



Guideline to Promote Ba Duan Jin Exercise Club in Primary Schools in Xi'an Province

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Abstract

Background and Aim: The Ba Duan Jin Exercise Club promotes traditional Chinese Qigong, which improves mental and physical energy and promotes holistic health. By enabling everyone to access low-impact wellness practices, it also promotes community well-being. This study aimed to enhance the promotion of Ba Duan Jin exercise clubs in primary schools in Xi'an Province, recognizing their potential in fostering students' physical and mental well-being. Despite its historical and cultural significance, Ba Duan Jin remained underutilized in primary education. The study set out three specific objectives: (1) to assess the current state of Ba Duan Jin exercise implementation in primary schools; (2) to develop comprehensive guidelines for promoting Ba Duan Jin exercise clubs; and (3) to verify the effectiveness and applicability of these guidelines.

Materials and Methods: A mixed-method research design was employed to ensure a comprehensive and evidence-based approach. Initial data collection involved a questionnaire survey with eight administrators, eight teachers, 183 primary students, and 183 parents (IOC = 0.87), as well as expert interviews (IOC = 0.89) to identify existing practices, needs, and challenges. The results were summarized using mean and standard deviation. Following this, a two-round Delphi method was conducted with 17 experts (IOC = 0.83) to refine and validate the core elements of the proposed guidelines, with results summarized using median ≥ 3.50 and IQR ≤ 1.50 . The study concluded with a connoisseurship seminar involving nine experts, who reviewed the final guidelines in terms of educational alignment, cultural appropriateness, and practical feasibility. The findings were then summarized through content analysis.

Results: The study revealed significant management gaps in the promotion of Ba Duan Jin exercise clubs, particularly in the areas of planning, organizing, leading, and controlling. Stakeholder input highlighted challenges in service quality, communication, and feedback mechanisms. In response, a structured framework comprising 21 action items and 25 strategic goals was developed. These components were designed to enhance program delivery, stakeholder engagement, and long-term sustainability, aligning with both institutional goals and local cultural values.

Conclusion: Through systematic stakeholder engagement and expert validation, the study successfully developed and verified a set of practical guidelines for the effective promotion of Ba Duan Jin exercise clubs in primary schools. These guidelines offer a clear, actionable framework that addresses key management functions and supports the integration of traditional exercise into the modern educational context. The results provide a strong foundation for policymakers, school administrators, and educators to implement sustainable and impactful Ba Duan Jin programs that contribute to students' holistic development.

Keywords: Ba Duan Jin Exercise Clubs; Guidelines for Promoting Ba Duan Jin Exercise Clubs; Primary School Students

Introduction

Ba Duan Jin, also known as the "Eight Pieces of Brocade," is a traditional Chinese qigong exercise with origins dating back over a millennium to the Song Dynasty (960–1279 CE). It integrates slow, deliberate movements with controlled breathing and meditative focus, making it an accessible and holistic exercise suitable for individuals of all ages and fitness levels. Celebrated for its therapeutic benefits, Ba Duan Jin has been associated with improved flexibility, cardiovascular health, and stress reduction (Chen et al., 2015; Wang, 2010). In contemporary China, it remains a widely practiced health regimen, promoted through government initiatives like the National Fitness Program as a tool for enhancing both physical and mental well-being (General Administration of Sport of China, 2003).



In recent years, the integration of Ba Duan Jin into school curricula has gained momentum as a response to the increasing prevalence of sedentary lifestyles and stress among students. Particularly in primary schools within Xi'an Province, education authorities have initiated Ba Duan Jin programs aimed at instilling healthy lifestyle habits from an early age (Xi'an Education Bureau, 2024). Government policies have reinforced these efforts through teacher training, standardized instructional materials, and the encouragement of extracurricular Ba Duan Jin clubs. These initiatives reflect a broader commitment to inclusive and sustainable health promotion in education (Liu & Qiao, 2020).

Despite its promise, the effective implementation of Ba Duan Jin in primary education remains underdeveloped. The existing literature largely focuses on Ba Duan Jin's physiological benefits and historical significance but lacks empirical research on its structured application within the context of primary education, particularly in Xi'an Province. Studies have not sufficiently addressed the organizational, pedagogical, and managerial dimensions necessary for sustainable program development at the school level. This gap presents a critical challenge: without clear models for integrating Ba Duan Jin into the school system, its potential as a health-promotion tool remains unrealized.

To address this, the present study applies the POLC (Planning, Organizing, Leading, Controlling) framework, a classical model from management science, to guide the implementation of Ba Duan Jin programs in primary schools. While POLC has traditionally been used in corporate or administrative contexts, its core functions—strategic planning, resource allocation, leadership, and quality control—are directly transferable to the domain of educational program management. Specifically, Planning supports the strategic integration of Ba Duan Jin into existing curricula and school schedules. Organizing addresses the allocation of physical spaces, time, and human resources. Leading is essential for motivating teachers and engaging students, while controlling ensures continuous monitoring, feedback, and program improvement (Fayol, 1949; Gulick, 1937).

By employing the POLC model, this study aims to provide a systematic approach for overcoming the key challenges facing Ba Duan Jin implementation: lack of facilities, inadequate curricula, limited talent development, weak community engagement, and insufficient institutional collaboration. This management-based framework offers practical guidance for schools to enhance both the efficiency and impact of Ba Duan Jin programs, ensuring their alignment with educational and wellness goals.

Objectives

1. To study the current situation of Ba Duan Jin exercise in primary schools in Xi'an Province.
2. To draft guidelines for promoting Ba Duan Jin exercise clubs in primary schools in Xi'an Province.
3. To verify the effectiveness of the guidelines for promoting Ba Duan Jin exercise clubs in primary schools in Xi'an Province.

Literature review

Entering the 21st century, Ba Duan Jin emerged as a key feature of China's national fitness campaigns, with schools playing a pivotal role in its dissemination. In 2003, the General Administration of Sport of China emphasized Ba Duan Jin in its National Fitness Program Guidelines, encouraging its promotion among students of all ages (General Administration of Sport of China, 2003). Both urban and rural schools embraced the initiative, recognizing Ba Duan Jin as a cost-effective and inclusive approach to improving students' physical and mental well-being.

Over the past century, the study of management activities has led to the development of the management science discipline, which encompasses principles, skills, and strategies that guide individuals and organizations toward effective goal attainment (Sun, Y., 2007). As management practices evolved, so too did the scope of management science, which now integrates planning, organizing, leading, and controlling (POLC) functions into diverse organizational settings. These functions are particularly relevant to education management and can inform the systematic promotion of Ba Duan Jin in schools. For instance, the planning component can guide curriculum integration, while organizing helps structure time and



resources for Ba Duan Jin activities. Leadership fosters stakeholder engagement among teachers and students, and control ensures quality through monitoring and feedback mechanisms.

In addition to POLC, service quality frameworks, such as the GAP Model by Parasuraman, Zeithaml, and Berry (1985), provide tools for identifying shortcomings in Ba Duan Jin promotion efforts. The five gaps—knowledge, policy, delivery, communication, and customer—can be adapted to the educational setting to diagnose issues such as mismatches between student needs and implementation strategies or between promoted health outcomes and actual student experiences. This alignment of management theory with practice offers a comprehensive lens for evaluating and improving Ba Duan Jin programs in schools.

The integration of interdisciplinary knowledge in education has gained prominence over the past two decades. Scholars increasingly advocate for curricula that go beyond cognitive or physical development to include the cultivation of socially responsible, critically thinking citizens (Bailey et al., 2009; Banks, 2008). While Political Science Education (PSE) nurtures civic awareness and critical thinking, Physical Education (PE) builds discipline, teamwork, and physical well-being (Armour & Harris, 2013). Despite their complementary potential, literature on the integration of PSE and PE remains limited. Similarly, the incorporation of traditional practices like Ba Duan Jin into modern curricula has received relatively little pedagogical attention.

However, some research has begun to address this gap. For example, Chen and Yeung (2002) noted that by the 1980s, educational reforms had institutionalized Ba Duan Jin, recognizing its ability to balance academic pressure with holistic development. More recently, Zhang (2013) documented the use of group-based learning and peer instruction to teach Ba Duan Jin, indicating a shift toward student-centered pedagogies. Liu and Qiao (2020) further highlighted the role of technology in Ba Duan Jin dissemination, such as the use of video tutorials and online platforms, which have expanded access and improved instructional quality.

These developments show that Ba Duan Jin can be integrated into modern curricula not only as a fitness activity but also as a medium for values education, cultural learning, and psychosocial development. To strengthen the theoretical rationale, future studies should adopt educational integration models, such as experiential learning, culturally responsive pedagogy, or holistic education frameworks, to demonstrate how Ba Duan Jin supports student development across cognitive, emotional, and physical domains. Teaching and learning quality—defined as the effectiveness of educational strategies in promoting deep learning and student achievement—is central to the success of any integrated program (Biggs & Tang, 2011). High-quality instruction in Ba Duan Jin must therefore be responsive to student diversity, culturally sensitive, and pedagogically sound. It also requires ongoing evaluation and feedback to ensure that learning objectives are met and that the practice makes a meaningful contribution to student well-being.

Finally, Gao (2015) emphasized the physiological benefits of Ba Duan Jin in his review of its effects on various human systems, affirming traditional Chinese medicine's claims that the practice improves circulation, strengthens muscles and bones, and regulates internal organs. These health benefits further support its inclusion in school-based wellness initiatives and align well with contemporary goals for physical education in youth development.



Conceptual Framework

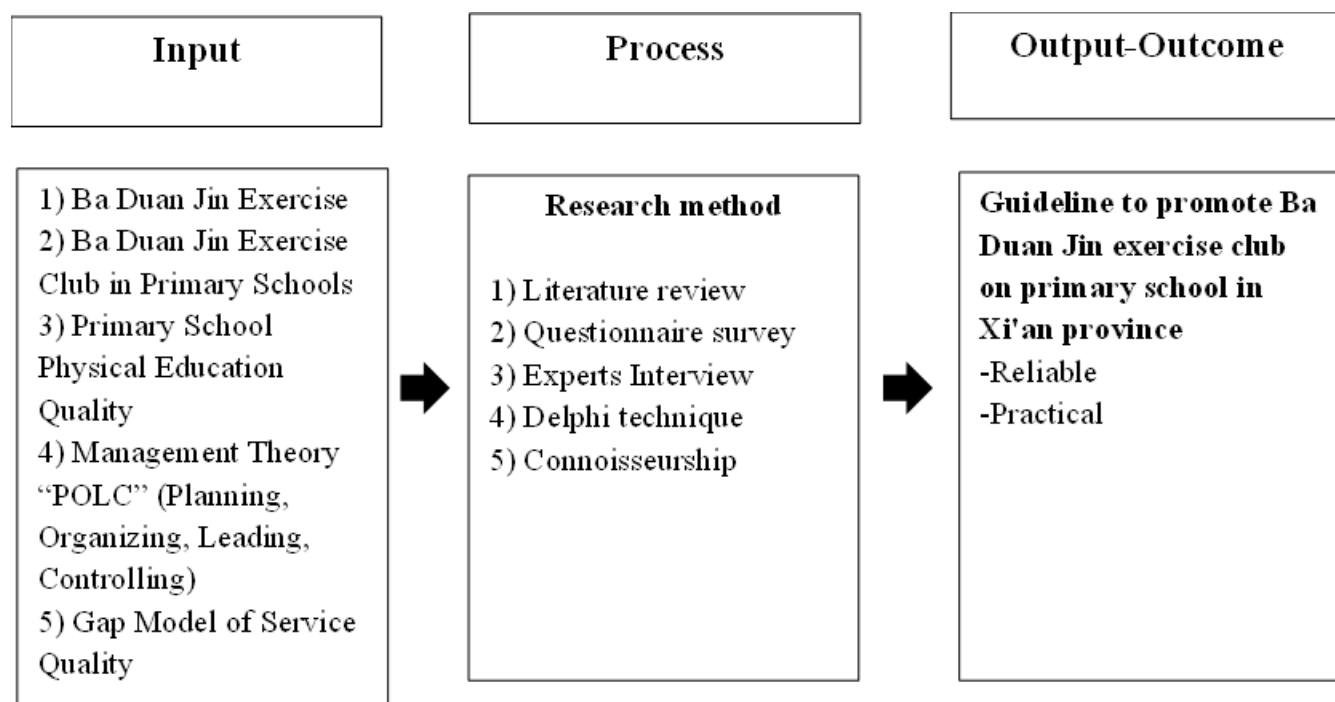


Figure 1 Conceptual Framework

Methodology

This research aimed to (1) study the current situation of Ba Duan Jin exercise in primary schools in Xi'an Province, (2) draft guidelines for promoting Ba Duan Jin exercise clubs, and (3) verify the effectiveness of the proposed guidelines. To achieve these objectives, the researcher first conducted a questionnaire survey (IOC = 0.87) and expert interviews (IOC = 0.89) to identify existing gaps and challenges. Based on the findings, a Delphi study involving 17 experts (IOC = 0.83) was conducted over two rounds to refine the essential components of the guidelines. Subsequently, nine experts participated in a connoisseurship seminar to further review and validate the content, ensuring its alignment with educational standards, cultural relevance, and practical feasibility. The finalized guidelines provide a solid, evidence-based foundation for promoting Ba Duan Jin exercise clubs effectively in primary schools.



Results

1. Questionnaire survey results:

Table 1 General Information

Participants		Male		Female		Total	
		Quantity	Percentage (%)	Quantity	Percentage (%)	Quantity	Percentage (%)
Students	10-12 years old	132	72.13	51	27.87	183	100
	Parents						
	20-30 years old	12	6.56	10	5.46	183	100
	31-40 years old	44	24.04	36	19.67		
	41-50 years old	32	17.49	36	19.67		
	51 years or more than 51 years old	4	2.19	9	4.92		
Teachers	20-30 years old	1	12.50	0	0	8	100
	31-40 years old	2	25.00	2	25.00		
	41-50 years old	2	25.00	0	0		
	51 years or more than 51 years old	0	0	1	12.50		
Administration	31-40 years old	1	12.50	1	12.50	8	100
	41-50 years old	2	25.00	1	12.50		
	51 years or more than 51 years old	2	25.00	1	12.50		

Table 1 shows the number and percentage of key informant groups who responded to the questionnaire, categorized by different genders and age ranges.

The questionnaire survey assessed perceptions of students, parents, primary school managers, and sports teachers on promoting Ba Duan Jin Exercise Clubs across planning, organizing, leading, and controlling functions. Students and parents reported moderate to high concerns about unclear planning and unmet student needs, while school managers rated planning more positively. Organizing issues, including lack of trained instructors and time constraints, were major concerns for students, parents, and sports teachers, though managers were less critical. Leadership support was perceived as low by students and parents but rated highly by managers. Gaps in leadership visibility, promotion, and role modeling were noted. Students and parents also reported low satisfaction with feedback, monitoring, and evaluation processes. Managers believed monitoring was strong, highlighting a major controlling gap. Then, school managers viewed Ba Duan Jin promotion more favorably than other groups. The findings reveal critical



perception gaps needing attention. Inclusive planning, better resources, visible leadership, and stronger evaluation systems are essential for improvement.

2. Experts' Interview results:

The seven education experts and physical education teachers identified several key barriers to implementing Ba Duan Jin in primary schools. They noted a lack of clear strategic planning and insufficient training for instructors as major challenges. Limited time, space, and resources were seen as ongoing obstacles. Experts observed that student and parent interests were not fully considered during program planning. Weak leadership support and unclear communication about Ba Duan Jin's benefits further hindered promotion efforts. Many schools lacked effective systems for monitoring and collecting feedback. Motivation among teachers varied, often influenced by administrative support and recognition. Experts also highlighted mismatches between promotion messages and actual program objectives. They emphasized the need for stronger collaboration among teachers, students, and parents. The experts recommended improving planning, training, communication, and resource allocation to strengthen Ba Duan Jin's implementation.

3. Delphi consensus results:

A list of final draft guidelines to promote Ba Duan Jin exercise clubs in primary schools in Xi'an province is as follows:

PLANNING & GAP 1: Understanding of Stakeholders' Expectations has 1 action and 3 goals.

PLANNING & GAP 2: Service Quality Design has 2 actions and 5 goals.

ORGANIZING & GAP 3: Service Delivery Performance has 5 actions and 8 goals.

LEADING & GAP 4: External Communication has 4 actions and 6 goals.

CONTROLLING & GAP 5: Monitoring & Feedback Gap has 4 actions and 4 goals.

4. Connoisseurship results:

PLANNING & GAP 1: Understanding of Stakeholders' Expectations

Action:

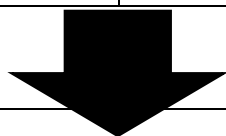
1) Survey students, parents, and teachers to understand interest levels and expectations.

Goals:

1) Student needs should be identified and reflected in program planning.

2) The interests of all stakeholders (students, parents, teachers) must be considered in planning decisions.

3) School administrators must understand students' and parents' expectations regarding Ba Duan Jin.



PLANNING & GAP 2: Service Quality Design

Actions:

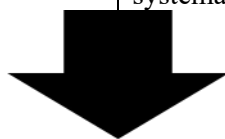
1) Create an age-appropriate, engaging, cross-curricular Ba Duan Jin curriculum aligned with PE and health education standards.

Goals:

1) Activities are designed based on the needs and interests of 6–12-year-olds and parents' expectations.



2) Align program goals with local education policy (e.g., Xi'an City Health Promotion Plan) and traditional cultural promotion policies. 3) Include cross-curricular links with subjects like health, moral education, and the arts. 4) Plan for annual Ba Duan Jin cultural festivals or exhibitions.	2) School staff are familiar with Ba Duan Jin exercises and their benefits. 3) A clear strategic framework and goal-setting guide the program. 4) Administrative support includes budget allocation, schedule integration, and school leader involvement. 5) Planning addresses coordination, space, resources, and scheduling challenges systematically.
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ORGANIZING & GAP 3: Service Delivery Performance

Actions: 1) Cooperate with local martial arts institutes, health organizations, and community facilities (parks, centers) to support delivery. 2) Organize certified Ba Duan Jin training sessions for school staff and teachers. 3) Require basic certification standards for instructors. 4) Appoint dedicated club coordinators in each school. 5) Provide training programs, instructional materials, necessary equipment, and well-planned, flexible schedules. 6) Ensure all support systems (staff, spaces, timing) work together for smooth implementation.	Goals: 1) Programs are supported by sufficient, qualified, and trained instructors. 2) Instructor shortages are mitigated through capacity building. 3) Responsibilities are assigned and effectively managed. 4) Sessions are conducted regularly with a structured, flexible timetable. 5) Barriers (e.g., space, time) are proactively managed. 6) Schools allocate adequate resources (space, time, personnel). 7) Space limitations are resolved through shared-use agreements with community facilities.
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LEADING & GAP 4: External Communication

Actions: 1) Communicate via school meetings, posters, newsletters, social media, and local events.	Goals: 1) Schools effectively communicate Ba Duan Jin goals and benefits. 2) Educational leaders provide visible and ongoing direction.
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2) School leaders actively participate in Ba Duan Jin activities and demonstrate ongoing commitment. 3) Assign staff and student ambassadors to connect with peers and the broader community. 4) Create reward systems to encourage teacher and student ambassador participation. 5) Invite parents to actively participate in Ba Duan Jin activities (e.g., as volunteers).	3) Communication efforts are strong, unified, and foster community involvement. 4) Student ambassadors strengthen peer engagement. 5) Gaps in communication and materials are identified and addressed. 6) Motivational strategies enhance participation and leadership in activities.
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CONTROLLING & GAP 5: Monitoring & Feedback Gap

Actions: 1) Collect regular feedback (qualitative and quantitative) from students, parents, and teachers. 2) Observe and evaluate teacher performance and student engagement. 3) Measure outcomes, including attendance, physical fitness, attention span, emotional well-being, and student interest. 4) Adjust activities based on feedback, provide additional training for underperforming teachers, and update teaching materials regularly. 5) Conduct an annual formal review and evaluation report for the Ba Duan Jin program.	Goals: 1) Feedback is systematically collected and used for continuous improvement. 2) Student participation and instructor performance are closely monitored and evaluated. 3) Key performance indicators (KPIs) are established (e.g., participation rate, satisfaction rate, fitness outcomes). 4) Activities are reviewed and updated regularly to maintain quality and meet evolving expectations.
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Figure 2 Guideline for Promoting Ba Duan Jin Exercise Clubs in Primary Schools

Conclusion

Research results revealed a comprehensive assessment of stakeholder perceptions—students, parents, school managers, and sports teachers—regarding the promotion of Ba Duan Jin Exercise Clubs in primary schools. The evaluation focused on the four management dimensions: planning, organizing, leading, and controlling (POLC). Students and parents expressed moderate to high concerns, particularly about the lack of clear strategic planning, insufficiently trained instructors, weak leadership visibility, and underdeveloped feedback systems. In contrast, school managers generally perceived these elements more favorably, indicating a potential disconnect in stakeholder experiences and expectations.

In-depth expert interviews highlighted systemic challenges, including vague strategic planning, inadequate teacher training frameworks, limited allocation of resources, fragmented communication mechanisms, and inconsistent levels of teacher engagement and motivation. Experts emphasized the need for stronger inter-sector collaboration and more strategic resource deployment to overcome these barriers.

A Delphi study involving 17 experts was conducted to validate and refine the proposed guidelines. Through a multi-phase process, a final set of 22 action items was established, each achieving strong expert



consensus (median ≥ 3.50 , IQR ≤ 1.50). Fourteen redundant or low-consensus items were either revised, merged, or eliminated. This rigorous methodology ensured that the resulting guidelines were both practical and grounded in real-world needs and expert validation.

Final Summary of Improved Guidelines for Promoting Ba Duan Jin Exercise Clubs in Primary Schools:

- PLANNING & GAP 1: Understanding of Stakeholders' Expectations — 1 action, 3 goals
- PLANNING & GAP 2: Service Quality Design — 4 actions, 5 goals
- ORGANIZING & GAP 3: Service Delivery Performance — 6 actions, 7 goals
- LEADING & GAP 4: External Communication — 5 actions, 6 goals
- CONTROLLING & GAP 5: Monitoring & Feedback — 5 actions, 4 goals

While the study provides a robust framework for implementing Ba Duan Jin Exercise Clubs, several practical limitations must be acknowledged. Diverse school contexts—such as rural versus urban settings—vary in terms of resource availability, administrative capacity, and community engagement levels. These disparities could affect the feasibility and uniformity of implementation. Additionally, long-term sustainability may be hindered by turnover in trained personnel, fluctuating institutional priorities, and potential resistance to integrating traditional practices within modern curricula. Therefore, ongoing evaluation, context-sensitive adaptation, and sustained policy support are essential to ensure successful and lasting adoption of the guidelines.

Recommendation

Application of Research Results

1. Implement Inclusive Planning Practices: Schools should establish planning committees that include students, parents, teachers, and administrators to collaboratively design and monitor Ba Duan Jin exercise club activities. This inclusive approach will help bridge the perception gaps identified in the study.
2. Strengthen Instructor Training and Certification: It is crucial to implement structured instructor training programs and certification standards to enhance teaching quality. Partnerships with martial arts institutions and local health organizations should be prioritized to build instructional capacity. Allocation (personal, spaces, budgets) for Ba Duan Jin activities and considering shared-use agreements with local community centers to address facility limitations.

Future Study Recommendations

1. Longitudinal Impact Studies: Future research should conduct longitudinal studies to measure the long-term effects of Ba Duan Jin participation on students' physical health, emotional well-being, and academic performance.
2. Comparative Studies Across Regions: Comparative research across different provinces or urban and rural settings could offer insights into contextual factors influencing the success of Ba Duan Jin exercise clubs and help tailor region-specific strategies.
3. Evaluation of Instructor Training Models: Studies should explore and evaluate different instructor training and professional development models to determine the most effective methods for building sustainable teaching capacity in primary schools.

References

- Armour, K., & Harris, J. (2013). Making the case for developing new PE-for-health pedagogies. *Sport, Education and Society*, 18(3), 291–310. <https://doi.org/10.1080/13573322.2012.713860>
- Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & the BERA Physical Education and Sport Pedagogy Special Interest Group. (2009). The educational benefits claimed for physical education and school sport: An academic review. *Research Papers in Education*, 24(1), 1–27.
- Banks, J. A. (2008). *An introduction to multicultural education* (4th ed.). Pearson.
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.





- Chen, X., & Yeung, A. S. (2002). Cultural differences in learning styles. *Journal of Educational Psychology*, 94(1), 20–30.
- Chen, Y., Zhang, W., & Liu, T. (2015). Research on student physical activity and health in China. *Journal of Physical Education Research*, 7(2), 45–53.
- Fayol, H. (1949). *General and industrial management* (C. Storrs, Trans.). Pitman. (Original work published 1916)
- Gao, S. (2015). *Study on the innovation of school physical education teaching*. Beijing Sports University Press.
- General Administration of Sport of China. (2003). *Outline of the National Fitness Program (2001–2010)*. Beijing: People's Sports Publishing House.
- Gulick, L. (1937). Notes on the theory of organization. In L. Gulick & L. Urwick (Eds.), *Papers on the science of administration* (pp. 1–45). Institute of Public Administration.
- Liu, J., & Qiao, H. (2020). Development and reform of school sports in China. *Sports Science Research*, 41(3), 34–41.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41–50.
- Sun, Y. (2007). Physical education and the cultivation of students' lifelong sports awareness. *Journal of Education Studies*, 28(4), 58–62.
- Wang, X. (2010). Analysis of the development of school sports in China. *Journal of Physical Education*, 17(1), 22–27.
- Xi'an Education Bureau. (2024). *Primary school extracurricular sports development plan*. Xi'an Jiao Tong University.
- Zhang, H. (2013). On the effectiveness of PE teaching models in China. *Modern Education Science*, 12(5), 88–94.

