

# The Polytechnic, Sports Development, and Student Development: A Pathway to Holistic Growth

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## Abstract

Polytechnic education plays a critical role in national development by bridging the gap between theoretical knowledge and practical skills acquisition. However, various challenges, such as inadequate funding, policy implementation gaps, and limited extracurricular engagement, continue to hinder the effectiveness of polytechnic institutions in Nigeria. This study examines the impact of polytechnic education on workforce readiness, the role of extracurricular activities in enhancing student performance, and the significance of sports participation in fostering leadership, teamwork, and mental well-being. Drawing from scholarly works, the study highlights the need for policy reforms to address barriers to sports development, improve technical and vocational education, and integrate structured extracurricular programs to enhance student engagement and cognitive performance. Additionally, findings from neuroscience and sport psychology suggest that physical activity positively influences stress resilience, cognitive function, and academic success among students. The study recommends amongst others that Nigerian polytechnics adopt evidence-based strategies to enhance student development, including increasing investments in sports infrastructure, promoting industry-focused training, and fostering an active learning environment that supports both academic and extracurricular excellence.

**Keywords:** polytechnic education, workforce readiness, extracurricular activities, student performance, sports participation, student development, sport development

## 1. Introduction

Polytechnics function as educational institutions that deliver technical and vocational training which prepares students with practical skills needed for the job market according to UNESCO (2022). Polytechnics prioritize teaching technical

skills in engineering and business yet they support student development through extracurricular activities like sports (Adebayo & Okon, 2021). Polytechnic sports programs develop character, teamwork abilities, discipline, and leadership skills that students need to succeed both personally and professionally

(Chatterjee, 2020). Research indicates that taking part in sports activities results in substantial improvements in students' cognitive growth and mental toughness. Research has also demonstrated that physical activity leads to better brain performance while also increasing focus and developing problem-solving abilities (Ratey & Loehr, 2019). Recent studies have also shown that sports participation decreases anxiety and depression levels which aids students in managing academic stress (Gerber et al., 2018). The intense academic and technical training at polytechnics demands students maintain sustained focus and perseverance (Obasi & Eze, 2020).

Sports activities provide multiple psychological and cognitive advantages while supporting students' total wellness. The World Health Organization [WHO] (2021) demonstrates how participating in sports strengthens cardiovascular health while boosting physical fitness and decreasing risks for diseases like obesity and hypertension. Studies shows that sports participation teaches students essential life skills including goal-setting as well as time management and conflict resolution which apply to academic and professional environments (Bailey et al., 2013).

Student development through sports receives significant support from polytechnic institutions. Universities possess well-established sports programs while polytechnics face challenges with insufficient sports facilities and financial support according to Ogunleye (2019). Research indicates that polytechnic students who take part in structured sports activities show academic improvement along with increased social integration and career preparedness according to Adeyemi & Olalekan (2022). It is on this background that this study intends to find out the polytechnic, sports development, and student development: A pathway to holistic growth.

## **2. The Role of Polytechnics in Education and Skill Development**

Polytechnics function as essential higher education establishments that train students to develop practical and technical abilities required for careers and business ventures (UNESCO, 2022). Polytechnics provide competency-based education programs which prepare students to meet industry demands by bridging theoretical knowledge from academia with practical

real-world applications (Okoro & Nwankwo, 2021). The focus of polytechnic curricula on engineering and technology programs, as well as business and other applied sciences serves to strengthen these institutions' contribution to both economic development and technological progress (Ogunleye, 2020). As more skilled workers are needed in the global economy polytechnics play a crucial role in meeting labor market demands while helping to reduce unemployment and support industrial development (World Bank, 2021).

Polytechnic education stands out because it prioritizes experiential learning methods. Students develop technical abilities through practical training in industry environments and laboratory exercises which helps increase their job prospects (Adeyemi & Oladipo, 2021). Skill-based learning in technical and vocational education and training (TVET) stands out as a global trend that supports economic advancement and stimulates innovative progress according to the International Labour Organization [ILO] (2021). Strong TVET systems in countries like Germany and Finland showcase the economic benefits and workforce preparation advantages of polytechnic education through its production of job-ready graduates (European Commission, 2020). Studies indicate that polytechnic graduates display greater adaptability to industry demands than university graduates because their training focuses on practical problem-solving across multiple sectors (Umar & Abubakar, 2020).

Polytechnic education demonstrates considerable strengths yet heavily emphasizes technical training which limits student development in critical areas like sports and physical activities. Polytechnics implement sports programs as part of student life but these programs frequently suffer from insufficient funding and low utilization which leads to restricted participation (Adebayo & Okon, 2021). According to Gerber et al. (2018), introducing sports into polytechnic education improves cognitive development and stress management while developing teamwork and leadership skills essential for professional achievement. Research shows that sports participation helps students develop social skills while enhancing their emotional intelligence and problem-solving capabilities which employers now seek (Bailey et al., 2013).

Educators now increasingly understand that extracurricular activities together with sports form essential components of a comprehensive education which supports holistic development in students (Bailey et al., 2013). The findings from Ratey and Loehr (2019) demonstrate that students who maintain regular physical activity routines achieve enhanced focus levels together with superior time management abilities and demonstrate more resilience when dealing with academic and professional obstacles. Many polytechnic institutions fail to prioritize sports which results in students remaining unaware of its advantages thus decreasing participation rates (Ogunleye, 2019). Students avoid physical activities because of missing structured sports policies and insufficient facilities which negatively impacts their well-being and productivity (Chatterjee, 2020).

With education placing more emphasis on mental and physical wellness polytechnics need to broaden their educational approach to incorporate structured sports activities. Successful integration of sports into academic settings produces skilled professionals while fostering resilience and discipline alongside teamwork abilities for personal and career success (Adeyemi & Olalekan, 2022). Polytechnics need to devise strategies that foster student participation in sports activities while improving their sports facilities and promoting physical fitness values together with technical proficiency. Polytechnics can nurture graduates who excel in their fields and possess essential physical and mental qualities that enable them to succeed in today's fast-changing world.

### **3. Sports Development in Polytechnics**

Sports development involves the establishment of structured programs, provision of adequate facilities, and implementation of policies that promote active participation in athletics and recreational activities (Bailey et al., 2013). Despite the technical focus of polytechnics, integrating sports into student life enhances cognitive, psychological, and social development, reinforcing the importance of a well-rounded education (Gerber et al., 2018).

### **4. Infrastructural Development**

Adequate sports facilities availability is crucial for developing effective sports programs at polytechnic institutions. Well-maintained sports infrastructure in institutions increases student physical activity participation which results in

better physical and mental health outcomes as reported by WHO (2021). Football fields and basketball courts along with gymnasiums and multipurpose sports halls allow students to participate in both competitive and leisure sports activities according to Chatterjee's findings (2020).

Many polytechnics in developing nations face inadequate sports infrastructure because they experience both limited funding and lack of priority in this area (Ogunleye, 2019). Sports participation levels among students have declined and athletic talent development at these institutions faces obstacles. The solution to this problem lies within enhanced funding for sports facilities and strategic alliances with private entities alongside government infrastructure support (Adeyemi & Olalekan, 2022).

### **5. Policy Implementation**

The advancement of sports programs in polytechnics depends on creating and enacting policies that embed sports activities within the educational curriculum. Higher education institutions around the world have put in place programs to promote student involvement in sports because they understand physical activities contribute to better academic results and stronger mental health (Ratey & Loehr, 2019).

Several Nigerian polytechnics now offer mandatory physical education courses alongside athletic programs to boost student involvement (Obasi & Eze, 2020). The full realization of these initiatives has been hindered by inconsistent policy implementation together with insufficient funding and weak enforcement mechanisms (Ogunleye, 2019). To maximize student benefits policymakers need to develop well-structured sports policies with sufficient funding and proper implementation mechanisms.

### **6. Competitive and Recreational Sports**

Sports development in polytechnics fundamentally relies upon the promotion of student involvement in both competitive and recreational sports. Student-athletes have the chance to perform their skills and achieve national and international exposure through competitive sports like inter-polytechnic tournaments and national student games (Adebayo & Okon, 2021). These competitions develop essential skills like teamwork, discipline and leadership which benefit both academic and

professional pursuits according to Chatterjee (2020).

Recreational sports programs aim to include as many students as possible in physical activities by providing opportunities to play sports for enjoyment and fitness instead of competing (Bailey et al., 2013). Research demonstrates that students participating in regular recreational sports achieve reduced stress levels and better cognitive functioning along with enhanced motivation for academic tasks (Gerber et al., 2018). Polytechnics need to implement structured recreational sports programs which provide benefits to students who choose physical activity for wellness rather than competitive sports.

### **7. Coaching and Training Programs**

Professional coaching and training programs serve as fundamental components for student-athletes to develop effectively in polytechnic environments. Structured coaching programs enable student athletes to enhance their abilities while boosting performance levels and preparing for competitive events (Adeyemi & Olalekan, 2022). Experienced coaches provide mentorship that builds student-athletes' resilience and motivation while helping them establish goals leading to better sports performance and academic outcomes according to Ratey & Loehr (2019).

Multiple polytechnics experience difficulties due to shortages of certified sports trainers and insufficient training infrastructure (Ogunleye, 2019). To solve this problem we need partnerships between sports organizations, government agencies, and private investors to deliver professional coaching services and student training opportunities. Structured mentorship programs and workshops will provide additional support to student-athletes so they can maintain a balance between their sports participation and academic responsibilities (Obasi & Eze, 2020).

### **8. The Impact of Sports on Student Development**

Sports play a pivotal role in shaping students' overall development by enhancing physical, mental, academic, and social competencies. While polytechnics primarily focus on technical and vocational training, integrating sports into student life provides numerous benefits that extend beyond the classroom (Bailey et al., 2013). Research suggests that students engaged

in regular sports activities experience improved health, better academic performance, stronger leadership qualities, and enhanced social integration (Gerber et al., 2018).

#### *8.1 Physical and Mental Well-Being*

Participation in sports significantly contributes to students' physical and mental well-being. Regular physical activity improves cardiovascular health, muscular strength, and overall fitness levels, reducing the risk of chronic illnesses such as obesity, diabetes, and hypertension (World Health Organization [WHO], 2021). Additionally, exercise has been proven to alleviate stress, anxiety, and depression by stimulating the release of endorphins—hormones that promote feelings of happiness and relaxation (Ratey & Loehr, 2019).

Engaging in sports also enhances cognitive function by improving concentration, memory, and problem-solving skills (Donnelly et al., 2016). A study by Gerber et al. (2018) found that university students who participated in regular physical activities reported lower levels of psychological distress and higher academic motivation compared to their non-active peers. Thus, polytechnics that integrate sports into their student development programs contribute to both the mental stability and academic success of their students.

#### *8.2 Academic Performance*

There is a common misconception that sports distract students from their academic responsibilities. However, research indicates that physically active students tend to perform better academically due to improved cognitive function, discipline, and time management skills (Singh et al., 2019). Studies have shown that physical activity enhances brain function by increasing blood flow to the brain, which boosts memory retention and learning capacity (Donnelly et al., 2016).

Moreover, student-athletes often develop strong time management skills as they must balance training schedules with academic commitments. A study by Adebayo and Okon (2021) found that students involved in structured sports programs exhibited better organizational skills and higher levels of concentration in academic tasks. These findings highlight the importance of maintaining a balance between sports and academics in polytechnics to optimize student development.



### *8.3 Leadership and Teamwork*

Sports provide students with valuable opportunities to develop leadership skills, teamwork, and a sense of responsibility. Participation in team sports fosters communication, cooperation, and problem-solving abilities, which are essential skills in professional and social settings (Chatterjee, 2020). Leadership roles, such as team captains or sports club coordinators, help students cultivate confidence, decision-making abilities, and resilience in competitive environments (Adeyemi & Olalekan, 2022).

Research by Bailey et al. (2013) suggests that student-athletes are more likely to exhibit strong leadership and interpersonal skills, which contribute to their career success. These attributes are particularly beneficial in polytechnic settings, where students are expected to transition into the workforce with both technical and soft skills.

### *8.4 Career and Skill Development*

Engaging in sports can open various career pathways for students beyond their chosen academic disciplines. Many students who participate in polytechnic sports programs explore careers in coaching, sports management, athletic training, and fitness instruction (Duda & Appleton, 2016). Furthermore, professional sports organizations often recruit talented athletes from polytechnics, providing them with opportunities to advance into competitive sports careers (Obasi & Eze, 2020). In addition to career prospects, sports enhance students' employability by equipping them with essential soft skills such as discipline, perseverance, and strategic thinking (Adebayo & Okon, 2021). These attributes make student-athletes more competitive in the job market, regardless of their field of study.

### *8.5 Social Integration and Networking*

Sports enable social unification among students at polytechnic institutions through team participation which builds community bonds. Team sports enable students from different backgrounds to interact with each other which helps in building cultural understanding and inclusivity (Chatterjee, 2020). Ogunleye's 2019 study demonstrates that colleges with active sports programs see enhanced student involvement and fewer instances of social isolation.

Students who participate in sports gain valuable networking possibilities that support their educational and professional development. Students who participate in inter-polytechnic sports competitions establish important connections with their peers as well as mentors and industry professionals which creates opportunities for future collaborative work and career opportunities (Adeyemi & Olalekan, 2022). Sports integration within polytechnic education serves as a fundamental element for student development because it supports physical health and mental well-being while also enhancing academic excellence, leadership skills, career opportunities and social inclusion. By establishing sports programs as a priority institution create an educational environment that equips students for success in their professional lives as well as personal growth. Polytechnics need to allocate resources towards sports development initiatives to help students experience complete benefits from physical activities while they continue their academic studies.

## **9. Challenges Facing Sports Development in Polytechnics**

Despite the numerous benefits of sports in fostering student development, its implementation in polytechnics faces several challenges. These barriers hinder student participation, limit the effectiveness of sports programs, and reduce the overall impact of sports on physical and mental well-being. Key challenges include inadequate funding, lack of institutional support, time constraints, and poor awareness and motivation.

### *9.1 Inadequate Funding*

One of the primary challenges facing sports development in polytechnics is inadequate funding. Limited financial resources hinder the development and maintenance of sports facilities, the recruitment of qualified coaches, and the organization of competitive events (Ogunleye, 2019). Many polytechnics operate on tight budgets that prioritize academic and technical programs, often leaving sports programs underfunded or neglected (Adebayo & Okon, 2021).

According to Omoruan (2018), the lack of financial investment in sports infrastructure results in poorly maintained facilities, inadequate equipment, and restricted access to training programs. This financial constraint

discourages student participation in sports and limits the potential benefits of sports development in polytechnics.

### *9.2 Lack of Institutional Support*

Institutional policies and administrative attitudes significantly impact the development of sports programs. In some polytechnics, sports are not considered an essential aspect of student development, leading to minimal institutional support (Adeyemi & Olalekan, 2022). Without active encouragement from school management, sports facilities may be neglected, sports programs may lack proper organization, and students may not be motivated to participate in extracurricular athletics.

A study by Ogunleye (2019) found that polytechnics with strong institutional support for sports had higher student participation rates, better infrastructure, and improved academic performance among student-athletes. Conversely, institutions that overlooked sports experienced low engagement levels, which negatively impacted student well-being. This suggests that management commitment to sports policies is crucial for fostering an active and healthy student population.

### *9.3 Time Constraints*

The rigorous academic schedules of polytechnics often leave little time for students to engage in sports activities. Polytechnic curricula are structured to emphasize practical training and skill acquisition, leading to demanding coursework, laboratory sessions, and industrial training (Adebayo & Okon, 2021). As a result, students struggle to balance academic commitments with sports participation.

Research by Singh et al. (2019) indicates that students in technical education programs often experience high academic pressure, which reduces their willingness to engage in extracurricular activities such as sports. Furthermore, many polytechnics do not integrate sports into their academic schedules, making it difficult for students to dedicate time to physical activities without compromising their studies.

To address this challenge, institutions should adopt flexible academic schedules that allow students to engage in sports without negatively impacting their coursework. Establishing mandatory physical education programs or

designated sports periods could also encourage student participation (Chatterjee, 2020).

### *9.4 Poor Awareness and Motivation*

A lack of awareness regarding the benefits of sports and low motivation among students further hinder sports development in polytechnics. Many students perceive sports as secondary to their academic and career aspirations, failing to recognize its role in enhancing physical health, mental well-being, and career prospects (Gerber et al., 2018).

Moreover, societal attitudes often emphasize technical skills and academic success over extracurricular engagement, discouraging students from actively participating in sports (Omoruan, 2018). Some students may also lack self-confidence in their athletic abilities or feel intimidated by competitive sports environments, leading to low participation rates.

According to Duda and Appleton (2016), increasing student awareness through campaigns, orientation programs, and incentives can help boost participation in sports. Institutions should also create inclusive sports programs that cater to students of all skill levels, making sports participation more accessible and enjoyable.

## **10. Conclusion**

This paper has highlighted the significant role of sports development in polytechnics and its impact on student development. While polytechnics primarily focus on skill acquisition and technical education, integrating sports into student life enhances physical and mental well-being, improves academic performance, and fosters leadership, teamwork, and career development. Sports also promote social integration, providing students with networking opportunities and a sense of belonging. However, the implementation of sports programs in polytechnics faces several challenges, including inadequate funding, lack of institutional support, time constraints, and poor awareness and motivation among students. These challenges hinder student participation and limit the potential benefits of sports in polytechnics.

## **11. Recommendations**

- 1) Polytechnic institutions should increase budget allocations for sports facilities, equipment, and training programs.
- 2) School management should integrate sports

- into academic schedules to encourage student participation.
- 3) Policies promoting mandatory physical education and recreational sports should be implemented.
  - 4) Awareness campaigns should be conducted to educate students on the benefits of sports.
  - 5) Institutions should recruit qualified coaches and sports administrators to enhance sports development.
  - 6) More inter-polytechnic competitions should be organized to motivate student-athletes.
  - 7) Flexible academic structures should be introduced to balance sports and academic commitments.
  - 8) Private and public sector partnerships should be explored to fund sports initiatives in polytechnics.
  - 9) Institutions should create inclusive sports programs catering to students of all skill levels.
  - 10) Research should be conducted to assess and improve the effectiveness of sports programs in polytechnics.

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