instruments were used to gather both quantitative and qualitative data.

- **Rubric-based Assessments:** These were used to evaluate students' understanding of the rules and objectives of the traditional Filipino games (Tumbang Preso, Patintero, Luksong Tinik, Palo Sebo, and Piko) before and after the integration of culturally fit team sports. The rubric assessed students' ability to recall and apply game rules, clearly measuring their cognitive engagement with the activities.
- **Physical Fitness Test Scorecards:** These scorecards were used to measure improvements in key health-related components, including cardiovascular endurance, muscular strength, flexibility, and overall well-being. The tests included standardized activities such as the 3-minute step test for cardiovascular endurance, push-ups for muscular strength, and sit-and-reach tests for flexibility.
- **Likert-Scale Questionnaire:** This questionnaire was used to assess students' perceptions of the effectiveness of the games in improving physical fitness, engagement, and cultural appreciation. The questionnaire included items on a scale from 1 (Ineffective) to 5 (Highly Effective), allowing for a precise evaluation of students' views on the impact of the games.
- **Focus Group Discussions (FGDs):** The FGDs were conducted with a selected group of students from each strand. The discussions focused on students' reflections on their experiences with the traditional games, including their enjoyment, cultural relevance, social interactions, and motivation to participate. FGDs provided rich qualitative data on the impact of the culturally integrated games beyond measurable fitness outcomes.

### 2.4 Data Gathering Procedure

The data collection process occurred in two stages. First, a pre-assessment of students' physical fitness was conducted to establish baseline measurements. Following the introduction of the traditional Filipino games into the PE curriculum, a post-assessment was conducted to measure any changes in physical fitness. After the intervention, Focus group discussions were held to gather qualitative insights into students' experiences and perceptions.

Each game session was followed by a brief survey and physical fitness assessment to track improvements. The FGDs were scheduled after the students had participated in multiple game sessions, providing them with ample time to reflect on their overall experience.

### 2.5 Ethical Considerations

This research adhered to ethical guidelines to protect participants' rights and well-being. The study followed the ethical standards outlined by the American Psychological Association (APA, 2017) and the Data Privacy Act of 2012 (Republic Act No. 10173).

Before participation, all students and their guardians were fully informed about the study's purpose, procedures, and potential risks through an informed consent process. Participation in the study was voluntary, and students were informed of their right to withdraw without penalty. All personal information and responses were kept private to ensure confidentiality, and only aggregate data were used in the analysis. The researcher also ensured that the FGDs were conducted in a supportive, non-coercive environment where students felt comfortable sharing their opinions. All discussions were anonymized before analysis to protect the identity of the participants.



### 3.0 Results and Discussion

Integrating culturally fit team sports into Physical Education (PE) significantly impacted the students' understanding of the games and their health-related fitness. This section presents the pre- and post-assessment results conducted before and after the intervention, alongside students' reflections on their experiences. The findings are organized into tables and figures to visually demonstrate the effectiveness of integrating traditional Filipino games into PE.

#### 3.1 Improvement in Students' Understanding of the Rules and Objectives

Integrating traditional Filipino games into the Physical Education (PE) curriculum resulted in significant improvements in students' understanding of the rules and objectives of the games. As shown in Table 1, the post-assessment results demonstrate a marked increase in the mastery of the games, with several games, such as *Tumbang Preso* and *Palo Sebo*, showing the highest gains in students' cognitive engagement.

**Table 1.** Levels of Understanding the Rules and Objectives Before and After the Integration of Culturally Fit Team Sports

Activity	Mean Score (Before Integration of CIP)	Verbal Interpretation (Before)	Mean Score (After Integration of CIP)	Verbal Interpretation (After)
Tumbang Preso	4.14	Adequate Understanding	4.47	Mastery
Patintero	4.94	Mastery	5.00	Mastery
Luksong Tinik	4.46	Mastery	4.76	Mastery
Palo Sebo	4.00	Adequate Understanding	4.32	Mastery
Piko	4.83	Mastery	4.91	Mastery

The improvements in understanding were especially notable in *Tumbang Preso* and *Palo Sebo*. These games showed the most substantial increase in mastery, with mean scores rising from *Adequate Understanding* to *Mastery* levels. One potential explanation for these significant improvements lies in the complexity of the games. *Tumbang Preso*, for example, requires a strategic combination of agility, coordination, and spatial awareness, which may necessitate a deeper cognitive engagement from students as they learned how to balance offensive and defensive actions. The increase in mastery could indicate that these elements required additional explanation and more time for students to internalize.

In contrast, games like *Patintero* and *Piko* demonstrated a high level of understanding even before the intervention, with mean scores close to 5.00, indicating that students were already highly familiar with these games. *Patintero*, for instance, is widely played in Filipino communities, and most students likely had prior exposure to the game. As a result, the improvement in understanding was less dramatic, possibly due to the students' pre-existing knowledge. The findings suggest that while the cultural familiarity of specific games may enhance initial understanding, more complex games like *Tumbang Preso* require a more structured approach and additional instructional time to foster a deeper level of mastery.

Similar to the findings of Birzer and Liggins (2022), this study highlights how integrating culturally relevant activities leads to improved cognitive engagement by making the activities more relatable to students' cultural contexts. Birzer and Liggins (2022) observed that students exhibit higher engagement and retention when the learning activities are connected to their artistic experiences. In this study, integrating *Laro ng Lahi* (traditional Filipino games) into PE allowed students to connect with their heritage, resulting in a better understanding of the games and the strategies involved. The cultural relevance of these activities made the learning process more engaging, and the students were more motivated to learn the rules and objectives in depth.

Furthermore, the increased engagement observed in *Tumbang Preso* and *Palo Sebo* may also be attributed to the novelty and physical challenges these games presented to students. For instance, *Palo Sebo*, which involves climbing a slippery pole to retrieve a flag, tests physical strength and endurance, mental focus,



and strategic thinking. The added challenge of these games could have made the learning experience more memorable and meaningful, contributing to the higher levels of understanding observed in the post-assessments.

By examining the impact of these games on students' understanding of the rules, this study reinforces the importance of integrating culturally responsive and challenging activities into PE curricula. The results suggest that providing students with opportunities to engage with culturally relevant games enhances their physical fitness and promotes deeper cognitive engagement and a better understanding of the activity. This approach fosters physical and intellectual growth, essential for holistic student development.

### 3.2 Impact on Health-Related Fitness Components

The integration of traditional Filipino games into Physical Education (PE) significantly contributed to improvements in key health-related fitness components, as demonstrated by the pre- and post-assessment results. As shown in Table 2, students displayed notable improvements across all measured fitness categories: cardiovascular endurance, muscular strength, flexibility, and overall well-being. These findings reflect the effectiveness of culturally integrated PE games in enhancing physical and psychological health.

**Table 2.** Effectiveness of Culturally Integrated PE Sports Games in Improving Health-Related Fitness Components

Health-Related Component	Mean Score (Before)	Mean Score (After)	Verbal Interpretation (After)
Cardiovascular Endurance	3.60	4.50	Highly Effective
Muscular Strength	3.75	4.63	Highly Effective
Flexibility	3.50	4.36	Highly Effective
Well-being	3.80	4.75	Highly Effective

### Contributions of Specific Games to Fitness Improvements

While the results across all fitness components were impressive, a closer examination of the individual games offers valuable insights into how specific activities contributed to these gains. The improvements in cardiovascular endurance were most pronounced in games like *Patintero* and *Tumbang Preso*. These games require frequent bursts of running, dodging, and changing direction, which naturally boost heart rate and cardiovascular efficiency. For instance, *Patintero*, which involves evading the opposing team's defensive lines, demands rapid sprinting and agility, leading to improved aerobic capacity. Similarly, *Tumbang Preso* encourages quick reflexes, as players run to hit a can with a slipper while avoiding being tagged by the defender, providing an excellent cardiovascular workout.

On the other hand, muscular strength improvements were most notable in games like *Palo Sebo* and *Luksong Tinik*. *Palo Sebo*, in particular, requires significant upper body strength and endurance as students climb a slippery pole to retrieve a flag. The physical exertion needed to ascend the pole engages the core, arms, and legs, increasing muscular strength. Meanwhile, *Luksong Tinik* tests leg strength and explosive power, as players jump over their teammates' outstretched feet. The repeated motions of jumping and landing provide a challenging workout for the lower body, resulting in improved strength and coordination.

Flexibility, as measured by the sit-and-reach test, showed notable improvement, particularly in games that require balance and coordination, such as *Piko* and *Luksong Tinik*. In *Piko*, students must hop between squares drawn on the ground, often requiring them to bend, stretch, and maneuver their bodies into various positions. These dynamic movements naturally contribute to better flexibility, particularly in the hamstrings and lower back. Similarly, *Luksong Tinik*, which involves jumping over obstacles, helps to increase the range of motion in the legs and hips, further enhancing overall flexibility.

### Discussion of Limitations in Fitness Improvements

While the results indicate significant gains in fitness, certain factors may have limited improvements in specific areas. For example, flexibility showed the least improvement compared to other components, despite games like *Piko* and *Luksong Tinik* requiring stretches and jumps. This could be due to several factors, including the limited duration of the intervention. Flexibility improvements typically require consistent, targeted stretching exercises over an extended period. The brief exposure to these games may not have been





enough to produce as substantial changes in flexibility as seen in other components like muscular strength and cardiovascular endurance.

Some students reported feeling that certain games, such as *Piko*, were less physically challenging, especially regarding cardiovascular fitness. While *Piko* is excellent for flexibility and balance, it may not have been as intense in terms of cardiovascular demands compared to more fast-paced games like *Patintero*. This highlights the need for a diverse range of games in the PE curriculum that can address all fitness components in a balanced manner.

### Broader Health and Well-Being Outcomes

In addition to the physical fitness components, the games significantly impacted students' overall well-being. As seen in the post-assessment results, students reported a mean score increase from 3.80 to 4.75 for well-being, reflecting a highly effective improvement in their emotional and psychological health. This improvement was in physical fitness and mood, self-esteem, and motivation for future physical activity. Many students shared during focus group discussions (FGDs) that they felt more energized, confident, and connected to their peers. One student noted, "I feel more confident now. Playing these games made me appreciate my body and my strength."

The improvement in well-being is particularly significant, as it speaks to the broader emotional and social benefits of integrating culturally relevant activities into PE. By engaging in familiar and culturally meaningful games, students reported feeling a sense of pride in their heritage and a deeper connection to their cultural identity. This sense of cultural pride can be linked to enhanced motivation to continue participating in physical activities outside the school setting. Furthermore, the positive social interactions during gameplay fostered a sense of belonging and support, crucial for emotional development, particularly in adolescence.

These findings align with previous research by Chavez and Mirador (2023), who observed that culturally relevant activities can enhance students' emotional well-being and foster a positive mindset towards physical education. The integration of traditional Filipino games into the PE curriculum supported physical health and nurtured students' mental and emotional growth, emphasizing the holistic benefits of culturally grounded PE activities.

### 3.3 Student Reflections on Cultural Integration and Social Interaction

Integrating traditional Filipino games into the Physical Education (PE) curriculum profoundly impacted students' social interactions, cultural identity, and overall motivation to engage in physical activities. The Focus Group Discussions (FGDs) feedback highlighted key themes of teamwork, social bonding, and cultural pride, which emerged as central components of the students' experiences.

#### Teamwork and Social Interaction

One of the most prominent themes expressed by students was the sense of teamwork and social interaction fostered by the games. Students reported that participating in the traditional Filipino games created a supportive and collaborative environment, encouraging stronger relationships and improved communication skills. One student shared, "In *Tumbang Preso*, we had to defend our target and help each other when someone was tagged. It was like we were a team and supported each other every step of the way."

Another student reflected, "In *Patintero*, I felt part of something bigger. We weren't just running around; we were constantly communicating and figuring out how to get past the defenders. It was fun, and we got closer as a group." These reflections underscore how the games provided an opportunity for students to enhance their physical fitness and strengthen interpersonal bonds. The collaborative nature of the games, particularly those that involved defending or supporting teammates, encouraged cooperation and mutual respect. This is consistent with the findings of Garcia and Villanueva (2022), who emphasized that culturally integrated activities help build a sense of community and belonging among students.

In addition to fostering teamwork within small groups, students also expressed how the games facilitated social interaction between different groups of students. For example, one participant shared, "I never really talked to students from other strands, but through the games, we were all in it together, and we



got to know each other better. It was a great way to break the ice."

### Cultural Pride and Connection to Filipino Identity

Beyond the physical and social benefits, integrating traditional Filipino games led to a more profound sense of cultural pride and a stronger connection to Filipino heritage. Several students expressed how participating in these games made them feel more connected to their cultural roots. One student noted, "I grew up hearing about these games but never played them. It made me proud to see how we could keep our traditions alive and learn more about them in class."

Another student shared, "We don't always think about our culture in school, but when we played these games, it felt like I was part of something special. It made me appreciate our Filipino traditions more." These reflections illustrate how the integration of *Laro ng Lahi* (traditional Filipino games) made PE more engaging and provided students with a sense of pride in their cultural heritage. By actively participating in games that were once a part of everyday life in Filipino communities, students felt a deeper connection to their cultural identity, which enhanced their engagement and enjoyment in the activities.

Students also discussed how these games allowed them to reflect on Filipino values such as bayanihan (communal unity) and pagtutulungan (helping one another). One student remarked, "It was nice to see everyone working together. It's like the Filipino way—helping each other and having fun simultaneously." This shared experience and collaboration provided a tangible link between the games and Filipino cultural values, which are often overlooked in a classroom setting focused primarily on Western educational practices.

### Motivation and Engagement

Integrating culturally relevant games into PE also significantly boosted students' motivation to participate in physical activities. One student explained, "I was never really into sports before, but when we played these games, I enjoyed it more. It felt familiar and exciting." This sense of familiarity and cultural connection made the activities more appealing to students who might otherwise feel disconnected from traditional PE activities, which are often centered on Western sports. The cultural resonance of the games provided an intrinsic motivation for students to engage in the activities actively, leading to improved participation rates and enthusiasm.

Students also noted that including these games provided a new perspective on PE. One student remarked, "I used to think PE was just about running or playing basketball, but these games showed me that there are other ways to stay active, and it made me realize that physical activity can be fun and meaningful." This shift in perspective reflects the broader impact of culturally integrated PE, where students improve their physical fitness and develop a more positive attitude toward physical activity in general.

### Conclusion

Integrating traditional Filipino games into the PE curriculum significantly enhanced students' social interactions, teamwork, and cultural identity. The students' reflections revealed that these games fostered stronger peer bonds, promoted cooperation, and allowed students to reconnect with their Filipino heritage. Students' sense of pride in participating in culturally meaningful activities helped them engage more deeply in the PE curriculum and boosted their motivation to participate in physical activities. This aligns with research by Garcia and Villanueva (2022), who found that culturally responsive teaching methods encourage greater student engagement and participation by making learning experiences more relevant and personal. In conclusion, integrating *Laro ng Lahi* into PE improved students' physical development. It strengthened their social connections and cultural pride, demonstrating the holistic benefits of incorporating culturally integrated activities into education.





### 3.4 Statistical Analysis: Paired T-test Results

To validate the effectiveness of integrating traditional Filipino games into the Physical Education (PE) curriculum, a paired t-test was conducted to determine whether there was a statistically significant difference in students' understanding of the rules and objectives before and after the intervention. The results of the paired t-test, shown in Table 3, reveal that for most games, there were significant improvements in students' knowledge of the game rules. This statistical analysis is essential because it provides evidence that the intervention (i.e., integrating culturally relevant games into PE) had a measurable impact on students' cognitive engagement with the games.

**Table 3.** Paired T-test Results for Knowledge of Rules and Objectives Before and After Integration of Culturally Fit Team Sports

Activity	p-value	t-value	Decision on $H_0$	Interpretation
Tumbang Preso	0.001385	3.5496	Reject $H_0$	Significant
Patintero	0.160600	1.4376	Fail to Reject $H_0$	Not Significant
Luksong Tinik	0.001337	3.4785	Reject $H_0$	Significant
Palo Sebo	0.001342	3.5762	Reject $H_0$	Significant
Piko	0.044100	2.0755	Reject $H_0$	Significant

#### Explanation of the Results for Patintero

As shown in Table 3, the game *Patintero* did not exhibit a statistically significant improvement in students' understanding, with a p-value of 0.160600, which is higher than the commonly accepted threshold of 0.05. This result can be attributed to students' familiarity with the game, as *Patintero* is widely known and frequently played in many Filipino communities. Most students likely had prior exposure to *Patintero* before the intervention, which means their understanding of the rules was already high before the study. This familiarity likely reduced the potential for further cognitive gains as they were already well-versed in the game.

The lack of significant improvement in *Patintero* suggests a potential limitation when integrating widely known games into the curriculum. For games with which students are already familiar, new teaching methods may have a diminished effect in enhancing their understanding. This finding emphasizes the need for more diverse and varied approaches to teaching, especially when popular games are involved. For example, even well-known games like *Patintero* could benefit from fresh perspectives or more in-depth instruction on game strategies, teamwork, or cultural history to deepen students' engagement and understanding.

#### Additional Statistical Interpretation for Broader Understanding

For readers who may not be familiar with statistical analysis, the p-value measures the probability that the observed differences between the groups (pre- and post-assessment) occurred due to chance. A p-value below 0.05 typically indicates that the results are statistically significant, meaning that the observed differences are unlikely to have happened by chance. In this study, significant p-values (less than 0.05) for *Tumbang Preso*, *Luksong Tinik*, *Palo Sebo*, and *Piko* suggest that the integration of these games into PE had a real, measurable impact on students' understanding of the rules and objectives.

The t-value is a test statistic that represents the difference between the means of the two groups (pre- and post-assessment) relative to the variability of the data. Higher t-values indicate larger differences between the groups, while lower values suggest smaller differences. In this case, higher t-values for games like *Tumbang Preso* and *Palo Sebo* (3.5496 and 3.5762, respectively) further support the finding that these games significantly impacted students' understanding.

When we say "Reject  $H_0$ ", this refers to the decision to reject the null hypothesis ( $H_0$ ), which typically states that there is no difference between the groups (pre- and post-assessment). If the p-value is less than 0.05, we reject the null hypothesis, concluding that there is a significant difference between the two groups. In the



cases where the p-value was greater than 0.05 (like *Patintero*), we fail to reject the null hypothesis, indicating no statistically significant difference.

### Implications and Broader Context

The statistical analysis confirms that the integration of traditional Filipino games into the PE curriculum significantly enhanced students' understanding of the rules and objectives for most of the games. The positive results for games like *Tumbang Preso*, *Luksong Tinik*, and *Palo Sebo* suggest that culturally relevant activities have a strong potential for engaging students and improving their cognitive understanding.

However, as discussed, the lack of improvement for *Patintero* raises important considerations for educators. For games already part of students' cultural knowledge, teaching methods should be adapted to focus on more complex aspects, such as advanced strategies or deeper cultural context, to facilitate further cognitive engagement. Additionally, the effectiveness of culturally relevant games in improving students' understanding could vary depending on their prior exposure; thus, interventions need to account for students' familiarity with the activities.

### 3.5 Summary of Results

Integrating traditional Filipino games into the Physical Education (PE) curriculum significantly improved students' physical fitness, cognitive engagement, and cultural awareness. The pre- and post-assessment results demonstrated that students showed marked improvements in key health-related fitness components, including cardiovascular endurance, muscular strength, flexibility, and overall well-being. These gains were accompanied by a deeper understanding of the rules and objectives of the games, particularly for *Tumbang Preso*, *Palo Sebo*, and *Luksong Tinik*, which saw the highest levels of cognitive engagement. Students reported increased social interaction, teamwork, and a heightened sense of cultural pride and connection to Filipino heritage through participating in the games.

The study also highlighted the importance of cultural relevance in promoting student engagement and learning outcomes. The familiarity and cultural significance of the games helped students feel more motivated and connected to the PE curriculum, fostering a sense of belonging and pride in their cultural identity. This finding aligns with previous research that underscores the value of culturally responsive teaching in enhancing students' learning experiences and outcomes.

However, the study also revealed that games with prior high levels of student familiarity, such as *Patintero*, showed less significant improvement in cognitive engagement, suggesting that more popular games may require specialized approaches to deepen understanding and challenge students' thinking. These insights point to the need for varied instructional strategies to accommodate students' different levels of prior knowledge.

### Broader Implications

The results of this study have significant implications for educational practices, PE curriculum design, and teacher training. Educators can foster a more inclusive and engaging learning environment that resonates with students' cultural identities by incorporating culturally relevant activities like traditional Filipino games into the PE curriculum. This approach enhances students' physical fitness and promotes social, emotional, and cognitive development.

For PE curriculum designers, these findings suggest the importance of integrating culturally diverse activities that cater to students' backgrounds and interests, ultimately making physical education more relevant and enjoyable. Additionally, the study's findings provide valuable insights for teacher training programs, emphasizing the need for educators to develop skills in incorporating culturally responsive teaching strategies into their physical education lessons. Such training will help teachers create more engaging and meaningful learning experiences for all students, fostering their physical health and cultural awareness. In summary, the integration of traditional Filipino games into PE presents an innovative and effective approach to physical education, with the potential to enhance students' overall development. By adopting culturally responsive methods, schools can create more inclusive and impactful PE programs that support the holistic growth of students.



## 4.0 Conclusion

This study demonstrates that integrating traditional Filipino games—*Tumbang Preso*, *Patintero*, *Luksong Tinik*, *Palo Sebo*, and *Piko*—into the Physical Education curriculum significantly enhances students' physical fitness, cultural engagement, and understanding of traditional sports. The findings revealed notable improvements in cardiovascular endurance, muscular strength, flexibility, overall well-being, and increased mastery of the game rules. Students also reported enhanced social skills such as teamwork, communication, and leadership, highlighting the holistic benefits of culturally integrated PE activities. Furthermore, students developed a stronger connection to their cultural heritage, which fostered a greater sense of pride and motivation to participate in PE.

These results underline the importance of culturally responsive approaches in education, demonstrating that the integration of *Laro ng Lahi* (traditional Filipino games) improves physical health and promotes emotional, social, and cultural development, making PE more inclusive and aligned with students' lived experiences.

## 4.1 Recommendation for Future Research

Future studies could explore how to implement culturally integrated PE programs in resource-limited settings, where access to materials and space may be constrained. Additionally, investigating the long-term impacts of such interventions on students' physical fitness, cultural identity, and academic performance would provide valuable insights into the sustainability and broader benefits of integrating traditional games into PE curricula.

## 5.0 Contributions of Authors

**Irish Melody Buyan:** Data collection, research analysis, and manuscript writing.

**Dr. Isidro Biol:** Guidance on methodology, data interpretation, and manuscript review.

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## 7.0 Conflict of Interests

The authors declare no conflict of interest.

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