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Investigating the Link Between Self-Efficacy and Perceived Student Engagement: An Analysis of Teacher Perspective

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Abstract

This study investigates the influence of school sports facilities and equipment on student engagement in Physical Education (PE), emphasizing the teachers' self-efficacy. Results show that while the availability of facilities (e.g., basketball and volleyball) is high, individual and culturally significant sports are underserved. Regression analysis reveals that teacher self-efficacy significantly predicts student engagement across intellectual, psychomotor, and learning dimensions ($p < .001$), whereas facilities alone have a direct effect on students' engagement. The findings highlight that self-efficacy is a stronger predictor of engagement than resource availability. This suggests that improving PE outcomes requires not only addressing disparities in infrastructure but also strengthening teacher development programs. Therefore, the study recommends equitable resource allocation, promotion of inclusive sports programs, and continuous professional development to empower teachers and foster a more engaging, holistic, and culturally responsive physical education environment.

Keywords: Physical Education, facilities, equipment, student engagement, teacher self-efficacy, regression analysis, resource allocation, professional development.

1. Introduction

Learner engagement is a key indicator of success in Physical Education (PE), promoting motivation, autonomy, and holistic development through physical activity, teamwork, and discipline. However, many PE programs—particularly in rural areas—struggle due to inadequate facilities and equipment, limiting both instructional quality and student participation. Studies (Rosete et al., 2022; Kroupis et al., 2019) highlight that insufficient resources negatively affect both student engagement and teacher confidence.

Teacher satisfaction with available resources strongly influences their self-efficacy, which plays a vital role in enhancing students' intellectual, psychomotor, and learning engagement. While past research has explored the separate roles of resources and teacher effectiveness, few studies have examined how these factors interact—especially in under-resourced settings.

This study aims to assess the impact of PE facilities and equipment on teacher satisfaction and self-efficacy, and how these in turn affect student engagement. It also provides a socio-demographic profile of public and private high school teachers in Iligan City, examining how differences in resource availability influence engagement strategies across school types. The findings aim to inform policies that promote equitable access, teacher development, and improved PE outcomes.

2. Methods

This study employed a descriptive-correlational quantitative design using stratified and purposive sampling to examine the impact of PE facilities and equipment on teacher self-efficacy and student engagement in public and private schools in Iligan City. Data were gathered through structured, adapted survey questionnaires assessing socio-demographic characteristics, resource adequacy, self-efficacy, and engagement strategies. Tools included a resource checklist (Valenzuela, 2018), the General Self-Efficacy Scale (Tsai et al., 2014) ($\alpha = 0.85$), and the Teacher Engagement in PE Questionnaire (Nguyen, 2023) with high reliability ($\alpha = 0.82-0.90$). Quantitative data were analyzed using Jamovi, applying descriptive statistics (mean, median, mode, standard deviation) to evaluate perceptions of PE program effectiveness and engagement. This study followed a systematic approach to ensure accurate and reliable data collection. The researchers first obtained an approved letter of consent to conduct the survey. This letter was then submitted to the relevant authorities of each private high school and to the Superintendent of the DepEd Iligan for public schools, to ensure proper authorization. Approval from

both private and public school administrators was obtained to facilitate the survey process. The researcher gathered data through surveys administered to all suitable respondents. Both printed survey questionnaires and google forms were utilized to ensure inclusivity and accessibility, allowing for a comprehensive data collection process.

3. RESULTS AND DISCUSSION

3.1 Demographic Profile

Majority of teachers are under **30 years old (46.7%)**, **female (68.3%)**, and **PE majors (88.3%)**. Most hold a **bachelor's degree (86.7%)** and have varied teaching experience, with **31.7%** having over **10 years**. Respondents were equally distributed between public and private schools (**50% each**), enabling balanced comparisons. According to Miao et al. (2024), new teachers are often full of energy and enthusiasm, which plays a significant role in actively engaging students in physical education activities. However, 30% of the teaching is positively associated with job satisfaction particularly when it aligns with teachers' perceived needs (Smet, 2021). Additionally, female respondents make up 68.3% of the population, reflecting the international trend of a higher proportion of women in the teaching profession (Barni et al., 2019). Martone (2020) emphasized that teachers' sex should be considered in the teaching-learning process, as it can help foster a more effective learning environment between students and teachers. Deng and Maria (2024) noted that higher levels of education are often accompanied by increased self-confidence and greater innovation in teaching methods. In terms of teaching experience, a substantial portion of teachers have more than ten years in the profession, indicating a mix of both experienced educators and new entrants. Experienced teachers are typically associated with more advanced teaching skills, which contribute to greater student engagement and academic performance (Hidaya et al., 2023). Furthermore, private schools often offer superior facilities that enhance student engagement and learning outcomes (Lamba, 2022). In contrast, public schools may face challenges due to resource limitations, which can hinder educational quality and student participation (Herpratana & Sumaryanti, 2019).

3.2 Availability of Facilities and Equipment

Team sports facilities like **volleyball (90%)** and **basketball (83%)** are widely available. Individual and culturally significant sports (e.g., **arnis: 48%**, **taekwondo: 38%**) are less supported. Equipment for basketball and volleyball is fully available (100%), while others like **lawn tennis (28%)** and **track and field (28%)** are limited. Intellectual sports like **chess (93%)** and **scrabble (63%)** are relatively well-supported.

The result shows that overall self-efficacy significantly predicts overall involvement with positive effect; $\beta = 0.276$ with low correlation and $p = 0.002$. This indicates that a person who has a little higher level of self-efficacy is more likely to display a higher involvement level. A previous study (Abun, 2021) found that self-efficacy influences work performance and is shaped by the work environment. Individuals confident in handling challenges are more likely to engage fully (Centeio et al., 2022), aligning with research linking self-efficacy to sustained learner motivation (DeMartini & Villemaire, 2023). While facilities can enhance engagement, their impact is often secondary to factors like instructional quality and teacher support (Herpratana & Sumaryanti, 2019; Kroupis et al., 2019; Widiastuti, 2019). Overall, boosting self-efficacy may be more effective in increasing participation than improving facilities alone (Wardanis et al., 2023).

4. Discussion

This study intends to explore the impact of school sports facilities and equipment on student engagement in Physical Education (PE), with a focus on the mediating role of teacher self-efficacy. The findings of this study is interesting in a number of ways:

Firstly, female respondents make up 68.3% of the population, while male respondents comprise 31.7%. This distribution reflects broader trends in the teaching profession, where women continue to outnumber men. Martone (2020) emphasized that the teacher's sex should be considered in the teaching-learning process, as it can contribute to a more effective and responsive classroom environment. Supporting this view, Gong et al., (2018) found that assigning female middle school teachers in China resulted in higher academic achievement and greater social adaptation among female students, suggesting that gender alignment between students and teachers can positively influence learning outcomes.

Secondly, the quality of sports facilities and equipment in schools significantly affects students' experiences, levels of participation, and overall satisfaction with physical education programs. This reveals that the availability of these resources plays a pivotal role in shaping students' intellectual, psychomotor, and learning engagement within the physical education context.

Lastly, self-efficacy is a more powerful predictor of student engagement than the direct availability of facilities. Facilities support engagement indirectly, particularly when leveraged by confident and skilled teachers. Disparities in equipment availability, especially for individual and culturally significant sports, highlight the need for more equitable resource distribution.

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