

Quality Improvement Pathways for Campus Aerobics Group Activities: An Empirical Study

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Abstract

Campus aerobics group activities constitute a vital component of physical education in higher education institutions, fulfilling multifaceted educational functions including physical fitness enhancement, mental health promotion, cultural enrichment, and teamwork cultivation. Nevertheless, current implementation of these activities is commonly plagued by structural imbalances in faculty allocation, homogenization of organizational formats, outcome-dominated evaluation systems, and a pronounced disconnection between group activities and classroom instruction—all of which severely constrain the maximal realization of their educational efficacy. On the basis of a systematic review of the existing conditions and underlying causes of these problems, this paper proposes a comprehensive quality improvement framework encompassing four interrelated dimensions: faculty team optimization, innovation in activity content and formats, construction of a digital process-oriented evaluation system, and design of an integrated in-class and extracurricular mechanism. The aim is to provide both theoretical reference and practical leverage for transitioning campus aerobics group activities from scale-oriented coverage to quality-oriented advancement.

Keywords

Campus Aerobics; Group Activities; Quality Improvement; In-class and Extracurricular Integration; Digital Evaluation.

1. Introduction

Campus aerobics group activities represent a significant extension of the university physical education curriculum and serve as a key operational vehicle for implementing the "Health First" educational philosophy and the "Student Physical Fitness Strengthening Plan" jointly issued by the Ministry of Education and other national agencies. As a form of physical exercise that integrates fitness value, artistic expressiveness, and social interactivity, aerobics enjoys broad grassroots appeal and sustained participation willingness among the student population, owing to its low entry threshold, high engagement potential, and dynamic rhythmic qualities. In recent years, with escalating policy attention to school physical education, campus aerobics group activities have witnessed notable quantitative growth, as exemplified by the proliferation of "Aerobics Competitions," "Sunshine Sports Fitness Months," and "Creative Break-time Exercise Showcases."

However, quantitative expansion has not automatically translated into qualitative improvement. Drawing upon existing literature and field observations, this study identifies multiple structural predicaments confronting campus aerobics group activities. First, regarding faculty deployment, there is a pervasive shortage of aerobics-specialized instructors, with their proportion severely imbalanced compared to teachers of conventional ball sports such as football and basketball. Some institutions even operate without any full-time aerobics faculty, relying instead on outsourced instructors or student substitutes, which directly undermines

the professional quality of activity guidance. Second, at the organizational level, the majority of universities adhere to a monolithic "unified choreography, fixed time and venue" model, lacking differentiated designs tailored to students of varying grades, genders, and motor skill bases, resulting in passive participation and dwindling intrinsic motivation. Third, with respect to evaluation mechanisms, attendance records and final performance scores constitute nearly the entirety of assessment dimensions, while process-oriented data—such as improvement trajectories, team contributions, and self-challenge efforts—are systematically overlooked. This not only diminishes students' sense of achievement but also impedes teachers' capacity for precise intervention. Fourth, and more critically, a persistent schism exists between group activities and classroom teaching: skills acquired in class are rarely applied or extended in extracurricular settings, while group activities fail to inform pedagogical improvements, leaving the synergistic educational potential largely untapped.

These problems are not isolated but mutually reinforcing, forming a systemic barrier to the full realization of aerobics' educational value. Consequently, overcoming this impasse demands coordinated interventions across multiple dimensions—resource allocation, organizational models, technological instruments, and institutional design—which constitutes the core research concern of the present study.

2. In-depth Analysis of Constraining Factors in Quality of Campus Aerobics Group Activities

2.1. Structural Shortage of Faculty and Deficiency in Professional Guidance Capacity

Faculty quality stands as the primary safeguard of activity quality. Nevertheless, current staffing patterns in most universities disproportionately favor traditional competitive sports such as basketball, volleyball, and football, leaving aerobics and dance-sport specialists in a chronically marginal position regarding position establishment and talent cultivation. According to relevant surveys, in certain regional undergraduate institutions and vocational colleges, aerobics-specialized teachers account for less than 15% of the total physical education faculty, and a considerable proportion of these are multi-sport or converted instructors, whose sport-specific skill reserves, pedagogical knowledge accumulation, and competition organization experience exhibit evident inadequacies. In actual group activity implementation, supervisory duties are often rotated among general physical education teachers on a duty basis, lacking continuity and targeted intervention; during high-intensity periods such as pre-competition training or performance rehearsals, reliance falls upon student association leaders or artistic specialty students to undertake instructional tasks, whose demonstration accuracy and training program scientificity remain professionally unassured. This dual deficit—quantitative shortage compounded by qualitative competence gaps—not only weakens students' sense of safety and technical acquisition but also confines group activities to a "follow-the-leader" level rather than advancing toward "science-based practice."

2.2. Homogenization of Activity Formats and Diminishing Marginal Returns on Participation Motivation

Current campus aerobics group activities exhibit pronounced convergence in content design: musical selections are predominantly pop-song medleys, movement choreography relies on repetitive basic aerobic steps, and variations in rhythm and spatial formation remain unduly limited. This "one-size-fits-all" uniform model disregards the substantial intra-group diversity in physical fitness, coordination ability, aesthetic preferences, and social needs. For students with prior foundational experience, the lack of challenge and creative space readily extinguishes enthusiasm; conversely, for those with lower baseline coordination or fitness

levels, the risk of falling behind induces anxiety and withdrawal tendencies. More fundamentally, group activities have failed to effectively interface with contemporary college students' interest hotspots and cultural contexts—elements such as street dance, traditional ethnic sports, and fashionable fitness cultures are rarely incorporated, resulting in weak cultural resonance and impeding the formation of lasting group identity and belonging. Research indicates that when participants' perceived "enjoyment" and "self-efficacy" persistently fall below threshold levels, their engagement behavior shifts from intrinsically driven to extrinsically coerced, ultimately manifesting the participation paradox of "loving aerobics as an activity but disliking collective drills."

2.3. Structural Deficits in Evaluation Systems and Rupture of Feedback Loops

Evaluation serves both as orientation and motivation. Yet, the vast majority of universities currently adhere to a two-dimensional framework of "attendance records plus final performance ratings," whose implicit logic is "participation equals qualification, performance equals totality." This evaluative paradigm suffers from at least three deficiencies: first, it disregards baseline disparities, failing to provide fair consideration for students with different initial physical conditions; second, it neglects process performance, leaving indicators such as effort level, cooperative behaviors, and innovative attempts unrecorded; third, it lacks dynamic feedback, preventing students from accessing their own progress curves and improvement directions during the activity process, thereby stripping evaluation of its incentive and regulatory functions. Owing to the rupture of the feedback loop, teachers are likewise unable to diagnostically assess the rationality of activity designs or adjust instructional strategies based on evidence, consigning quality improvement to "experience-driven" rather than "evidence-driven" decision-making.

2.4. Institutional Separation between Classroom Teaching and Group Activities

Under current university administrative frameworks, classroom instruction falls under the purview of academic affairs offices, while group activities are administered by student affairs departments or extracurricular activity centers within physical education sections. This bifurcation results in a lack of coordination mechanisms regarding objective alignment, content articulation, and credit recognition. Concretely, the foundational knowledge and skills taught in class—such as basic aerobics steps, formation transition principles, and rhythmic processing—are not systematically applied or reinforced in group activities; conversely, the creative choreography and collaborative experiences emerging from group activities fail to feed back into classroom teaching resources. This dual-track operation of "one set taught in class, another practiced outside" not only squanders educational resources but also prevents students from forming a complete motor cognition chain and practical closure, ultimately attenuating the overall effectiveness of aerobics education.

3. Multi-dimensional Pathway Design for Quality Improvement of Campus Aerobics Group Activities

3.1. Optimizing Faculty Supply Structure and Establishing a Tiered Guidance Capacity System

Addressing the faculty bottleneck requires coordinated efforts at three levels: incremental supplementation, in-service enhancement, and auxiliary force development. First, on the recruitment front, universities should revise physical education teacher hiring plans to include aerobics specialization in annual critical-shortage discipline catalogs, moderately increase full-time faculty positions, and improve the gender and age structure of the teaching team. Second, regarding in-service training, institutions should leverage provincial and municipal physical education teacher training bases to conduct regular thematic workshops on aerobics

choreography techniques, sports injury prevention, and group activity organization management, while encouraging teachers' participation in exchange competitions and referee certification programs to enhance professional competencies through hands-on practice. Third, in terms of auxiliary support, drawing upon the "peer teaching" concept, senior students with athletic expertise and teaching enthusiasm may be selected as "student mentors," who, after systematic training, assume responsibility for subgroup leadership and basic instruction, while teachers transition to overall coordination and quality supervision roles, thereby forming a three-tier guidance echelon of "expert leadership—backbone support—peer assistance." This model has demonstrated effectiveness in pilot implementations at selected institutions, concurrently alleviating faculty shortages and cultivating students' organizational capabilities and sense of responsibility.

3.2. Promoting Diversified Innovation in Activity Content and Formats to Activate Intrinsic Participation Drive

To overcome format rigidity, the core strategy is to shift from "supply dominance" to "demand responsiveness." Specific measures include: first, implementing a tiered grouping mechanism, wherein students are assigned to "basic consolidation groups," "skill enhancement groups," and "creative choreography groups" based on their physical fitness levels and skill foundations, each with differentiated tasks and progress schedules, ensuring "appropriate challenges for every individual." Second, introducing theme-based creative activities—such as "Ethnic-style Aerobics," "Campus Youth Inspirational Aerobics," and "Red Melody Aerobics"—that integrate cultural narratives with bodily expression, thereby enriching the activity's value connotations and aesthetic appeal. Third, drawing upon experimental findings on "small-group teaching models," students are divided into collaborative teams, each required to complete the design, rehearsal, and presentation of a self-choreographed routine within the semester, with teacher guidance throughout the process and final evaluation combining peer assessment and instructor feedback. Empirical evidence confirms that this model not only enhances students' choreographic abilities and team cohesion but also significantly improves their psychosocial adaptation levels. Fourth, regularly organizing informal events such as "Aerobics Open Days," "Flash Mob Performances," and "Inter-departmental Exchange Competitions" lowers participation barriers and fosters a relaxed, vibrant group atmosphere, thereby gradually attracting peripherally engaged populations into the fold.

3.3. Constructing a Digital Process-oriented Evaluation System for Precise Diagnosis and Dynamic Incentivation

Evaluation reform should adhere to the principles of "data-driven, process-visible, and feedback-immediate." The concrete pathway entails: first, establishing a campus aerobics digital management platform that integrates smart wristbands, check-in terminals, and video recording and analysis tools to automatically collect objective data on participation frequency, exercise heart rate, movement completion quality, and attendance stability. Second, constructing a multi-dimensional evaluation index system encompassing sports participation (40%), improvement magnitude (20%), teamwork (20%), and innovative performance (20%), wherein the improvement magnitude adopts an "initial baseline comparison method" to fully acknowledge the efforts of students with different starting points. Third, utilizing the platform to generate personalized "sports growth profiles" for each student, presenting individual change trajectories through visual charts, and periodically delivering tailored recommendations (e.g., "coordination training suggested twice more this week"). Fourth, teachers, based on aggregated system data, dynamically adjust activity intensity, grouping schemes, and tutoring priorities, achieving "assessment-driven improvement and practice stimulation." This system addresses fairness concerns while reinforcing students' self-

monitoring awareness, providing a reliable data foundation for continuous quality enhancement.

3.4. Establishing an Integrated In-class and Extracurricular Educational Closed Loop to Remove Institutional Barriers

Eliminating the "two-skin" phenomenon hinges on institutional articulation and curricular integration. On one hand, group activities should be formally incorporated into the physical education curriculum plan, designating "extracurricular aerobics practice" as a mandatory component accounting for 20%–30% of the total physical education grade, with a credit accumulation system requiring students to complete a prescribed number of participation sessions per semester. On the other hand, classroom teaching content should be explicitly aligned with group activities in a "precursor—application—deepening" articulation: for instance, the first eight weeks of class concentrate on basic steps, combination variations, and musical analysis, while the latter eight weeks dedicate class time to guiding each group's choreography projects, whose final outcomes are directly employed in extracurricular group activity showcases and competitions. Simultaneously, a joint consultation mechanism involving physical education teachers, counselors, and Youth League committee staff should be established to coordinate activity venues, schedules, and promotional efforts, avoiding conflicts with disciplinary courses. Through institutional consolidation and process reengineering, classroom instruction provides the knowledge-skill foundation for group activities, while group activities furnish practical scenarios and generative resources for classroom teaching—the two mutually nourish each other and collectively serve students' exercise habit formation and health literacy enhancement.

4. Conclusion

Improving the quality of campus aerobics group activities is by no means a matter of simply "increasing frequency" or "changing music"; it is a complex engineering endeavor involving the synergistic evolution of multiple systems—faculty, content, evaluation, and institutional arrangements. Grounded in the diagnosis of practical problems, this paper has proposed a systematic scheme encompassing the reinforcement of faculty echelons, innovation of activity forms, introduction of digital process evaluation, and reconstruction of an integrated in-class and extracurricular mechanism. These pathways are not linearly sequenced but mutually conditional and reinforcing: faculty constitutes the quality foundation, innovation the source of impetus, evaluation the regulatory lever, and institution the long-term safeguard. Only by advancing these four dimensions within a unified reform framework can campus aerobics group activities achieve the essential leap from "having participants" to "enabling effective growth," and from "conducting activities" to "realizing educational outcomes." Future research may further investigate the differential applicability of various pathways across different types of higher education institutions, as well as the impact mechanisms of digital tools on long-term participation behavior, thereby enriching the empirical evidence base for refined governance of campus sports group activities.

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