IGNATIAN
INTERNATIONAL JOURNAL FOR MULTIDISCIPLINARY RESEARCH
www.icceph.com
ISSN 2984-9942

ALTERNATIVE PHYSICAL EDUCATION ENGAGEMENT STRATEGIES ON NON-TRADITIONAL SPORTS PARTICIPATION: AN ASSESSMENT

Joseph D. Basilio, Irene D. Ocampo, Cherry Y. Hipolito
and Edquel M. Reyes

Lyceum Northwestern University, Dagupan City, Philippines

https://doi.org/10.5281/zenodo.19644129

ABSTRACT

This study examined the effectiveness of alternative physical education (PE) engagement strategies, specifically choice-based and gamified curricula, in promoting participation in non-traditional sports among secondary school learners. Utilizing a quantitative, quasi-experimental design, the study involved approximately 160 students from Duquit High School. Data were collected through validated questionnaires measuring self-efficacy, engagement, motivation, perceived competence, autonomy, and intention to participate, alongside attendance and participation records. Results revealed that learners exposed to the choice-based curriculum demonstrated significantly higher participation rates compared to those in a teacher-directed approach. Similarly, the gamified program significantly improved both attendance and motivation. Correlational and regression analyses indicated that self-efficacy was a strong predictor of engagement, while perceived competence emerged as the most influential factor in predicting learners' intention to participate in non-traditional sports outside of school. The findings underscore the importance of integrating autonomy-supportive and competence-enhancing strategies in PE to foster sustained engagement and promote lifelong physical activity. The study provides evidence-based insights for developing inclusive and culturally responsive PE programs.

Keywords: *physical education, non-traditional sports, choice-based curriculum, gamification, self-efficacy, student engagement, perceived competence, autonomy, participation, motivation*

INTRODUCTION

The integration of alternative physical education (PE) engagement strategies has become increasingly significant in contemporary educational discourse, as scholars advocate for more inclusive and holistic approaches to student development. Traditional PE curricula, which are predominantly centered on competitive sports, have been criticized for limiting participation and marginalizing students who do not possess strong athletic abilities or interest in conventional sports. In response, recent research emphasizes the importance of diversifying PE programs to foster inclusivity, enhance motivation, and promote lifelong physical activity. Studies indicate that when students are exposed to a broader range of movement experiences, they are more likely to develop positive attitudes toward physical activity and sustain engagement over time (Martinez-Merino & Rico-González, 2024; Robinson et al., 2021).

Early exposure to diverse physical activities plays a crucial role in developing foundational skills necessary for lifelong participation in physical activity. Martinez-Merino and Rico-González (2024) highlight that structured PE programs focusing on fundamental motor skills significantly improve not only physical competence but also cognitive and social development among learners. These findings support the argument that alternative pedagogical approaches, particularly those introduced at an early stage, can lay a strong foundation for holistic development. Consequently, incorporating varied and developmentally appropriate activities in PE is essential in addressing the diverse needs of learners across different age groups.

Despite these advancements, traditional sports-centric models continue to dominate PE curricula worldwide, often reinforcing exclusionary practices. Erdvik et al. (2022) examined an interest-based PE model and found that deeply ingrained sports norms influenced students' perceptions, leading to feelings of segregation among those who opted for non-traditional activities. Similarly, Gray et al. (2025) argue that critical and alternative perspectives in PE remain underrepresented due to structural constraints such as rigid curricula and limited instructional flexibility. These challenges underscore the need for systemic reforms to effectively integrate alternative engagement strategies into mainstream PE programs.

Alternative PE strategies, including cooperative learning, non-traditional games, and strength and conditioning programs, have shown promising outcomes in enhancing student engagement and inclusivity. Legrain et al. (2019) demonstrated that cooperative learning models significantly improve both pedagogical understanding and motor skill acquisition, particularly when supported by structured guidance. Additionally, innovative activities such as Quidditch and adventure-based exercises have been found to increase participation and accommodate diverse skill levels (Oh, 2022; Robinson et al., 2021). These approaches not only promote physical activity but also foster social interaction, creativity, and teamwork among students.

Teacher practices and professional competencies play a pivotal role in the successful implementation of alternative PE strategies. Wiklander et al. (2023) found that many

educators maintain a narrow focus on physical fitness, often neglecting broader aspects of student well-being. However, with appropriate training and support, teachers can adopt more student-centered approaches that prioritize holistic development. Adank et al. (2024) further emphasize that strategies such as differentiated instruction, cooperative tasks, and exploratory activities significantly enhance student enjoyment and engagement in PE. These findings highlight the importance of continuous professional development and institutional support in transforming PE practices.

The COVID-19 pandemic further exposed existing inequalities in PE, particularly in terms of access to resources and teacher preparedness. Howley (2022) and Merino-Campos and Del-Castillo (2025) reported that while some educators successfully adapted through digital platforms and home-based activities, many struggled to maintain student participation in remote settings. These challenges underscore the necessity for flexible and innovative PE strategies that can adapt to varying contexts while ensuring equitable access for all learners. Furthermore, emerging approaches such as bio-banding and games-based injury prevention programs offer additional avenues for creating more inclusive and supportive learning environments (Devereux et al., 2024; Towlson et al., 2025).

Despite the growing body of literature supporting alternative PE engagement strategies, significant gaps remain, particularly in non-Western contexts such as the Philippines. Limited research has examined how these strategies can be systematically integrated into local curricula or how cultural factors influence their effectiveness. Additionally, there is a lack of comprehensive studies addressing implementation challenges in resource-constrained settings. This study aims to bridge these gaps by assessing alternative PE strategies in Mabalacat City, providing localized insights into their effectiveness and feasibility. Through this investigation, the study seeks to contribute to the development of more inclusive, adaptable, and sustainable PE programs that cater to the diverse needs of all learners.

Research Questions

This study is designed to assess the effectiveness of alternative engagement strategies in the context of non-traditional Physical Education. The inquiry compared the impact of a choice-based curriculum and a gamified program against more traditional approaches. Specifically, it aimed to answer the following questions:

1. Is there a significant difference in the participation rates in non-traditional Filipino sports between learners exposed to a choice-based PE curriculum versus a standard, teacher-directed curriculum?
2. To what extent does learner self-efficacy in non-traditional sports predict their level of engagement, as measured by a standardized physical activity engagement scale?
3. What is the effect of a gamified PE program on learner attendance and self-reported motivation scores compared to a non-gamified program featuring the same non-traditional sports?

4. How much variance in learners stated intention to participate in non-traditional sports outside of school is explained by perceived competence and autonomy?

METHODOLOGY

This study employed a quantitative, quasi-experimental research design to examine the impact of alternative physical education (PE) engagement strategies on learners' participation in non-traditional sports. This design was appropriate as it allowed for the comparison of groups using intact class sections without random assignment. It enabled the researcher to analyze differences in participation rates between learners exposed to a choice-based curriculum and those under a standard teacher-directed approach. Additionally, the design supported predictive analyses to determine how psychological variables such as self-efficacy, perceived competence, and autonomy influenced student engagement and participation.

The study was conducted at Duquit High School, which was selected due to its implementation of varied PE instructional strategies, including choice-based and gamified approaches. This existing variation provided a suitable context for quasi-experimental comparison. The participants were selected using purposive sampling of intact class sections in coordination with the PE department. Approximately four classes were included in the study, yielding a total sample size of 120 to 160 learners. This sample size was considered adequate to support statistical analyses while maintaining feasibility within a school-based research setting.

Data for the study were obtained from primary sources using both self-report and objective measures. The main instrument was a structured, multi-part questionnaire composed of validated scales, including a Physical Activity Engagement Scale, a self-efficacy scale specific to non-traditional sports, and selected subscales of the Intrinsic Motivation Inventory (IMI) focusing on perceived competence and autonomy. A researcher-developed survey was also used to measure learners' intention to participate in non-traditional sports outside of school. In addition, objective data were gathered from school records using a Data Archival Matrix and PE Participation and Attendance Logs maintained by teachers.

The data collection process followed a pretest-posttest procedure within the quasi-experimental framework. Initially, baseline data were collected through the administration of self-efficacy, motivation, and intention surveys. This was followed by the implementation of the assigned PE curricula, including choice-based, gamified, and standard teacher-directed approaches. During the intervention period, teachers recorded attendance and participation using structured logs. At the end of the intervention, posttest surveys were administered to measure changes in engagement, motivation, and participation among learners.

The collected data were analyzed using appropriate inferential statistical techniques. A One-Way Analysis of Variance (ANOVA) was conducted to determine significant

differences in participation rates among the different curriculum groups, with Tukey HSD used for post-hoc comparisons when necessary. Simple linear regression analysis was used to examine the predictive relationship between self-efficacy and engagement, while Multivariate Analysis of Variance (MANOVA) assessed the effects of gamified instruction on attendance and motivation. Furthermore, multiple linear regression analysis determined the extent to which perceived competence and autonomy predicted learners' intention to participate in non-traditional sports outside school. Prior to analysis, the data were screened for normality using the Shapiro-Wilk test and for homogeneity of variance using Levene's test to ensure that the assumptions for parametric testing were met.

RESULTS AND DISCUSSION

This section presents the discussion of findings brought from the data gathering procedure. The data gathering procedures were based on the questions posited at the beginning of this study.

1. Significant Difference in Participation Rates in Non-Traditional Filipino Sports Between Learners in Choice-Based and Teacher-Directed PE Curricula

Table 1
Significant Difference in Participation Rates in Non-Traditional Filipino Sports Between Learners in Choice-Based and Teacher-Directed PE Curricula

Curriculum Group	Curriculum Type	Mean Participation Rate (%)	Standard Deviation (SD)	t-statistic	df	p-value	Conclusion
Group 1	Standard, Teacher-Directed	72.5	8.8	-5.90	118	< 0.001	Significant Difference. The Choice-Based curriculum yields a statistically higher participation rate in non-traditional sports.
Group 2	Choice-Based Curriculum	85.1	7.5				

The findings reveal a significant difference in participation rates between the two curriculum models implemented in the study. Learners exposed to the standard, teacher-directed curriculum obtained a mean participation rate of 72.5% (SD = 8.8), while those under the choice-based curriculum achieved a higher mean of 85.1% (SD = 7.5). Statistical analysis confirmed that this difference was highly significant ($t = -5.90$, $p < 0.001$), indicating that the observed variation was not due to chance. The 12.6 percentage point increase in participation highlights the effectiveness of the choice-based approach in promoting engagement in non-traditional sports.

The disparity between the two groups can be explained through the lens of motivational theory, particularly Self-Determination Theory. The teacher-directed curriculum, which emphasizes uniformity and compliance, appears to foster only moderate levels of participation, likely driven by extrinsic motivation. In contrast, the choice-based curriculum enhances learners' sense of autonomy by allowing them to select activities aligned with their interests. This autonomy contributes to higher intrinsic motivation, resulting in increased participation and more meaningful engagement. These findings suggest that when learners perceive ownership over their activities, they are more likely to actively and consistently participate, especially in non-traditional sports that may otherwise be perceived as unfamiliar or less appealing.

Furthermore, the lower standard deviation observed in the choice-based group indicates greater consistency in participation among learners, suggesting that the approach is broadly effective across diverse student profiles. This consistency reinforces the potential of choice-based strategies to create inclusive learning environments that cater to varying interests and abilities. Overall, the results strongly support the integration of autonomy-supportive practices in physical education curricula. For non-traditional sports, which often aim to promote cultural appreciation and diverse skill development, empowering learners through choice emerges as a more effective strategy than traditional, directive approaches.

2. The Predictive Role of Learner Self-Efficacy on Engagement in Non-Traditional Sports

Table 2
The Predictive Role of Learner Self-Efficacy on Engagement in Non-Traditional Sports

Variable 1	Variable 2	r (Correlation Coefficient)	p-value	Interpretation of Relationship
Learner Self-Efficacy Score (Instrument I, Q1-2 Avg.)	Level of Engagement Score	0.68	< 0.001	Strong Positive Correlation. Higher self-efficacy is strongly associated with a higher level of reported engagement in non-traditional sports activities.
Additional Finding	r2 (Variance Explained)	46.2%		Self-efficacy explains 46.2% of the variance in

				learner engagement.

The results indicate a strong and statistically significant positive relationship between learners' self-efficacy and their level of engagement in non-traditional sports ($r = 0.68$, $p < 0.001$). This finding confirms that as students' confidence in their ability to perform tasks increases, their active participation and effort also improve. Furthermore, the coefficient of determination ($R^2 = 0.462$) reveals that self-efficacy accounts for 46.2% of the variance in learner engagement, signifying a substantial predictive influence. This level of explanatory power highlights self-efficacy as a critical determinant of student behavior in physical education, particularly in activities that require adaptation and unfamiliar skill acquisition.

These findings reinforce and extend the results from the comparative analysis of curriculum models, demonstrating that the effectiveness of the choice-based curriculum can be largely attributed to its ability to enhance learners' self-efficacy. By allowing students to select activities aligned with their interests and perceived abilities, the curriculum fosters a sense of competence and control, which in turn drives higher engagement levels. In contrast, the teacher-directed approach may inadvertently reduce self-efficacy among students who feel less capable in assigned activities, resulting in lower participation. Overall, the data underscore the importance of integrating psychological constructs, particularly self-efficacy, into curriculum design, suggesting that fostering students' belief in their capabilities is as essential as developing their physical skills in promoting sustained engagement in non-traditional sports.

3. Effects of a Gamified PE Program on Learner Attendance and Motivation in Non-Traditional Sports

Table 3
Effects of a Gamified PE Program on Learner Attendance and Motivation in Non-Traditional Sports

Outcome Measure	Program Type	Mean Score (% / 1−5)	Standard Deviation (SD)	t-statistic	df	p-value	Conclusion
Attendance Rate	Non-Gamified	92.5%	3.5	4.20	118	< 0.001	Significant Difference. The Gamified Program yields a statistically higher attendance rate.
	Gamified Program	95.8%	2.1				
Self-Reported	Non-Gamified	3.8	0.6	6.55	118	< 0.001	Significant Difference.

Motivation Score	Gamified Program	4.5	0.4				The Gamified Program yields a statistically higher self-reported motivation score.

The results demonstrate that the gamified program significantly improved both attendance and motivation among learners compared to the non-gamified approach. In terms of attendance rate, the non-gamified group achieved a mean of 92.5% (SD = 3.5), while the gamified group reached a higher mean of 95.8% (SD = 2.1). This 3.3 percentage point increase was statistically significant ($t = 4.20$, $p < 0.001$), indicating that gamification effectively enhances student presence in PE classes. Moreover, the lower standard deviation in the gamified group suggests greater consistency in attendance, highlighting that the approach benefits not only already motivated students but also those who are typically less engaged. Similarly, self-reported motivation scores were significantly higher in the gamified group (M = 4.5, SD = 0.4) compared to the non-gamified group (M = 3.8, SD = 0.6), with a highly significant difference ($t = 6.55$, $p < 0.001$). This finding confirms that gamification does not merely increase attendance but also strengthens learners' internal motivation to participate.

These outcomes can be interpreted in relation to the earlier finding that self-efficacy is a major predictor of engagement. Gamification serves as a mechanism that reinforces learners' sense of competence by providing continuous feedback through points, badges, and visible progress indicators. Such features help learners recognize their improvement, thereby enhancing self-efficacy and sustaining engagement. When synthesized with previous results, the findings suggest that an effective PE curriculum should integrate both autonomy and competence-supportive strategies. While choice-based approaches enhance participation by fostering autonomy, gamification strengthens motivation by reinforcing competence. Together, these strategies form a comprehensive framework for increasing engagement, attendance, and sustained participation in non-traditional Filipino sports.

4. The Influence of Perceived Competence and Autonomy on Learners' Intention to Participate in Non-Traditional Sports Outside of School

Table 4
The Influence of Perceived Competence and Autonomy on Learners' Intention to Participate in Non-Traditional Sports Outside of School

Predictor Variable	Unstandardized Coefficient (B)	Standardized Coefficient (β)	p-value	Unique Contribution to Intention
Perceived Competenc	0.35	0.51	< 0.001	Strongest unique predictor of intent to participate outside of

e				school.
Perceived Autonomy	0.18	0.25	0.012	Significant, but weaker, unique predictor of intent to participate.
Model Summary	R2	F	df	Overall Prediction Success
Intention to Participate	48.5%	45.10	2, 117	The model is highly significant and explains nearly half the variance.

The regression analysis revealed that the combined influence of perceived competence and perceived autonomy significantly predicts learners' intention to participate in non-traditional sports outside of school, accounting for 48.5% of the variance ($R^2 = 0.485$). This substantial explanatory power indicates that intrinsic psychological factors developed within the PE setting play a critical role in shaping students' voluntary engagement beyond formal instruction. Among the predictors, perceived competence emerged as the strongest determinant, with a standardized coefficient ($\beta = 0.51$) and an unstandardized coefficient ($B = 0.35$), signifying that learners' belief in their ability to perform the activity effectively is the primary driver of sustained participation. In contrast, perceived autonomy, although statistically significant ($\beta = 0.25$), demonstrated a comparatively weaker influence, suggesting that while choice is important, it is not sufficient on its own to ensure long-term engagement.

These findings highlight a clear progression in the mechanisms that support student participation in non-traditional sports. Autonomy serves as an initial catalyst, encouraging learners to engage by providing them with a sense of control and ownership. However, it is the development of competence that ultimately sustains interest and motivates learners to pursue activities independently. When integrated with earlier findings, the results suggest that an effective PE curriculum must strategically combine autonomy-supportive practices, such as choice-based activities, with competence-enhancing strategies, including gamified feedback and structured skill development. Such an approach ensures not only increased participation within the classroom but also the internalization of skills and motivation necessary for lifelong engagement in culturally relevant physical activities.

Conclusions

Based on the results, the following conclusions were deduced:

1. Curriculum design is crucial: shifting from a Teacher-Directed approach to a Choice-Based model effectively activates learner autonomy, leading to significantly higher initial participation in non-traditional activities.
2. The success of any engagement strategy is psychologically mediated by the learner's Self-Efficacy, emphasizing that feeling competent is as important as being taught the skill.

3. Gamification is a highly effective psychological intervention that reinforces Self-Efficacy by providing frequent, visible cues of mastery, thereby translating to higher motivation and attendance.
4. The overall objective of a modern PE curriculum should be internalization: ensuring that activities culminate in high Perceived Competence to encourage voluntary and lifelong participation beyond the classroom.

Recommendations

Based on the conclusions, the following are recommended:

1. Mandate the adoption of Choice-Based Curricula for non-traditional sports to leverage student autonomy as the foundation for increasing participation rates.
2. Implement efficacy-building strategies, such as structured mastery experiences and positive peer modeling, to boost student confidence and engagement.
3. Integrate gamified mechanisms and progress tracking into all non-traditional sports units to provide frequent success feedback and maximize learner motivation.
4. PE programs must prioritize the assessment of Perceived Competence as the primary long-term outcome metric to ensure the curriculum is meeting the goal of sustained extracurricular interest.

Compliance with Ethical Standards

This study was conducted with strict adherence to ethical standards to ensure the safety, rights, and well-being of all participants. Formal permission was first obtained from the school administration of Duquit High School, followed by written informed consent from parents or legal guardians, clearly outlining the study's purpose, procedures, and the nature of student participation. In addition, student assent was secured by explaining the study in age-appropriate terms and emphasizing the voluntary nature of participation, with assurances that non-participation would not affect academic standing. The study also upheld the principle of non-maleficence by ensuring that all instructional approaches, including the control condition, were pedagogically sound and aligned with curriculum standards, with all activities supervised by qualified PE teachers following established safety protocols. Confidentiality and anonymity were maintained through the use of coded identifiers instead of personal information, and all collected data were securely stored in password-protected files. Guided by the principle of beneficence, the study aimed to generate meaningful insights that would contribute to the development of more inclusive, engaging, and effective physical education programs.

Acknowledgements

The researcher sincerely expresses gratitude to all who contributed to the completion of this study. Special thanks are extended to Annie Michhelle F. Laurzano, EdD, for her invaluable guidance and support, as well as to friends, colleagues, and family for their

encouragement and unwavering belief. Above all, the researcher thanks God Almighty for His guidance and blessings throughout this journey.

REFERENCES

Adank, M., et al (2024). Teaching practices that enhance student enjoyment in physical education. Physical Education and Sport Pedagogy, 29(2), 145–160.

Devereux, G., et al(2024). Games-based approaches to injury prevention in youth physical education. Journal of Sports Sciences, 42(3), 210–223.

Erdvik, I. B., et al (2022). Interest-based physical education: Student experiences of sports and explorative approaches. European Physical Education Review, 28(4), 987–1003.

Gray, S., et al. (2025). Rethinking physical education: A cross-border dialogue on curriculum innovation. Curriculum Studies in Health and Physical Education, 16(1), 25–40.

Howley, D. (2022). Physical education during COVID-19: Challenges and innovations in remote learning. Education and Information Technologies, 27(5), 6231–6248.

Legrain, P., et al. (2019). Cooperative learning in physical education: Effects on motor skills and pedagogical knowledge. Teaching and Teacher Education, 78, 215–224.

Martinez-Merino, N., & Rico-González, M. (2024). Effects of structured physical education on preschool children's development. Early Childhood Education Journal, 52(1), 89–101.

Merino-Campos, C., & Del-Castillo, H. (2025). Digital transformation in physical education: Lessons from the pandemic. Computers & Education, 195, 104701.

Oh, J. (2022). Quidditch as an alternative sport in physical education: Engagement and inclusion outcomes. Sport, Education and Society, 27(6), 678–692.

Robinson, D. & Barrett, J. (2021). Alternative environment activities in physical education: Teacher perspectives from Canada and Ireland. Physical Education and Sport Pedagogy, 26(5), 521–535.

Towlson, C., et. Al. (2025). Bio-banding in youth physical education: Implications for equity and development. Sports Medicine, 55(2), 345–357.

Wiklander, P., et al. (2023). Health perspectives in physical education: Teachers' beliefs and practices. Sport, Education and Society, 28(3), 356–370.

APA Citation:

Basilio, J. D., Ocampo, I. D., Hipolito, C. Y., & Reyes, E. M. (2026). ALTERNATIVE PHYSICAL EDUCATION ENGAGEMENT STRATEGIES ON NON-TRADITIONAL SPORTS PARTICIPATION: AN ASSESSMENT. Ignatian International Journal for Multidisciplinary Research, 4(4), 903–913. https://doi.org/10.5281/zenodo.19644129

Corresponding author: *80reyesj@gmail.com*