



Managerial Guidelines to Promote Pickleball for University Students in Hebei Province

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Abstract

Background and Aims: This study aimed to develop systematic managerial guidelines for promoting pickleball among university students at Hebei University of Finance by applying the POLC (Planning, Organizing, Leading, Controlling) management framework.

Methodology: A mixed-methods design was employed, combining quantitative and qualitative approaches. The sample group consisted of 900 male and female students aged 18–22 years and 20 faculty members selected through purposive sampling. Research instruments included a structured questionnaire, an expert interview protocol, and a focus group discussion guide. The questionnaire's content validity, verified by three experts, yielded an Index of Item-Objective Congruence (IOC) of 0.79. Quantitative data were analyzed using descriptive statistics, including mean and standard deviation, while qualitative data were analyzed through content analysis. Five experts were interviewed to refine the draft of key management factors, and nine experts participated in focus group discussions guided by the POLC model to finalize the framework.

Results: The results revealed that promoting pickleball in universities significantly enhanced students' interest in physical activity, ball-handling skills, and cooperative spirit, while enriching the diversity of campus sports culture. The developed managerial framework consisted of 26 key recommendations: 6 for planning, 5 for organizing, 7 for leading, and 8 for controlling. Statistical analysis showed high expert agreement (Mean = 4.52, SD = 0.48), confirming the framework's validity and feasibility.

Conclusion: Experts emphasized that systematic development of pickleball through curriculum integration, resource allocation, facility improvement, media promotion, and inter-university collaboration effectively increased student participation and performance. The finalized guidelines demonstrate that sustainable management, diversified evaluation, and continuous quality improvement are crucial to promoting pickleball and enhancing students' engagement at Hebei University of Finance.

Keywords: Pickleball; POLC Management Theory; Sports Promotion; Hebei University of Finance





Introduction

Chinese universities are currently facing increasing pressure to diversify physical education curricula and to enhance student participation in sports activities. Traditional programs focusing on basketball, football, and table tennis have not fully met the diverse interests, motivation levels, and physical conditions of contemporary students (Liu & Chen, 2022). Recent national policies, such as the “Healthy China 2030” plan and the “Active Campus Initiative,” emphasize innovation in university sports and encourage the inclusion of emerging, low-barrier, and high-participation activities (Ministry of Education of the People’s Republic of China, 2023). In this context, pickleball has garnered attention as an innovative racket sport that combines the characteristics of tennis, badminton, and table tennis, offering both leisure and competitive value (Han, 2019). Originating in the United States in 1965, it has rapidly evolved into a globally popular sport due to its simplicity, inclusivity, and social engagement benefits (Wang, 2021).

Despite pickleball’s growing international popularity and its well-documented benefits for physical fitness, psychological well-being, and social cohesion (Bi, 2024; Chen, 2020), its systematic promotion in Chinese higher education institutions remains limited. Studies indicate that universities in China have encountered obstacles such as inadequate instructor training, insufficient facilities, a lack of policy guidance, and low institutional awareness of emerging sports (Feng, 2022). At Hebei University of Finance, preliminary observations and informal surveys revealed that while students show enthusiasm for alternative recreational and competitive sports, there is no structured program or managerial system to support pickleball development. This absence highlights a practical gap between student needs and institutional planning, representing an underutilized opportunity for advancing campus sports culture and promoting physical well-being.

Existing research has primarily focused on pickleball’s physical health outcomes, including improvements in cardiopulmonary endurance, coordination, and stress relief among adults (Bi, 2024). However, there remains a lack of research examining how pickleball can be effectively integrated into university physical education systems through strategic management. Prior studies, such as Feng (2022), discussed promotional strategies but did not provide a comprehensive managerial framework. Similarly, Sun (2021) analyzed market potential but focused on community and commercial contexts rather than educational institutions. No studies to date have applied modern management theories, particularly the POLC (Planning, Organizing, Leading, Controlling) framework, to guide the systematic development of pickleball programs within Chinese universities. This constitutes the theoretical and practical gap that the present study seeks to address.





Therefore, this research aims to develop evidence-based managerial guidelines for promoting pickleball at Hebei University of Finance, grounded in the POLC management framework. By integrating quantitative analysis of student and faculty perspectives with qualitative expert consultations, the study establishes a comprehensive, context-specific framework that ensures sustainable promotion and institutional support. The findings are expected to provide significant contributions to sport management scholarship, inform policymakers and university administrators, and serve as a model for other higher education institutions seeking to diversify physical education programs. Ultimately, this research benefits multiple sectors: it supports universities in policy development and curriculum innovation, empowers students to adopt healthier and more active lifestyles, and contributes to the broader goals of national fitness and social well-being.

Objectives

1. To explore the problems and current situation of pickleball university students at Hebei University of Finance.
2. To draft the Managerial Guideline to Promote Pickleball among university students in Hebei University of Finance.
3. To confirm the Managerial Guideline to Promote Pickleball among university students at Hebei University of Finance.

Literature Review

Pickleball has rapidly evolved from a recreational backyard game into an internationally recognized sport, supported by growing institutional and academic interest. Studies such as Li (2023) and Han (2019) describe this transformation as driven by the sport's accessibility, simplicity, and appeal across diverse populations. These authors emphasize that pickleball's success stems from its hybrid characteristics combining tennis, badminton, and table tennis, which reduce participation barriers while maintaining competitive enjoyment. However, while Li (2023) identifies community promotion and policy support as the main catalysts for its expansion, few scholars have examined how these mechanisms can be adapted to structured university settings. This highlights the need to connect global development trends with localized educational implementation strategies.

In the context of higher education, researchers have focused increasingly on pickleball's educational and health-promoting potential. Wang (2022) demonstrated that integrating pickleball into university physical education programs significantly improved students' endurance, flexibility, and teamwork, findings that align with Chen (2020), who reported benefits for cardiovascular





health and stress reduction among older adults. Together, these studies establish pickleball's multidimensional value for physical, psychological, and social development. Nonetheless, existing research tends to isolate physiological outcomes without addressing institutional barriers or management factors influencing long-term adoption in academic environments. This gap underscores the need for management-oriented studies that extend beyond physical benefits to explore systemic implementation processes.

Despite its advantages, several studies note persistent challenges in promoting pickleball within Chinese universities. Feng (2022) identified obstacles, including a shortage of qualified instructors, limited access to facilities, and inadequate institutional awareness of emerging sports. Similarly, Sun (2018) emphasized the importance of government support and policy frameworks for sustaining development, while Liu (2019) highlighted the technical and tactical evolution of the sport but failed to link these to educational management systems. Collectively, these findings reveal that most existing research focuses on descriptive or technical analyses rather than constructing comprehensive, theory-driven strategies for program management and promotion.

The application of structured management frameworks provides a valuable approach to addressing these shortcomings. The POLC model, originating from Henri Fayol's classical management theory, has been widely used in organizational and educational settings to guide systematic planning, organizing, leading, and controlling processes (Robbins & Coulter, 2023). In the field of sport management, scholars such as Liu and Zhao (2022) applied POLC-based management frameworks to enhance the administration of university athletic programs, demonstrating their effectiveness in coordinating policy implementation, resource allocation, and stakeholder collaboration. However, the model's application in developing and promoting emerging sports such as pickleball remains underexplored, particularly within the context of Chinese higher education. Integrating the POLC framework into pickleball promotion could help structure management decisions, clarify responsibilities, and establish continuous performance evaluation—a methodological contribution that current research still lacks.

In summary, the reviewed literature confirms that pickleball offers substantial physical, social, and educational benefits and enjoys increasing global popularity. Nevertheless, critical gaps remain concerning how universities can institutionalize pickleball programs through systematic management. Current research lacks integration between sport promotion theory and practical management models, particularly in Chinese universities where administrative structures and resource constraints differ significantly from Western contexts. This study therefore seeks to fill this gap by developing evidence-based managerial guidelines for promoting pickleball among university students at Hebei University of Finance, guided by the POLC management framework. The findings aim to contribute both theoretically by extending the application of management



principles to sport promotion and practically by providing actionable strategies for university administrators, policymakers, and educators.

Conceptual Framework

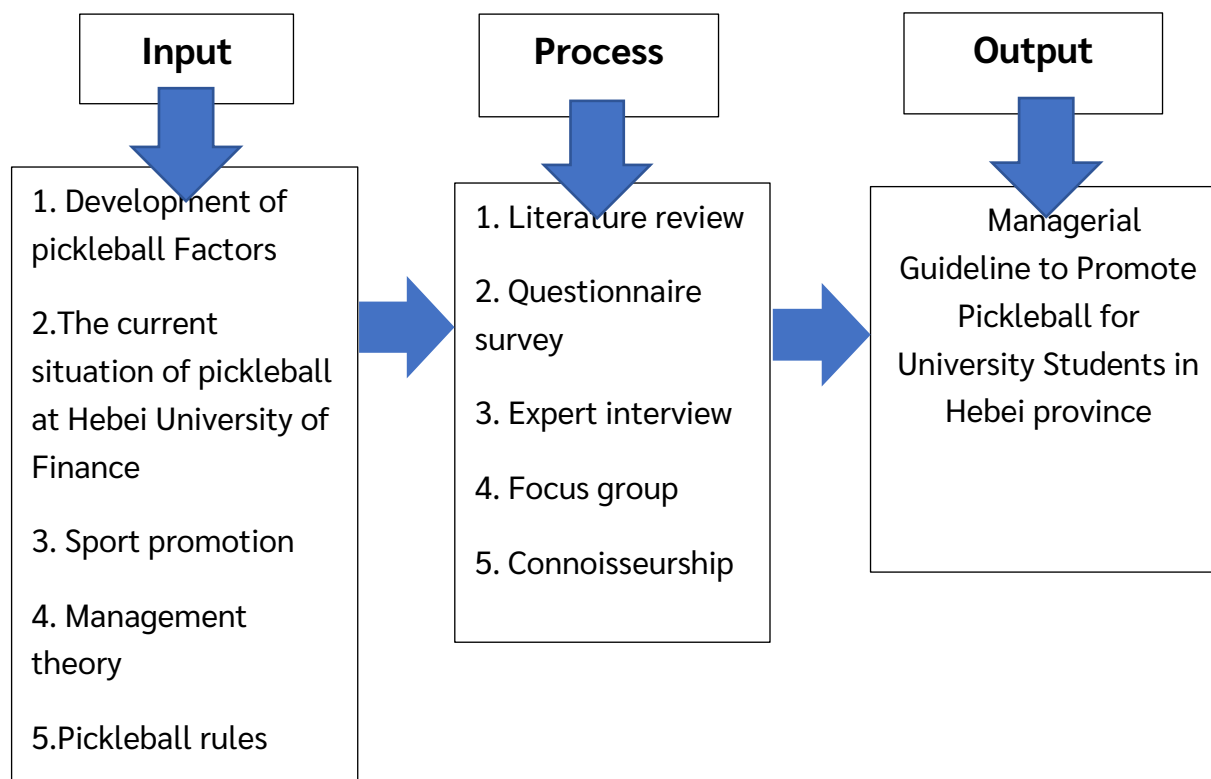


Figure 1 Conceptual Framework

Methodology

Research Design

This study adopted an exploratory sequential mixed-methods design (Creswell & Plano Clark, 2018) to develop managerial guidelines for promoting pickleball at Hebei University of Finance. The design began with a quantitative survey to assess the current situation, followed by qualitative phases, including expert interviews, focus groups, and connoisseurship validation to refine and verify the proposed framework. The approach was grounded in pragmatism (Morgan, 2014), emphasizing data-driven and practice-oriented solutions.

Research Context

The research was conducted at Hebei University of Finance, Hebei Province, China, during the 2023–2024 academic year (September 2023–June 2024). The university has introduced

pickleball as an elective physical education course and seeks a systematic management model to enhance participation.

Participants and Sampling

The study included students, teachers, and expert panels across quantitative and qualitative phases.

- Quantitative phase: A census survey involved 900 second-year undergraduate students (aged 18–22, male and female) and 20 physical education instructors. Second-year students were targeted as they had completed foundational PE courses and could choose elective sports.
- Qualitative phase: Experts were selected through purposive sampling based on at least five years' professional experience in sport management or pickleball. Four expert groups participated:
 1. IOC validation experts (n=3): Evaluated questionnaire content validity.
 2. Interview experts (n=5): Provided insights on barriers and strategies for pickleball promotion.
 3. Focus group experts (n=9): Refined draft guidelines through structured discussion.
 4. Connoisseurship experts (n=9): Validated the final guidelines.In total, 26 experts contributed across all qualitative stages.

Research Instruments

Four instruments were employed:

1. Questionnaire: A 25-item Likert-scale instrument (1–5) assessed perceptions of planning, organizing, leading, and controlling in pickleball promotion. It showed strong validity (IOC = 0.79) and reliability (α = 0.86).
2. Interview guide: Ten open-ended questions explored issues in policy, resource allocation, training, and student participation (IOC = 0.75).
3. Focus group outline: Structured discussions around the four POLC components (≈90 min per session).
4. Connoisseurship form: Experts rated the clarity, feasibility, and practicality of final recommendations.

Data Collection Procedures

Data were collected sequentially between September 2023 and June 2024:

- (1) Questionnaire survey: Distributed via the Wenjuanxing platform (780 student responses, 86.7%; 20 teacher responses, 100%).
- (2) Expert interviews: Conducted face-to-face or online, lasting 45–60 minutes each.

- (3) Focus groups: Two 90-minute sessions with nine experts to refine the draft guidelines.
- (4) Connoisseurship validation: The same experts reviewed and confirmed the final framework.

Data Analysis

Quantitative data were analyzed using descriptive statistics (mean, SD, frequency, and percentage) with Likert's (2018) interpretation scale. Qualitative data from interviews, focus groups, and evaluations were analyzed through conventional content analysis (Hsieh & Shannon, 2005). Two independent coders conducted thematic coding using NVivo 12, and Cohen's Kappa = 0.82 confirmed substantial inter-rater reliability.

Trustworthiness

Triangulation across students, teachers, and experts ensured credibility. Member checking followed each qualitative phase to verify interpretations. Transferability was enhanced through detailed contextual description, while dependability and confirmability were maintained via documentation of coding and expert feedback.

Summary

This mixed-methods design effectively integrated empirical evidence and expert consensus, producing a validated, theory-based managerial guideline under the POLC framework. The methodology ensured that the guidelines are both scientifically grounded and practically applicable for promoting pickleball among university students at Hebei University of Finance.

Results

The results of the questionnaire survey show that teachers generally believe that pickleball is fun, easy to learn, suitable for all ages, and can enrich campus sports culture, with high potential for promotion. However, willingness to participate in the game and familiarity with the rules are relatively low, indicating insufficient awareness and practical opportunities. Most teachers support providing campus venues and equipment, as well as promoting awareness through promotional activities to increase teacher and student participation.

Summarizing the focus group findings.

Planning has 6 aspects:

1. Incorporate pickleball into elective physical education courses or extracurricular sports activities.
2. Regularly hold instructional seminars and workshops to help beginners get started.
3. Establish a "Pickleball Practice Base" or "Joint Training Center" jointly with off-campus enterprises and institutions.



4. Build the pickleball project into a new window for external communication and image promotion of the campus.
5. Conduct collaborative activities in conjunction with National Fitness Day and World Sports Day.
6. Encourage each college to organize an intercollegiate pickleball league to enhance students' sense of belonging.

Organizing has 5 aspects:

1. Faculty or graduate students will be assigned as mentors to ensure the proper conduct of activities.
2. Establish weekly opening hours for free play and practice.
3. The School of Physical Education will spearhead the establishment of a Pickleball Club, providing initial funding and venue resources.
4. Pickleball elective courses are offered at the beginner, intermediate, and advanced levels, with accompanying syllabi and textbooks.
5. Teachers are organized to participate in pickleball referee and coaching training to enhance their professional skills.

Leading has 7 aspects:

1. Teachers and organizers should lead by example, demonstrating passion for and the value of pickleball.
2. Create a low-barrier entry point to reduce beginner anxiety.
3. Emphasize the concept of "growing together" and guide students to connect sports with their personal development.
4. Incorporate participation in organizational activities into comprehensive performance evaluations or credit incentives.
5. Teachers, coaches, and students discuss activity schedules, content, and rules, giving students a voice.
6. Teachers should act as leaders and collaborators, giving students autonomy.
7. Incentive mechanisms should encompass multiple dimensions: material, honor, growth, and social interaction.

Controlling has 8 aspects:

1. Collect student feedback (Likert scale + open-ended questions).
2. Gain a deeper understanding of participants' experiences and attitudes toward promotion.
3. Automatically aggregate attendance, satisfaction, and message suggestions.
4. Create a monthly participation trend chart to identify peaks and troughs in participation.





5. Set key performance indicators (KPI): Average attendance at events. Repeat attendance rate. Gender ratio and cross-disciplinary participation.
6. Introducing a QR code check-in system (student ID + WeChat mini-program check-in)
7. Compare changes in interest, knowledge, and willingness to participate in pickleball before and after the promotion
8. Established a unified data platform to share student participation data, health records, satisfaction surveys, etc.

Experts appreciate and confirm the promotion guide and confirm that the guide is actually used effectively. The expert's summary demonstrates that these coordinated measures provide a systematic and effective model for promoting pickleball in higher education institutions. The experts were unanimously highly complementary, providing a comprehensive support strategy for the systematic promotion of pickleball in colleges and universities.

Discussion

The findings highlight that in terms of planning, incorporating pickleball into the university sports system, focusing on the continuous improvement of teaching content and methods, and promoting the systematic development of the curriculum through project management. This aligns with the physical education curriculum innovation framework proposed by Sun Yu (2021), emphasizing curriculum diversity, meeting the needs of contemporary college students for emerging sports, and embodying the value of sustainable development. In terms of organization proposes a promotion model that integrates classroom teaching and extracurricular activities, including intramural leagues, regional competitions, and inter-school exchanges. A dedicated teaching and management team is established to oversee curriculum, competitions, and promotion. This aligns with Li Ping's (2022) emphasis on meeting diverse needs through diverse activities and clear mechanisms to enhance students' physical fitness and teamwork. In terms of leading emphasizes promoting the popularization of pickleball through teacher-student interaction, using skill demonstrations and interest lectures to stimulate student enthusiasm, and strengthening teacher training to ensure teaching and competition organization capabilities. This aligns with (2021) research, which emphasizes the core role of the leadership team in "stimulating interest and enhancing capabilities," ensuring the quality and vitality of promotional activities. In terms of control, it recommends establishing a systematic monitoring and evaluation mechanism, including curriculum review, student feedback, and performance evaluation, as well as developing an annual promotional plan covering venue, equipment, and event management. This aligns with (Chi Hao,2020) research, which emphasizes institutionalized management to ensure program standardization and long-term development.





Recommendation

1. Physical education leaders implement the Hebei University of Finance's Management Guidelines for Promoting Pickleball among University Students. They can also be applied to other universities in Hebei Province to provide better guidance.
2. Colleges and universities seek support from education authorities and social resources to ensure venues, equipment, and event organization. At the same time, they can learn from the management experience of Hebei University of Finance and Economics for optimization.
3. Establish a university pickleball association or dedicated management team, clarify responsibilities, and improve the efficiency of organizing activities.

Recommendations for further research

1. Conduct long-term follow-up research to focus on changes in university student participation, retention of interest, and skill improvement across different grades.
2. Inter-university and cross-national comparative research: Promote exchange and cooperation in pickleball among domestic universities and with international universities and conduct comparative research on teaching models and training concepts.
3. In the future, we should establish a completely guaranteed system from the aspects of venue construction, teacher training, and curriculum system to promote the long-term and healthy development of pickleball in colleges and universities.

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