

## **Research on the Development Path of Physical Education in Local Universities under the Context of “Sports-Education Integration”**

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**Abstract:** This study investigates the development pathways for physical education in local universities against the backdrop of the “sports-education integration”. Focusing on Ningde Normal University and other institutions within Fujian Province as empirical examples, it offers a comprehensive analysis of the dialectical relationship between sports-education integration. The paper explores the current status, inherent challenges, and potential for effective fusion between competitive sports and university physical education programs. Employing a combination of literature review, interviews, and logical analysis, the research identifies critical areas for reform, including ideological orientation, curriculum design, management structures, and resource allocation. It proposes the establishment of an innovative operational model that equally emphasizes academic learning and athletic training. This model aims to address longstanding issues such as the marginalization of physical education goals, fragmented resource integration, and disjointed training systems. Ultimately, the study seeks to develop a replicable and scalable “hybrid” approach to sports-education integration, providing practical frameworks and strategic recommendations for local universities to contribute meaningfully to the national objectives of strengthening education and athletics.

**Keywords:** Sports-Education Integration; Universities; Development Pathways; Physical Education; Integrate

### **1. Background**

The sports-education integration represents a pivotal initiative under contemporary historical conditions aimed at strengthening school physical education, advancing quality-oriented

education, fostering youth athletic training, and cultivating a high-caliber workforce alongside outstanding reserve sports talents for the nation [1]. In 2020, the sports-education integration was elevated to a national strategic priority, mandating that university elite sports teams be incorporated into the competitive sports talent development system [2]. However, when this policy filters down to the “mid-tier universities” — local universities accounting for 80% of the nation’s sports special admissions quota — a “last-mile” obstacle emerges [3]. Following the consolidation of competition systems, participation quotas plummeted by 30%; in Fujian Province, local universities allocate a mere 1.5% of their total budget to sports, with fewer than 20% of these funds directed toward competitive athletics. Moreover, “dual-qualified” teachers constitute only 7.4% of staff, while student-athletes fail academic courses at an 11 percentage point higher rate than their non-athlete peers. Concurrently, the province’s amateur sports schools face a 64% loss rate of athletes aged 18 to 22, as universities have yet to effectively absorb youth training programs, with over half of recruited athletes ceasing systematic training within two years of enrollment. Campus sports culture remains narrowly focused on medal acquisition; in 2023, only 78.4% of local undergraduate students in Fujian met physical fitness standards — 4.3 percentage points below the national average. Students classified as level-two athletes or above suffered a 6.8% decline in fitness scores in their third year, twice the rate of ordinary students. The advent of 5G technology and digital training platforms offers local universities a transformative opportunity to engage with provincial sports teams and research institutions at minimal cost, creating a potential “fast track” for advancement [4]. Nevertheless, existing scholarship predominantly concentrates on “Double First-Class” universities, leaving a dearth of micro-

level case studies addressing policy adaptation and institutional innovation within local universities. This study, drawing on five provincial universities including Ningde Normal University, aims to systematically examine the bottlenecks impeding the implementation of national strategies among the “mid-tier” forces and to identify replicable development pathways, thereby filling a critical gap in the current literature.

## **2. Paper Investigation into the Current State of Sports-Education Integration in Local Universities (Based on Longitudinal Data from Five Local Universities in Fujian Province, 2021–2023)**

### **2.1 The Present Integration of Competitive Sports and University Athletics**

Local universities commonly prioritize the development of their campus sports teams by selecting exceptional athletes and employing professional coaches to elevate competitive standards [5]. They actively participate in provincial and national university sports events, such as the National University Games and the Chinese University Basketball Association (CUBA) league. Some institutions have achieved distinguished results in specific disciplines, contributing reserve talents to the nation’s competitive sports system [6]. Nonetheless, research findings reveal several challenges:

(1) A marked contraction in competition entry opportunities has occurred. Following the 2023 merger of Group A and B events in the Provincial University Games, the number of available events for local universities shrank from 92 to 67, and the participation quota plummeted from 34.2% to 21.7%. Among the five sample universities, three failed to qualify for finals in the three foundational disciplines of track and field, swimming, and basketball.

(2) Integration of training between universities and professional teams remains minimal. Except for Ningde Normal University, which collaborates with the municipal sports bureau in jointly managing a City Team–University Partnership, the other four institutions lack routine joint training programs with provincial or municipal specialized teams. Only 28.4% of student-athletes engage in bi-weekly training sessions of at least ten hours, significantly lagging behind the 55.6% recorded in “Double

First-Class” universities within the province. (3) Talent attrition is conspicuous. Among the 2022 graduates who had attained level-two athlete status or above, 64% opted to relinquish their athletic training roles in favor of pursuing graduate studies or entering the workforce. No athletes from local universities were directly recruited into provincial teams, creating a disconnect between university programs and the provincial competitive pipeline.

### **2.2 Ideology and Values: Predominant Emphasis on Medal Attainment over Holistic Education**

The “14th Five-Year Development Plans” of the five surveyed universities uniformly enshrine the goal of securing “no fewer than two gold medals at the Provincial Games” as a central KPI, yet conspicuously omit educational or developmental indicators such as “post-graduation trajectories of student-athletes” or “physical fitness improvement rates.” This overt “medal-centric” rhetoric pervades institutional policies [7]. During interviews, three vice presidents overseeing athletics revealed that “absence of gold medals results in a 50% cut in dedicated funding”, compelling universities to channel scarce resources predominantly into projects like basketball and wushu—disciplines with readily attainable medals—while marginalizing general physical education and curricular integration. Student-athletes experience a palpable conflict of values [8]. Survey data (n=312) indicates that 46.8% of respondents endorse the notion that “only medal winners merit recognition”, whereas a mere 18.6% affirm that “academic excellence is equally honorable.” Furthermore, when queried about their willingness to reduce training hours to ensure academic coursework, 52.9% expressed unwillingness, underscoring the entrenched “athletics prioritized over academics” mindset within the athlete community.

### **2.3 Resource Allocation: Insufficiencies in Funding, Faculty, Facilities, and Technological Integration**

Funding sources remain limited in diversity. In 2022, the average sports expenditure among the five surveyed universities constituted a mere 1.4% of their total institutional budgets, with competitive training accounting for only 18.3% of that allocation—significantly below the 30%

threshold mandated by the Ministry of Education's Basic Standards for Physical Education in General Higher Education Institutions. Contributions from social sponsorships and alumni donations amounted to less than 5%, starkly contrasted by NCAA Division II colleges, where commercial revenue averages 38% of athletic budgets. There is a critical shortage of "dual-qualified" faculty. Merely 7.4% of current physical education instructors hold both university teaching credentials and national-level coaching certifications, while fewer than 3% possess professional qualifications in sports rehabilitation or strength and conditioning. The student-to-teacher ratio stands at an elevated 21:1, far exceeding the 14:1 ratio prevalent among "Double First-Class" universities. Facility utilization and technological adoption remain suboptimal. The five universities surveyed report that indoor multi-purpose training centers remain unused for an average of 42% of each day, and the renewal rate for strength and rehabilitation equipment falls below 30%. Numerous institutions have yet to implement wearable technology or leverage sports analytics platforms, relying instead on rudimentary timing devices and manual data management via Excel spreadsheets.

#### **2.4 Training Programs: Conflicts between Academics and Athletics, Monolithic Assessments, and Marginalization of General Education**

Scheduling conflicts are pronounced. Students majoring in physical education engage in an average of 11.2 training hours weekly, with overlaps reaching 46% between training, laboratory courses, and teaching internships. The need to pay additional fees for course make-ups or retakes exacerbates both financial and temporal burdens on these athletes. Evaluations remain singularly competition-focused. All five universities surveyed have established "top three at the provincial level" as a rigid criterion for scholarship eligibility within their Comprehensive Student-Athlete Assessment Policies. Performance in academic courses accounts for a mere 20% of the overall evaluation, compelling student-athletes to prioritize training above all else. General education is marginalized. From freshman through junior years, student-athletes exhibit an average absentee rate of 23% in academic

courses and a failure rate of 11.2%—more than twice the 5.1% failure rate of their non-athlete peers. Less than 15% of graduation theses or projects bear any relation to sports training, highlighting a stark disconnect between scholarly inquiry and practical application. Post-graduation career pathways remain nebulous. In the absence of a dual-mentorship system integrating academic and athletic supervision, as well as partnerships between universities and industry, student-athletes achieve a mere 35.7% pass rate for professional certifications—such as teaching licenses, social sports instructor qualifications, and strength coaching certificates—substantially lower than the 58.4% pass rate observed among general physical education students. This engenders a vicious cycle wherein athletic retirement often precipitates unemployment.

### **3. Pathway Construction: A "Hybrid" Model of Sports-Education Integration in Local Universities (Pilot Program in Five Fujian Institutions, 2023–2025)**

#### **3.1 Philosophical Reorientation: From "Medal-Winning" to "Balancing Academics and Athletics"**

**Institutional Ethos Integration:** The motto "Balanced Academic and Athletic Excellence, Cultivating Virtue and Skill in Tandem" is enshrined within the university's 14th Five-Year Development Plan, equated alongside the cultivation of application-oriented talent, and elevated to a primary indicator within annual performance evaluations. **Multidimensional Objectives:** Graduation criteria for student-athletes transition from singular "gold medal attainment" to a comprehensive "triple achievement" framework—1) a minimum academic GPA of 2.5; 2) specialized skill proficiency at or above National Level Two with a top-eight provincial ranking; and 3) physical fitness test scores at a 'Good' level or higher coupled with possession of at least one professional sports certification. **Value Guidance:** Introduction of a mandatory one-credit course, Athletic Literacy and Career Development, featuring lectures by distinguished alumni, corporate HR representatives, and provincial team coaches. This initiative diminishes the primacy of a "gold medal-only" narrative, reinforcing the ethos of "lifelong sport, lifelong learning".

### **3.2 Organizational Structure: Establishment of an On-Campus Sports-Education Integration Center**

**Leadership Configuration:** The university president assumes the role of director, supported by three vice presidents overseeing academics, athletics, and research respectively, thereby establishing a tripartite coordination axis integrating teaching, training, and scientific inquiry. **Subdivisions:** Four dedicated departments—Training, Academics, Industry, and Data—are established with independent staffing and autonomous funding to holistically manage admission quotas, curriculum design, training and competition coordination, technological support, and performance assessment. **External Representation:** This center acts as the official liaison with provincial and municipal sports bureaus, corporate partners, and athletic clubs for contractual cooperation. **Faculty Enhancement:** Introduction of 8–10 new full-time “competitive sports” teaching positions operating under a dual-appointment system—faculty benefit from standard academic promotion pathways while receiving provincial-level coaching stipends equivalent to professional team coaches, effectively resolving the incentive dilemma posed by the traditional “university salary plus part-time coaching” model.

### **3.3 Operational Mechanism**

**3.3.1 Collaborative sports teams:** Joint construction by sports departments and universities

**Ownership Model:** Provincial and municipal sports teams provide coaches, training funding, and competition quotas, while universities supply venues, dormitories, and scientific research equipment. Athletes retain their team registration within the sports system, but their academic enrollment remains with the university. Upon graduation, athletes may autonomously choose to either “enter professional teams” or “pursue market employment” [9]. **Risk Allocation:** Training-related injury insurance is covered by the provincial team, whereas academic progress monitoring and early warning systems fall under the purview of the integration center, establishing a division of responsibilities characterized by “socialized training risk” and

“institutionalized academic risk” [10].

**3.3.2 Credit-based extracurricular training and dual-mentorship system of academic advisors and coaches**

**Curricular Training:** Weekly training hours averaging 10 to 12 are consolidated into a formal course titled Specialized Training and Practice, worth 4 credits per semester and factored into GPA calculations. Failure to meet prescribed training benchmarks results in a failing grade for the practical component, necessitating course repetition. **Dual-Mentorship Framework:** Each student-athlete is paired individually with an academic advisor responsible for course selection, academic warning, and thesis guidance, alongside a coaching mentor overseeing cycle training, competition registration, and career planning. Both mentors share a unified data platform and conduct monthly joint consultations. **Scheduling Conflict Resolution:** Training sessions are fixed on Tuesdays, Fridays, and Sunday afternoons, scheduled to avoid overlap with laboratory classes and teaching practicums. For mandatory external training camps, academic requirements are met through a hybrid model of “online courses plus intensive in-person sessions”.

**3.3.3 Introduction of third-party professional operations teams**

**Scope of Services:** Includes physical conditioning, sports rehabilitation, nutritional planning, event management, and brand sponsorship acquisition. Universities contribute venue access during idle hours (averaging 6 hours per day) as equity, while partner enterprises invest equipment and personnel. Revenue is distributed on a “30% university, 70% enterprise” basis; enterprises are mandated to prioritize internship and employment opportunities for student-athletes. **Performance Clauses:** Third-party teams are contractually required to reduce student-athlete injury incidence by 15% annually and enhance training efficiency metrics (e.g., Yo-Yo endurance test,  $\text{VO}_2\text{max}$ ) by 10%. Failure to meet these standards results in immediate contract termination.

### **3.4 Safeguard System**

**3.4.1 Funding:** Diverse contributions from government, universities, and enterprises

At the provincial level, the “Competitive Sports Talent Cultivation Special Fund” awards up to

RMB 5 million annually based on a matched funding model of “1 yuan from the institution, 1 yuan from the government.” Municipal governments provide a per capita annual subsidy of RMB 12,000 for participants in the “City Team–University Partnership” initiative. Universities establish dedicated “Sports-Education Integration Funds” sourced from a 1% tuition levy, societal donations, and alumni crowdfunding, earmarked for scholarships and recruitment of research and coaching personnel. Corporate cooperation spans four categories—brand sponsorships, venue advertising, event broadcasting rights, and athlete management—with annual revenues consolidated under unified fund management to ensure “designated use of funds and performance-prioritized allocation”.

**3.4.2 Evaluation methodology:** Dual-track assessment of academic and athletic performance

**Four-dimensional Weighting:** Academic GPA (40%), Training Process (20%), Competition Results (20%), and Physical Fitness (20%). These metrics interface with the national database to automatically generate graduation review reports. **Tiered Incentives:** During freshman and sophomore years, failure in academic courses leads to suspension of eligibility for out-of-province competitions; in junior and senior years, provincial top-three awards can substitute for 2 academic credits, while National Level One Athletes may offset 4 credits; upon graduation, a cumulative score of 80 or above is requisite to earn the title of “Outstanding Graduate Athlete”, which entitles recipients to preferential treatment in public recruitment exams and graduate school recommendations.

**3.4.3 Technology:** Big data-driven training oversight and sports rehabilitation center

Equipped with wearable sensors measuring heart rate, blood lactate, and GPS, high-speed motion capture cameras, and isokinetic muscle testing devices, the university collaborates with the provincial sports science institute to co-develop a “Cloud Training Platform” that uploads data in real time and utilizes AI to generate individualized training prescriptions. The rehabilitation center staffs three physical therapists and one sports psychologist to provide post-competition relaxation, injury recovery, and psychological interventions, with the objective of maintaining an annual student-

athlete injury incidence below 8%, significantly lower than the national collegiate average of 12%.

By implementing this comprehensive “philosophy – organization – mechanism – safeguard” integrated hybrid model, local universities can, without substantial financial augmentation, simultaneously achieve localized cultivation of athletic talents, elevate academic quality among student-athletes, and foster a vibrant campus sports culture. This paradigm offers a scalable and replicable blueprint for the effective localization of the national sports-education integration strategy within the country’s critical “mid-tier” university cohort.

## **4. Conclusions and Recommendations**

### **4.1 Research Conclusions**

Local universities have achieved notable progress in integrating sports and education across curricula, competitions, faculty development, and infrastructure; nevertheless, challenges persist, including insufficient resources, uneven regional development, and underdeveloped coordination mechanisms between athletic and academic domains. Moving forward, these institutions must deepen the synergy of sports and education by enhancing policy support, optimizing resource integration, and fostering innovative practices to propel the high-quality advancement of physical education. This study, utilizing a sample of five local universities in Fujian Province, systematically examined the implementation mechanisms of sports-education integration policies within “mid-tier” institutions. The findings reveal that:

(1) At the conceptual level, a paradigm shift is imperative—from a one-dimensional pursuit of gold medals to a balanced emphasis on “academic and athletic excellence”. Graduation criteria for student-athletes should be delineated into four dimensions: academics, competition, physical fitness, and career readiness, thus rectifying the entrenched precedence of training over academic achievement.

(2) Institutionally, it is essential to establish an interdepartmental “Intra-University Sports-Education Integration Center” that consolidates academic affairs, athletics, research, and student services under a unified governance framework. Such integration enables streamlined decision-making across the entire spectrum of

recruitment, curriculum design, training, competition, and evaluation.

(3) Concerning resources, reliance on singular fiscal inputs proves inadequate to sustain high-quality development. A hybrid funding model encompassing “government matching grants, university self-financing, and corporate equity participation” facilitates simultaneous enhancement of training conditions, faculty competency, and technological support without imposing undue strain on public finances.

In summary, the successful sports-education integration in local universities necessitates the concurrent advancement of “ideology, institutional frameworks, and resource allocation”. Isolated breakthroughs in any single dimension are unlikely to yield enduring transformation; rather, the synergistic coupling of all three constitutes a replicable and scalable “mid-tier paradigm” for widespread adoption.

#### **4.2 Policy Recommendations**

(1) It is advised that provincial education and sports administrative bodies jointly draft the Implementation Guidelines for Sports-Education Integration in Local Universities, which would articulate detailed provisions regarding the organizational affiliation of “City Team–University Partnership”, allocation of training funding, shared ownership of sports venues, management of student-athlete enrollment, and risk-sharing arrangements. Such guidelines would provide a legal basis for fostering collaborative efforts between educational institutions and local authorities.

(2) The establishment of a dedicated “Special Fund for Sports-Education Integration in Local Universities” is proposed, structured around a matched funding formula of equal contributions from the government, universities, and social donations. Emphasis would be placed on supporting digital training platforms, attracting dual-qualified teaching staff, and integrating third-party professional teams, with fund allocation closely tied to performance evaluations.

(3) Inclusion of four critical indicators—student-athlete graduation placement rates, enhancement of physical fitness levels, achievements in provincial and higher-level competitions, and the number of university-industry collaborative projects—within the framework of annual leadership appraisals is recommended. These indicators could be linked

with enrollment planning, financial appropriations, and academic assessment to cultivate a comprehensive accountability system vested with university executives.

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