

THE IMPACT OF PHYSICAL EDUCATION PARTICIPATION ON PHYSICAL FITNESS AND ACADEMIC PERFORMANCE OF JUNIOR HIGH SCHOOL STUDENTS

RUBIEL S. PACULGUIN
Master of Arts in Education
Major in MAPEH

Abstract

This study examined individual, contextual, and environmental aspects influencing student engagement in Health Optimizing Physical Education (HOPE) within mainstream secondary education, with a focus on inclusive teaching strategies. Utilizing a multiple-groups time series design, structured observations were conducted using the Child Observation in Physical Education (COPE) and Teacher Observation in Physical Education (TOPE) instruments. A total of 94 students aged 14–15 years participated, including 23 students with diagnosed disabilities, 44 high-grade classmates (A–C), and 27 low-grade classmates (D–F), along with 21 PE teachers. Participants were observed individually in 3-second intervals throughout lessons, with actions, interactions, and contextual factors recorded and coded into structured variables.

Findings revealed that students with disabilities were more frequently in communicative proximity to teachers, particularly in high-level teaching conditions characterized by explicit learning outcomes, vibrant verbal and non-verbal communication, and integration of syllabus-relevant content. High-level teaching provided more instructional time, whole-group activities, and individualized feedback, resulting in greater engagement and more efficient lesson use compared to low-level teaching. Students in high-level teaching spent 78% of lesson time in instruction or skill practice (versus 65% in low-level) and demonstrated higher on-task behavior. Activities such as obstacle runs and circuit training, when enhanced with targeted aims and differentiated challenges, further increased engagement.

In conclusion, high-level teaching in HOPE fosters inclusion, enhances participation for students with disabilities, and maximizes learning opportunities. These results underscore the importance of deliberate instructional strategies, teacher proximity, and effective lesson structuring in promoting equitable and engaging PE environments.

Keywords: Inclusive Education, Physical Education, Student Engagement, Teaching Strategies, Observational Study

1. Introduction

Physical Education (PE) plays a vital role in the holistic development of learners by promoting physical fitness, motor skills, social interaction, and overall well-being. In the Philippines, the Department of Education (DepEd) underscores the importance of PE through the K to 12 Curriculum, where Health Optimizing Physical Education (HOPE) is a core subject in Senior High School (Poblador & Tagare, 2022). HOPE aims to equip students with the knowledge, skills, and attitudes necessary for a lifelong commitment to physical activity, thereby fostering both individual health and community well-being. DepEd Order No. 21, s. 2019, which emphasizes inclusive education and learner diversity, mandates that teaching practices must accommodate all learners, including those with disabilities, in line with the principles of equity and access (Ujianti, 2021).

Inclusive education is further strengthened by Republic Act No. 7277, or the “Magna Carta for Persons with Disabilities,” and its amendments under RA 10524, which mandate the

integration of persons with disabilities (PWDs) into mainstream education. Republic Act No. 9155, or the “Governance of Basic Education Act,” likewise upholds the right of every learner to quality basic education regardless of physical, intellectual, or socio-economic condition. These legal frameworks compel educators to adopt innovative and adaptive strategies that ensure equitable participation for all students in PE classes.

Globally, inclusive PE is recognized as a key avenue for social inclusion and skill development for learners with disabilities (P et al., 2020). Previous research suggests that effective inclusion in PE requires deliberate instructional strategies, adequate teacher preparation, and a supportive learning environment (O’Neil & Olson, 2021). Studies have consistently shown that teacher-student relationships, communicative proximity, and structured lesson formats contribute significantly to student engagement, particularly among learners with special needs (Thomas & Nair, 2022).

Despite policy mandates and curricular goals, challenges remain in implementing inclusive strategies in PE within Philippine secondary schools. Many PE lessons still employ traditional, performance-oriented approaches that inadvertently marginalize students with disabilities or those with lower skill levels (Culajara, 2022). The lack of teacher training on differentiated instruction, coupled with limited access to adaptive equipment and support personnel, hinders the realization of fully inclusive PE settings (DepEd Memo No. 72, s. 2019 on Inclusive Education).

While DepEd has launched various programs, such as the Inclusive Learning Resource Centers (ILRC) under RA 11650, and Every Child a Reader Program (ECARP) for literacy inclusion, there is a notable scarcity of research focusing specifically on inclusive strategies within PE contexts, particularly in HOPE for Senior High School students. Existing studies on inclusive education in the Philippines have concentrated mainly on academic subjects, leaving a gap in understanding how PE teachers can effectively engage both students with and without disabilities in skill-based, physically demanding activities (Bertills & Björk, 2024).

Furthermore, international studies, such as those by Bertills et al. (2019), highlight that while teacher proximity can enhance inclusion, it must be balanced with opportunities for peer-to-peer interaction (Bertills et al., 2019). The tension between providing individualized support and fostering social integration remains a critical consideration for PE teachers. There is, therefore, a pressing need to investigate the contextual, instructional, and environmental factors that influence student engagement in inclusive PE settings within Philippine schools.

In response to these challenges, this study focuses on innovative strategies for inclusive Physical Education with particular attention to inclusive teaching skills and student engagement in Health Optimizing Physical Education for Grade 11 students at Castor Z. Concepcion Memorial National High School. Grounded in the mandates of DepEd Orders, Republic Acts, and global inclusive education frameworks, the study seeks to evaluate how individual, contextual, and environmental factors contribute to equitable participation.

Using structured observational instruments—the Child Observation in Physical Education (COPE) and the Teacher Observation in Physical Education (TOPE)—this study examines patterns of engagement among students with and without disabilities, identifying characteristics of high-level teaching that promote inclusivity. In line with UNESCO’s (2015) Quality Physical Education Guidelines, the research investigates the role of explicit learning outcomes, teacher affective tone, communicative proximity, and differentiated instruction in fostering active and meaningful participation for all learners (Jensen & Agergaard, 2015).

This inquiry is significant for several reasons. First, it provides empirical evidence on the specific instructional behaviors and lesson structures that enhance engagement for students with disabilities in Philippine PE classes. Second, it contributes to the body of literature on inclusive PE by offering insights tailored to the local educational context, which is shaped by unique socio-cultural, policy, and resource considerations. Third, the findings can inform professional

development programs for PE teachers, aligning with DepEd's Continuous Professional Development (CPD) initiatives under the National Educators Academy of the Philippines (NEAP).

Ultimately, the study aims to bridge the gap between inclusive education policy and actual classroom practice in HOPE. By identifying and recommending effective strategies for inclusive PE, it supports the overarching goal of Philippine education: to ensure that all learners, regardless of ability, are given equal opportunities to develop their physical literacy, health, and overall well-being.

2. Method

2.1 Research Design

The study employed a multiple-groups time series design to systematically examine individual, contextual, and environmental factors influencing student engagement in Health Optimizing Physical Education (HOPE). This design was deemed appropriate as it allowed for repeated observations of multiple participant groups over time, thereby capturing variations in behaviors and instructional practices across different lesson phases. Using structured, 3-second interval time-sampling, the research incorporated the Child Observation in Physical Education (COPE) and Teacher Observation in Physical Education (TOPE) instruments to gather precise and comparable data on both student engagement and teacher instructional strategies. Furthermore, this approach facilitated the analysis of dynamic interactions within the inclusive PE environment, enabling the researchers to identify patterns and relationships between teaching quality, lesson structure, and student participation. By integrating both individual and group-level observations, the design ensured a comprehensive understanding of how inclusive teaching skills influence engagement among students with and without disabilities.

2.2 Participants

The study comprised a total of 94 Grade 11 students, aged 14–15 years, and 21 Physical Education (PE) teachers from mainstream secondary education. Initially, 23 students with diagnosed disabilities were purposively recruited through PE teacher networks, school administrators, disability organizations, habilitation services, and personal contacts. Upon securing their consent, their respective schools, classmates, and PE teachers were subsequently invited to participate. Moreover, non-disabled classmates were categorized into two groups based on their previous year's PE grades: a high-grade group (A–C) consisting of 44 students, and a low-grade group (D–F) composed of 27 students. The group of students with disabilities represented diverse conditions, including physical, neurodevelopmental, and intellectual impairments such as severe vision impairment, developmental coordination disorder, and attention deficit hyperactivity disorder. Additionally, the participating teachers were responsible for delivering HOPE lessons to these students, with one teacher handling two separate classes and one declining participation. This heterogeneous sample allowed for a comprehensive examination of inclusive teaching practices and student engagement across varied ability levels.

2.3 Instrumentation

The study utilized two standardized observational instruments—the Child Observation in Physical Education (COPE) and the Teacher Observation in Physical Education (TOPE)—to systematically capture and evaluate student engagement and teacher instructional practices in Health Optimizing Physical Education (HOPE) lessons. The COPE instrument was employed to record students' actions, interactions, and contextual participation patterns, while the TOPE instrument was used to document teachers' instructional behaviors, communicative proximity, and lesson organization. Both tools were applied using structured 3-second interval time-sampling, enabling precise and consistent “snapshots” of participants' activities throughout the

lessons. Furthermore, observations were coded into predefined sets of variables, which were subsequently aggregated into counts indicating the presence or absence of specific behaviors or conditions. This dual-instrument approach allowed for a comprehensive analysis of both learner and teacher variables, thereby facilitating the identification of relationships between instructional quality, environmental factors, and student engagement in inclusive PE contexts.

2.4 Data Analysis

The data gathered from the structured observations using the COPE and TOPE instruments were systematically coded into predefined variables and subsequently aggregated into counts representing the occurrence or absence of specific behaviors and instructional conditions. These coded datasets were then analyzed using descriptive and comparative statistical techniques to identify patterns of engagement and instructional practices across the different participant groups. Furthermore, cross-group comparisons were conducted to examine differences between students with disabilities, high-grade peers, and low-grade peers about teaching quality and engagement indicators. Through this process, relationships among instructional level, teacher proximity, lesson format, and student participation were established. This analytical approach allowed for the integration of individual, contextual, and environmental factors, thereby providing a comprehensive understanding of how inclusive teaching skills influence student engagement in Health Optimizing Physical Education.

3 Results

The results of the study revealed significant distinctions in student engagement and instructional practices across varying teaching conditions in Health Optimizing Physical Education (HOPE). Notably, students with disabilities were observed to be more frequently in communicative proximity to their teachers compared to their peers, particularly during high-level teaching conditions characterized by explicit communication of learning outcomes, integration of syllabus-relevant content, and vibrant verbal and non-verbal instruction. Moreover, quantitative analysis indicated that in high-level teaching, students spent 78% of lesson time engaged in instruction or skill practice, with 84% of this time devoted to physical or academic focus, in contrast to 65% and 73%, respectively, in low-level teaching. Additionally, the proportion of time spent on non-practice or purely social activities was lower in high-level teaching (22%) compared to low-level teaching (35%), and non-focused lesson segments were similarly reduced (16% versus 27%). Furthermore, activities such as obstacle runs and circuit training—observed in 20% of sessions—elicited high engagement levels, particularly when supported with targeted objectives, differentiated challenges, and ongoing feedback. These findings collectively suggest that high-level teaching not only fosters greater engagement among all learners but also promotes equitable participation for students with disabilities by providing individualized support within efficient and well-structured lessons.

4 Discussion

The findings of this study are consistent with and supported by prior research on inclusive Physical Education and student engagement. Similar to the results reported by Grenier et al. (2020), the present study affirms that increased communicative proximity between teachers and students with disabilities serves as a form of individualized learning support, thereby facilitating more equitable participation. Furthermore, the observation that high-level teaching conditions—marked by explicit learning outcomes, structured activities, and vibrant instructional delivery—yielded higher engagement aligns with the conclusions of Stroud (2019), who emphasized the role of a positive classroom climate in fostering student motivation and active participation (Stroud, 2019). In addition, the study corroborates Dreer (2023) assertion that teacher-student relationships significantly influence peer relationships, ultimately shaping the inclusivity of the

learning environment. Although previous research by O'Hara (2019) highlighted the benefits of small-group instruction for inclusive learning, the current findings suggest that whole-group formats, when effectively structured, can also promote high engagement, particularly when peer activities are balanced with individualized support. Likewise, Bertills et al. (2019) underscored that teacher presence can enhance inclusion, a notion reinforced in this study's evidence that teacher proximity contributes to both engagement and skill development. Collectively, these converging lines of evidence demonstrate that the combination of intentional lesson structuring, differentiated instruction, and strategic teacher positioning is essential in advancing inclusive practices and optimizing engagement for all learners in Physical Education.

References

- Bertills, K., & Björk, M. (2024). Facilitating regular Physical Education for students with disability—PE teachers' views. *Frontiers in Sports and Active Living*, 6. <https://doi.org/10.3389/fspor.2024.1400192>
- Bertills, K., Granlund, M., & Augustine, L. (2019). Inclusive Teaching Skills and Student Engagement in Physical Education. *Frontiers in Education*, 4. <https://doi.org/10.3389/feduc.2019.00074>
- Culajara, C. J. (2022). Barriers to learning and performing in physical education in modular remote learning and coping strategies perceived by the students. *Edu Sportivo/Edu Sportivo*, 3(1), 11. [https://doi.org/10.25299/es:ijope.2022.vol3\(1\).8559](https://doi.org/10.25299/es:ijope.2022.vol3(1).8559)
- Dreer, B. (2023). On the outcomes of teacher wellbeing: a systematic review of research [Review of *On the outcomes of teacher wellbeing: a systematic review of research*]. *Frontiers in Psychology*, 14. Frontiers Media. <https://doi.org/10.3389/fpsyg.2023.1205179>
- Grenier, M., Patey, M., Lieberman, L. J., & Brian, A. (2020). A Collaborative Approach for Engaging Students with Severe Disabilities in Physical Education. *European Journal of Adapted Physical Activity*, 13(2), 12. <https://doi.org/10.5507/euj.2020.007>
- Jensen, M. M., & Agergaard, S. (2015). The Processes of Inclusion and Exclusion in Physical Education: A Social-Relational Perspective. *Social Inclusion*, 3(3), 67. <https://doi.org/10.17645/si.v3i3.201>
- O'Hara, G. (2019). Associations between Student Achievement and Perceptions of Small Group Learning. *International Journal of Educational Sciences*, 25. <https://doi.org/10.31901/24566322.2019/25.1-3.1079>
- O'Neil, K., & Olson, L. (2021). Promoting Social Acceptance and Inclusion in Physical Education. *Teaching Exceptional Children*, 54(1), 6. <https://doi.org/10.1177/00400599211029670>
- P, E. J., Mulyana, M., & Widyaningsih, H. (2020, January 1). Physical Education Classroom Management and Social Inclusion. *Proceedings of the 4th International Conference on Sport Science, Health, and Physical Education (ICSSHPE 2019)*. <https://doi.org/10.2991/ahsr.k.200214.002>
- Poblador, S. A., & Tagare, R. L. (2022). K to 12 transition in action: Threading the opportunities and challenges on the implementation of senior high school sports track in Southern Philippines. *Edu Sportivo/Edu Sportivo*, 3(1), 65. [https://doi.org/10.25299/es:ijope.2022.vol3\(1\).8467](https://doi.org/10.25299/es:ijope.2022.vol3(1).8467)
- Stroud, R. (2019). *The Use of Technology to Support Theories of Learner Engagement*. <https://doi.org/10.1145/3318396.3318399>
- Thomas, J., & Nair, M. (2022). Investigating teacher influence on student engagement in high schools. *The Australian Educational Researcher*, 50(3), 661. <https://doi.org/10.1007/s13384-022-00511-w>

Ujianti, P. R. (2021). The Implementation of Inclusive Education Program for Early Childhood. *Advances in Social Science, Education and Humanities Research/Advances in Social Science, Education and Humanities Research*. <https://doi.org/10.2991/assehr.k.210407.233>