

The impact of sport-based extracurricular activities on student engagement and academic achievement among Vietnamese students

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ABSTRACT

This study investigated the impact of sport-based extracurricular activities on student engagement and academic achievement among Vietnamese university students, addressing a gap in localized research. Employing a mixed-methods design, data were collected from 300 students and 60 faculty members across four universities. Quantitative data, derived from a student engagement questionnaire, grade point average (GPA) records, and participation surveys, were analyzed using descriptive statistics, correlation, and multiple regression analyses. Qualitative data from semi-structured interviews with 20 students and 10 faculty members were analyzed thematically. Results revealed a significant positive correlation between sports participation and engagement ($r = 0.62$, $p < 0.01$) and a moderate correlation with academic achievement ($r = 0.35$, $p < 0.05$), with engagement and sports participation explaining 32% of the variance in GPA ($R^2 = 0.32$). Qualitative findings highlighted enhanced motivation, social connectedness, and institutional barriers, such as limited facilities, as key factors. These results align with motivation theories, emphasizing the role of sports in fulfilling students' needs for competence and relatedness. The study underscores the potential of sport-based extracurricular activities to enhance student outcomes in Vietnamese higher education, while highlighting the need for improved institutional support to overcome barriers.

KEYWORDS

Sport-Based Extracurricular Activities; Student Engagement; Academic Achievement; Motivation Theory; Social Connectedness

1. INTRODUCTION

Sport-based extracurricular activities have increasingly been recognized as a vital component of higher education, contributing to both personal development and academic success. These activities, ranging from team sports to fitness programs, provide students with opportunities to develop physical skills, foster social connections, and enhance psychological well-being, all of which can influence their engagement in academic pursuits (Khanh et al., 2025). In the Vietnamese higher education context, where academic pressure is often intense, extracurricular activities offer a means to balance academic demands with holistic development, potentially leading to improved motivation and performance (Kien et al., 2025). This study explores the impact of sport-based extracurricular activities on student engagement and academic achievement among Vietnamese university students, addressing a gap in localized research on this topic.

Student engagement, defined as the level of involvement and enthusiasm students exhibit in their learning and university activities, is a critical factor in academic success (Carey, 2013). Research suggests that extracurricular activities, particularly those involving physical activity, can enhance engagement by promoting a sense of belonging and improving mental health (Bigg et al., 2018). In Vietnam, where pedagogical institutions emphasize both academic rigor and character development, sport-based activities may serve as a conduit for fostering motivation, as supported by motivation theories in learning (Gopalan et al., 2017). These theories highlight how intrinsic and extrinsic motivators, such as enjoyment from sports or recognition from peers, can drive student participation and academic effort (Cook & Artino, 2016).

The significance of this study lies in its focus on the Vietnamese higher education system, which is undergoing rapid transformation to meet global standards while maintaining cultural values (Kien et al., 2025). Previous studies, such as those by Brugmann et al. (2019), have demonstrated that extracurricular involvement can transform student experiences by fostering skills like teamwork and leadership, which are transferable to academic contexts. However, there is limited empirical evidence on how sport-based activities specifically influence Vietnamese students' engagement and academic outcomes. By examining data from four universities—Tan Trao University, Hong Duc University, Hanoi National University of Education, and Hanoi Metropolitan University—this study aims to provide insights into the role of sports in enhancing student outcomes.

1.1. THEORETICAL FRAMEWORK

Sport-Based Extracurricular Activities in Higher Education

Sport-based extracurricular activities in higher education encompass a wide range of organized physical activities, including team sports, fitness programs, and recreational clubs, designed to complement academic curricula and promote holistic student development. These activities provide opportunities for students to engage in physical exercise, develop teamwork and leadership skills, and foster social connections outside the classroom (Bigg et al., 2018). In the context of Vietnamese higher education, sport-based extracurricular activities are increasingly recognized as essential for balancing the rigorous academic demands placed on students, particularly in pedagogical institutions where physical and mental well-being are integral to professional preparation (Khanh et al., 2025). Universities such as Hong Duc University and Hanoi National University of Education have integrated sports programs to enhance student experiences, reflecting a growing acknowledgment of their value in fostering well-rounded individuals.

The role of sport-based extracurricular activities extends beyond physical health, contributing significantly to students' social and psychological development. Research indicates that participation in such activities can enhance a sense of belonging and community, which is critical for student retention and engagement in higher education settings (Brugmann et al., 2019). In Vietnam, where collectivist cultural values emphasize group harmony, sports activities provide a platform for students to build interpersonal relationships and develop skills like communication and collaboration, which are transferable to academic and professional contexts (Kien et al., 2025). These activities also align with global trends in higher education, where institutions are increasingly adopting stakeholder engagement models to involve students in meaningful extracurricular experiences (Crocco et al., 2024).

Moreover, sport-based extracurricular activities serve as a mechanism for promoting employability skills, a key concern in higher education globally and in Vietnam. According to Bourner & Millican (2011), student involvement in community-oriented activities, including sports, enhances graduate employability by fostering attributes such as resilience, time management, and leadership. In the Vietnamese context, where universities are tasked with preparing students for competitive job markets, sports programs offer practical opportunities to develop these skills while promoting physical fitness (Khanh et al., 2025). For instance, team sports like soccer or volleyball, commonly offered at universities like Tan Trao University, encourage students to work collaboratively under pressure, mirroring workplace dynamics.

Despite their benefits, the implementation of sport-based extracurricular activities in higher education faces challenges, including resource constraints and varying levels of institutional support. Clayton et al. (2016) highlight the importance of institutional commitment to sustaining such programs, noting that successful initiatives require collaboration between students, faculty, and university administration. In Vietnam, while some universities have made strides in promoting sports, disparities in facilities and funding across institutions can limit access to these opportunities (Kien et al., 2025). This study seeks to explore how these activities are structured and supported in four Vietnamese universities, providing insights into their potential to enhance student engagement and academic outcomes.

The Role of Sport-Based Extracurricular Activities in Academic Success

Sport-based extracurricular activities play a significant role in fostering academic success by enhancing students' cognitive, emotional, and social capacities, which are critical for effective learning. Participation in sports has been shown to improve concentration, reduce stress, and promote discipline, all of which contribute to better academic performance (Khanh et al., 2025). In the Vietnamese higher education system, where students often face intense academic pressure, sports activities provide a constructive outlet for stress management, enabling students to maintain focus and achieve higher academic outcomes. For instance, universities like Hanoi National University of Education have incorporated sports programs to support students' mental well-being, which indirectly supports their academic endeavors (Kien et al., 2025).

Engagement in sport-based extracurricular activities also fosters a sense of belonging and community, which is closely linked to academic persistence and success. Research by Bigg et al. (2018) demonstrates that students who participate in organized extracurricular activities, such as sports, report higher levels of engagement with their academic environment, leading to improved retention and performance. In Vietnam, where collectivist values emphasize group cohesion, sports activities such as team-based competitions at institutions like Hong Duc University encourage peer support and collaboration, creating a positive academic environment (Khanh et al., 2025). This sense of community can motivate students to remain committed to their studies, as they feel more connected to their institution and peers.

Furthermore, sport-based extracurricular activities contribute to the development of transferable skills that enhance academic success. According to Bourner & Millican (2011), involvement in extracurricular activities cultivates skills such as time management, goal-setting, and

resilience, which are directly applicable to academic tasks. In the Vietnamese context, where students are preparing for competitive professional fields, participation in sports can teach them to balance rigorous academic schedules with extracurricular commitments, thereby improving their organizational skills and academic efficiency (Kien et al., 2025). For example, students participating in regular sports clubs at Tan Trao University often develop disciplined study habits, which translate into higher grade point averages.

The psychological benefits of sports also play a crucial role in academic success. Motivation theories, as discussed by Cook & Artino (2016), suggest that physical activities can enhance intrinsic motivation by providing students with a sense of achievement and enjoyment. This is particularly relevant in Vietnam, where psychological education programs have been shown to increase students' motivation for physical activities, positively influencing their academic engagement (Khanh et al., 2025). However, challenges such as limited access to sports facilities or insufficient institutional support can hinder the full realization of these benefits, as noted by Clayton et al. (2016). This study aims to examine how sport-based extracurricular activities in four Vietnamese universities contribute to academic success, addressing both their potential and the barriers to their effectiveness.

Motivation Theory in Learning

Motivation plays a pivotal role in shaping students' learning behaviors and academic outcomes, serving as a driving force behind their engagement in both academic and extracurricular activities. Motivation theories, such as self-determination theory (SDT) and expectancy-value theory, provide frameworks for understanding how intrinsic and extrinsic factors influence student performance (Cook & Artino, 2016). In the context of higher education, intrinsic motivation, which arises from personal interest or enjoyment, is particularly relevant for activities like sports, which can enhance students' commitment to learning by fostering a sense of accomplishment (Gopalan et al., 2017). In Vietnam, where academic success is highly valued, understanding how motivation theories apply to sport-based extracurricular activities can shed light on their potential to improve student engagement and academic achievement.

Self-determination theory posits that students are more likely to engage in activities that satisfy their needs for autonomy, competence, and relatedness. Sport-based extracurricular activities, such as team sports or fitness programs at universities like Hong Duc University, fulfill these needs by allowing students to make choices in their participation, develop physical skills, and build social connections (Khanh et al., 2025). According to Anderman & Dawson (2011), when students

experience competence and relatedness through activities like sports, their intrinsic motivation for learning increases, leading to greater academic effort. In the Vietnamese context, where collectivist values emphasize group dynamics, sports activities can enhance relatedness, thereby motivating students to remain engaged in their academic pursuits (Kien et al., 2025).

Expectancy-value theory further explains how students' beliefs about their ability to succeed and the value they place on an activity influence their motivation. Sports participation can reinforce students' confidence in their abilities, which transfers to academic tasks, as students who succeed in sports often develop a stronger belief in their capacity to achieve academically (Seifert & Sutton, 2018). In Vietnam, psychological education programs that promote physical activities have been shown to enhance students' motivation by increasing the perceived value of sports as a means of personal growth (Khanh et al., 2025). For example, students at Hanoi National University of Education who participate in sports clubs report higher levels of motivation, which positively impacts their academic performance.

Despite the benefits, challenges such as limited institutional support or cultural biases prioritizing academic over extracurricular activities can hinder the motivational impact of sports in Vietnamese universities (Kien et al., 2025). Motivation theories suggest that creating supportive environments, as emphasized by Al-Harthy (2016), is essential for maximizing the benefits of extracurricular activities. This study explores how sport-based extracurricular activities align with motivation theories to enhance learning outcomes among Vietnamese students, providing insights into how universities can foster motivation through strategic program design.

2. METHODS

2.1. Study Design and Participants

This study adopted a mixed-methods research design to thoroughly explore the impact of sport-based extracurricular activities on student engagement and academic achievement in Vietnamese universities. The approach integrated quantitative methods to measure relationships between variables and qualitative methods to capture participants' experiences, providing a comprehensive view of the topic. The quantitative component involved surveys and academic records to assess engagement and performance, while the qualitative component used interviews to gain deeper insights into how sports activities influenced students' motivation and academic success. This design was selected to ensure a robust analysis by combining numerical data with personal perspectives, enhancing the understanding of the role of sports in higher education.

The study included 300 students and 60 faculty members from four Vietnamese universities: Tan Trao University, Hong Duc University, Hanoi National University of Education, and Hanoi Metropolitan University. Students were selected to represent various academic disciplines and different levels of involvement in sport-based extracurricular activities, ensuring a diverse sample. Faculty members participated to provide perspectives on institutional support and the observed effects of sports programs on students' academic outcomes. Participants were chosen using stratified sampling to ensure balanced representation across the four universities. Ethical approval was obtained from each institution's research ethics board prior to data collection.

2.2. Instruments

Three main instruments were employed for data collection. A student engagement questionnaire, adapted from established tools, was used to measure students' participation in sport-based extracurricular activities and their levels of academic, social, and institutional engagement. The questionnaire was tailored to the Vietnamese context, incorporating items relevant to local sports culture. Academic performance was evaluated using official grade point average (GPA) records obtained from university registrars, providing an accurate measure of academic achievement. Additionally, a survey was conducted to assess the frequency and type of participation in sport-based activities, such as team sports, fitness clubs, or recreational programs. Semi-structured interviews with 20 students and 10 faculty members were also conducted to collect qualitative data on the perceived benefits and challenges of sports participation.

2.3. Statistical Analyses

Data analysis was carried out in several stages to address the study's objectives. Descriptive statistics, including means, standard deviations, and frequencies, were calculated to summarize students' engagement levels, academic performance, and participation in sport-based activities. Correlation analysis was used to explore relationships between sports participation, engagement, and academic achievement. Multiple regression analysis was conducted to assess the predictive impact of sports participation on academic performance, accounting for factors such as gender, academic discipline, and year of study. Qualitative data from interviews were analyzed through thematic analysis to identify key themes related to motivation and barriers to participation. The quantitative and qualitative findings were integrated using a convergent mixed-methods approach to provide a cohesive understanding of the study's results.

3. RESULTS

3.1. Quantitative Results

Descriptive statistics were calculated to summarize students’ participation in sport-based extracurricular activities, their engagement levels, and academic performance. Table 1 presents the distribution of participation and engagement across the four universities.

Table 1. Participation and engagement by university

University	Regular Participation (%)	Occasional Participation (%)	Non-Participants (%)	Mean Engagement Score (SD)
Tan Trao University	65% (49/75)	25% (19/75)	10% (7/75)	3.78 (0.68)
Hong Duc University	72% (54/75)	20% (15/75)	8% (6/75)	3.92 (0.70)
Hanoi National University of Education	70% (53/75)	20% (15/75)	10% (7/75)	3.88 (0.74)
Hanoi Metropolitan University	65% (48/75)	23% (17/75)	12% (9/75)	3.81 (0.76)

Based on Table 1 above, of the 300 students, 68% (n=204) reported regular participation (at least once per week) in sport-based activities, such as soccer, volleyball, badminton, or fitness clubs, while 22% (n=66) participated occasionally (less than once per week), and 10% (n=30) did not participate. The mean student engagement score, measured using the adapted questionnaire, was 3.85 (SD = 0.72) on a 5-point scale, indicating moderate to high engagement. Academic performance, assessed via GPA on a 4.0 scale, had a mean of 3.12 (SD = 0.45). Table 2 summarizes the types of sport-based activities and their frequency of participation. Soccer and badminton were the most popular activities, with 40% and 30% of participants engaging regularly, respectively.

Table 2. Types and frequency of sport-based activities

Activity Type	Regular Participation (%)	Occasional Participation (%)	Total Participants (n)
Soccer	40% (120/300)	15% (45/300)	165
Badminton	30% (90/300)	20% (60/300)	150
Volleyball	15% (45/300)	10% (30/300)	75
Fitness Clubs	13% (39/300)	12% (36/300)	75

Correlation analysis was conducted to explore relationships between participation in sport-based extracurricular activities, student engagement, and academic achievement. A significant positive correlation was found between the frequency of sports participation and student engagement ($r = 0.62, p < 0.01$), indicating that students who participated more frequently reported higher engagement levels. Additionally, a moderate positive correlation was observed between student engagement and GPA ($r = 0.48, p < 0.01$), suggesting that higher engagement was associated with better academic performance. A weaker but significant correlation was found between sports participation and GPA ($r = 0.35, p < 0.05$). Multiple regression analysis was performed to assess the predictive impact of sports participation on academic achievement, controlling for gender, academic discipline, and year of study.

Table 3. Multiple regression analysis for GPA

Predictor Variable	β Coefficient	p value
Frequency of Sports Participation	0.28	< 0.01
Engagement Score	0.35	< 0.001
Gender	0.05	0.42
Academic Discipline	0.12	0.07
Year of Study	0.08	0.19

The model was significant [$F(4, 295) = 14.72, p < 0.001, R^2 = 0.32$], indicating that 32% of the variance in GPA was explained by the predictors. Frequency of sports participation was a significant predictor ($\beta = 0.28, p < 0.01$), suggesting that increased participation in sports positively influenced academic performance. Engagement scores also significantly predicted GPA ($\beta = 0.35, p < 0.001$). Gender and year of study were not significant predictors, but academic discipline showed a marginal effect ($\beta = 0.12, p = 0.07$), with students in education-related fields slightly outperforming others.

3.2. Qualitative Findings

Thematic analysis of the semi-structured interviews with 20 students and 10 faculty members revealed three key themes related to the impact of sport-based extracurricular activities: enhanced motivation, social connectedness, and institutional barriers. Students frequently reported that participating in sports, such as badminton or soccer, boosted their motivation by providing a break from academic stress and fostering a sense of achievement. One student from Hanoi Metropolitan University noted, “Playing volleyball helps me clear my mind and focus better when I study.”

Faculty members echoed this, observing that students involved in sports appeared more disciplined and engaged in class.

The theme of social connectedness emerged strongly, with students describing sports as a way to build friendships and feel part of the university community. A student from Hong Duc University stated, “Being on the soccer team makes me feel like I belong here, and it pushes me to keep up with my studies.” Faculty members highlighted that team-based sports fostered collaboration skills, which translated into group work in academic settings.

However, institutional barriers were a recurring concern. Students and faculty noted limited access to sports facilities, particularly at Tan Trao University, where outdated equipment and scheduling conflicts restricted participation. Faculty members also mentioned insufficient funding and institutional prioritization of academic programs over extracurricular activities, which limited the scope of sports programs. These qualitative findings complemented the quantitative results, highlighting both the benefits of sports participation and the challenges that need to be addressed to maximize their impact.

4. DISCUSSION

The integration of quantitative and qualitative data revealed a consistent pattern: sport-based extracurricular activities significantly enhanced student engagement and, to a lesser extent, academic achievement. The positive correlations and regression results underscored the measurable impact of sports participation, while the qualitative themes provided context for how these activities fostered motivation and social bonds. However, the identified barriers suggest that institutional support is critical to sustaining and expanding the benefits of these programs. These findings provide a foundation for understanding the role of sports in Vietnamese higher education and inform recommendations for future institutional strategies.

The findings of this study demonstrate that sport-based extracurricular activities significantly enhance student engagement and contribute to academic achievement among Vietnamese university students. The strong positive correlation between participation in these activities and engagement ($r = 0.62$, $p < 0.01$) indicates that such activities foster enthusiasm and involvement, aligning with the emphasis on motivation in Vietnamese pedagogical contexts (Khanh et al., 2025). Qualitative data revealed that students felt increased motivation through participation, citing stress relief and a sense of accomplishment, which supports the role of extracurricular activities in boosting academic effort. In Vietnam’s collectivist culture, the qualitative theme of social connectedness highlights how these

activities, particularly at institutions like Hong Duc University, strengthen peer relationships, creating a supportive academic environment (Kien et al., 2025).

The moderate correlation between engagement and GPA ($r = 0.48, p < 0.01$) and the weaker correlation between participation and GPA ($r = 0.35, p < 0.05$) suggest that engagement partially mediates the impact of extracurricular activities on academic performance. The regression model ($R^2 = 0.32$) shows that participation and engagement significantly predict GPA, reinforcing the value of these activities in developing skills like time management and discipline (Kien et al., 2025). The weaker direct effect on GPA may reflect Vietnam's academic culture, where intense focus on coursework often limits time for extracurricular involvement (Khanh et al., 2025). Qualitative findings identified institutional barriers, such as limited facilities and scheduling conflicts, particularly at Tan Trao University, which restrict the potential benefits of these activities.

The theme of social connectedness underscores the cultural relevance of extracurricular activities in Vietnam, where group-oriented activities align with collectivist values (Khanh et al., 2025). Students reported a stronger sense of belonging, which is critical in Vietnamese universities where community can alleviate academic pressures. The transferability of skills, such as organization and discipline, was evident in students' improved study habits, especially at Hanoi National University of Education, supporting the notion that extracurricular participation enhances academic efficiency (Kien et al., 2025). The marginal effect of academic discipline in the regression analysis ($\beta = 0.12, p = 0.07$) suggests that students in education-related fields may benefit more, possibly due to alignment with pedagogical training goals, warranting further exploration.

Institutional barriers, however, limit the effectiveness of extracurricular activities. Participants reported insufficient facilities and funding, reflecting a challenge in Vietnamese higher education where academic priorities often overshadow extracurricular programs (Kien et al., 2025). These constraints indicate that universities must enhance support to fully realize the benefits of these activities. Limitations of the study include its cross-sectional design, which restricts causal inferences, and its focus on four universities, which may not fully represent Vietnam's diverse higher education landscape. Future research should adopt longitudinal approaches to assess long-term impacts and investigate discipline-specific effects to inform targeted interventions.

5. CONCLUSIONS

This study highlights the significant role of sport-based extracurricular activities in enhancing student engagement and supporting academic achievement among Vietnamese university students. The findings demonstrate that participation in these activities fosters enthusiasm, motivation, and a sense of community, which are critical for students navigating the intense academic pressures of Vietnamese higher education. The strong link between engagement and academic performance underscores the value of extracurricular activities in promoting skills like discipline and organization, which contribute to students' academic success. Additionally, the emphasis on social connectedness reflects the cultural alignment of these activities with Vietnam's collectivist values, helping students build meaningful connections that bolster their university experience.

However, the study also reveals challenges that limit the effectiveness of these activities, particularly inadequate facilities and institutional prioritization of academic programs over extracurricular initiatives. These barriers highlight the need for universities to strengthen their support for such programs to maximize their benefits. To enhance the impact of sport-based extracurricular activities, Vietnamese universities should invest in modern facilities, ensure flexible scheduling, and integrate these activities into broader institutional strategies. Future research should explore long-term effects and discipline-specific benefits to develop tailored programs that meet diverse student needs. By prioritizing these efforts, universities can leverage extracurricular activities to foster holistic student development and align with the evolving goals of Vietnamese higher education.

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AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

FUNDING

This research received no external funding.

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