Research on the Evaluation Index System of the Implementation Effect of Ideological and Political Education in College Physical Education Curriculum in the New Era

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Article

Research on the Evaluation Index System of the Implementation Effect of Ideological and Political Education in College Physical Education Curriculum in the New Era

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Abstract

This study develops a scientific and practical evaluation index system for assessing ideological and political education (IPE) in college physical education courses. Using the Analytic Hierarchy Process and two rounds of Delphi expert consultation, the study constructs and refines a comprehensive evaluation framework tailored to the characteristics of IPE in physical education. The primary indicators and their weights are: teaching objectives and design (21.39%), teaching subject capability (17.32%), teaching methods and implementation (11.48%), teaching content and resources (16.66%), and teaching effects and feedback (33.14%). Among secondary indicators, improvement in students' ideological and political literacy has the highest weight (9.35%). The results provide a quantitative tool for evaluating IPE effectiveness, offer insights for systematic teaching evaluation, and support the optimization of instructional strategies to enhance teaching quality.

Keywords: New Era; physical education curriculum; curriculum ideological and political education; evaluation Indicators

1. Introduction

In recent years, the integration of ideological and political education (IPE) into university curricula has become a central strategy for advancing China's fundamental mission of fostering virtue through education (Tang et al., 2023; Zhao, 2022). Within this context, physical education (PE) holds a distinctive position. Beyond developing physical fitness and athletic skills, PE courses naturally incorporate ideological and political elements such as teamwork, perseverance, respect for rules, and patriotism(Guo & Zhang, 2022; Wu, 2025). These features render PE a particularly fertile ground for implementing curriculum-based ideological and political education, commonly referred to as "curriculum civics" (Zhou et al., 2023).

Despite its recognized importance, systematic evaluation of IPE within PE remains insufficiently developed (Feng et al., 2024; Mengwei et al., 2024). Traditional evaluation practices in sports education tend to emphasize technical skills and physical performance, while neglecting less tangible but equally vital ideological outcomes such as value formation, civic responsibility, and moral development (Hong, 2023; Wang & Liu, 2023; Zhang, 2023). Consequently, assessing the effectiveness of IPE integration in PE with reliability and precision remains a challenge, constraining both theoretical inquiry and practical advancement.

To respond to these limitations, this study seeks to develop a scientific and practical evaluation index system for assessing the implementation of IPE in university PE courses. Drawing on the Delphi method and the Analytic Hierarchy Process (AHP), the research constructs and validates a comprehensive indicator framework that encompasses both process- and outcome-oriented dimensions of PE teaching. In doing so, the study not only enriches the theoretical discourse on

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curriculum civics but also provides practical insights for optimizing teaching strategies in higher education.

2. Literature Review

2.1. Current Status of Domestic Research

China has accumulated substantial research on the ideological and political evaluation of college courses. Some scholars emphasize process-oriented frameworks that assess the full teaching cycle, from instructional philosophy and course design to classroom implementation and student development (Chunxia, 2021). Others adopt multi-dimensional indicator systems, incorporating teaching management, teacher competence, curriculum design, classroom methods, and learning outcomes, aiming to balance instrumental rationality (teaching efficiency) with value rationality (moral and civic cultivation) (Zhao, 2022).

However, these frameworks remain fragmented in scope and criteria. Some focus exclusively on teaching processes, while others concentrate mainly on student outcomes, without fully integrating the two (Wang, 2021). Moreover, the distinctive characteristics of PE—such as teamwork, resilience, and health promotion—are often insufficiently addressed in current models, leaving them either overly generic or poorly aligned with the realities of PE instruction (Liu, 2023).

2.2. International Research on Moral Evaluation in Physical Education

Internationally, research on moral evaluation in physical education has a relatively long history and has produced significant results (Mouratidou et al., 2007). The 2004 European Union *Citizens and Sport* report emphasized that moral evaluation in sport should reflect citizens' perceptions and encompass multiple dimensions, including sporting spirit (e.g., fair play), social responsibility (e.g., respect for others, teamwork), and personal moral cultivation (e.g., discipline, self-control). The report further noted that promoting moral values through sport was a key EU policy priority, with 59% of citizens expressing support. Accordingly, considerable emphasis has been placed on fostering students' values and moral literacy through sports activities.

Polish scholars Mateusz Ludwick and Małgorzata Bronikowska surveyed 1,257 secondary school students, comparing those who participated in sports with those who did not in the context of physical education and sport (PES). Their findings demonstrated that extracurricular sports activities significantly contribute to adolescents' moral development, particularly in cultivating respect, a core moral value (Ludwiczak & Bronikowska, 2022). Similarly, Moroccan scholars Ouaddou and Kanbaai highlighted that the team spirit fostered through sports carries substantial transferable value. Beyond athletic contexts, it supports students' academic performance and future careers, enhances individual social competitiveness, promotes physical and mental well-being, and contributes to a collaborative and harmonious social environment (Ouaddou & Kanbaai, 2025).

Compared with domestic research, foreign studies are more advanced in employing empirical methods and establishing standardized evaluation systems. However, they differ in their integration of local cultural characteristics and alignment with China's educational system—dimensions that deserve further attention and reflection in domestic scholarship.

2.2. Gaps in PE-Specific IPE Evaluation

In physical education, traditional evaluation methods primarily focus on physical skills, fitness, and performance testing, often overlooking implicit ideological outcomes such as value internalization, civic responsibility, and moral cultivation (Zhang, 2023). Although several studies have advocated for the integration of ideological elements into PE, few have developed empirically validated indicator systems tailored to the discipline's unique characteristics. As a result, the practical implementation of IPE in PE courses remains constrained by the absence of operational evaluation tools.

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2.3. Insights from Related Disciplines

Cross-disciplinary research provides valuable methodological insights. In management education, integrated outcome–process–value frameworks offer parallels for constructing multi-dimensional evaluation models. In health education, approaches for assessing behavioral change, resilience, and teamwork align closely with PE's dual mission of promoting physical fitness and cultivating moral character (Guo & Zhang, 2022). These perspectives help expand the methodological foundation for designing a robust, discipline-sensitive evaluation system in PE.

2.4. Research Gap and Contribution

Overall, existing research lacks a unified and empirically validated framework for evaluating the implementation of IPE in PE. Most existing systems are either overly general, failing to capture PE's disciplinary particularities, or remain largely theoretical without empirical validation (Song, 2025). In response, this study aims to develop a comprehensive, empirically grounded, and PE-specific evaluation indicator system. By combining Delphi consultation with AHP weighting, the proposed framework ensures both expert-driven validity and methodological rigor, offering practical guidance for universities to assess and enhance the quality of "value-based education through sports."

3. Methodology

3.1. Research Design and Rationale

This study adopted a mixed-methods design, integrating the Delphi method and the Analytic Hierarchy Process (AHP). The Delphi method was employed to obtain expert consensus on the structure and content of evaluation indicators, ensuring that the system reflects both disciplinary characteristics and pedagogical realities. The AHP was then applied to assign relative weights to the indicators, providing a quantitative and systematic basis for evaluating the effectiveness of ideological and political education in physical education (PE) courses.

The choice of Delphi and AHP was deliberate. Delphi offers a structured mechanism for synthesizing expert knowledge and reducing subjective bias through iterative consultation, while AHP provides mathematical rigor by decomposing complex judgments into hierarchical comparisons and testing for internal consistency. Compared with alternatives such as exploratory factor analysis or structural equation modeling, this combined approach was deemed more suitable given the exploratory nature of indicator construction, the limited availability of empirical datasets, and the need for expert-driven validity in a newly emerging research area.

3.2. Expert Panel Selection

A purposive sampling strategy was adopted to ensure a representative and knowledgeable panel. Sixteen experts were invited, comprising:

8 specialists in physical education, with at least 10 years of teaching or research experience and published work in pedagogy or sports education;

5 experts in ideological and political education, including professors and associate professors with experience in curriculum design and policy implementation;

3 experts in pedagogy, with backgrounds in educational measurement or evaluation research.

Inclusion criteria required that experts hold at least an associate professorship (or equivalent professional title) and demonstrate active engagement in research or policy practice. This ensured both disciplinary diversity and methodological competence.

3.3. Indicator System Development

Indicator selection marks the starting point of model construction. First, we systematically reviewed policy documents, course syllabi, and the extant literature to clarify the origin, connotation,

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developmental trajectory, and systemic structure of ideological and political education in physical-education curricula. We then synthesized cross-disciplinary research to distill the key elements and evaluation indicators specific to this educational integration, thereby establishing the conceptual foundation of the study.

Drawing on established indicator frameworks, we operationalized the values of ideological and political education in sports along eight dimensions: patriotism and dedication, teamwork, discipline and respect for rules, resilience and courage, adversity education, respect for others, holistic development of body and mind, and health promotion. By integrating expert judgments with our preliminary findings, we finalized five first-level indicators—(1) instructional objectives and design, (2) instructor competence, (3) teaching methods and implementation, (4) content and resources, and (5) outcomes and feedback—that collectively capture the core components of teaching quality.

Consequently, we developed a comprehensive evaluation indicator system comprising five first-level and twenty second-level indicators (Table 1).

Table 1. Initial Framework of a Comprehensive Evaluation Indicator System for the Implementation Effectiveness of Ideological and Political Education in University PE Courses.

Goal Level	Primary Indicators	Secondary Indicators	Evaluation Standards
Comprehensive Evaluation of Implementation Effectiveness of Curriculum Civics in University PE Courses (A)	Teaching Objectives and Design (B1)	C1 Clarity of Ideological Objectives	The degree to which ideological and political requirements, such as core socialist values and the spirit of sports, are concretized and operationalized in course objectives
		C2 Diversity of Objectives	The extent to which knowledge, skills, and values are integrated into course goals
		C3 Ability of Student Needs Analysis	The capacity to design differentiated teaching for diverse student groups
		C4 Curriculum Civics Teaching Design	Systematic integration of ideological elements into syllabi, lesson plans, and teaching outlines
	Teaching Competence of Instructors (B2)	C5 Political Literacy of Teachers	Political stance, professional ethics, and moral conduct
		C6 Digital Teaching Competence	Ability to use information technology to strengthen ideological and political effectiveness
		C7 Ability to Extract Ideological Elements	Incorporation of elements from sports history, sportsmanship, and related contexts
		C8 Interdisciplinary Collaboration Competence	Capacity to cooperate with political theory teachers and student counselors
	Teaching Methods and Implementation (B3)	C9 Diversity of Teaching Methods	Use of case studies, situational simulations, and other varied pedagogical approaches
		C10 Classroom Interactivity	Degree of student participation and depth of classroom discussions
		C11 Application of Digital Tools	Utilization of smart classrooms, online platforms, and digital resources

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Teaching Content and Resources (B4)	C12 Classroom Organization and Management	Maintenance of classroom discipline and creation of an ideological and political atmosphere
	C13 Integration of Ideological Elements	Extent of embedding ideological content in teaching cases, such as sportsmanship
	C14 Richness of Teaching Resources	Availability of textbooks, videos, case databases, and other supporting materials
	C15 Proportion of Practical Teaching	Inclusion of experiential activities such as volunteering at sports events
	C16 Integration of Industry Trends and Policies	Integration of national strategies such as *Building China into a Leading Sports Nation*
Teaching Outcomes and Feedback (B5)	C17 Enhancement of Political Literacy	Improvement in patriotism, teamwork, and other ideological qualities
	C18 Integration of Professional Knowledge and Values	Ability of students to analyze problems from an ideological and political perspective
	C19 Teaching Satisfaction	Feedback from students, peer evaluations, and teaching assessments
	C20 Social Impact	The extent to which course achievements influence and benefit society

3.4. Data Collection Procedures

Two rounds of expert consultation were conducted using structured questionnaires distributed via WeChat and email.

Round 1: Sixteen questionnaires were distributed, and fifteen valid responses were returned, yielding a recovery rate of 93.75%, indicating a satisfactory level of participation. Key feedback included:

Adding a new dimension, "Continuous Improvement Mechanism", under the first-level indicator Teaching Outcomes and Feedback (B5), with the criterion defined as "dynamic optimization of the ideological and political case database through student evaluations," to enhance the system's adaptability.

Merging C4 (Curriculum Civics Teaching Design) and C13 (Integration of Ideological Elements) into a new indicator, "Systematic Integration of Ideological Elements", with the criterion "progressive design of ideological elements explicitly reflected in the syllabus," to reduce redundancy.

Replacing C16 (Integration of Industry Trends and Policies) with "Proportion of Cases Related to the Sports Power Strategy" and redefining C20 (Social Impact) as "Number of Media Reports" or similar quantitative measures, improving both disciplinary relevance and operational feasibility.

Round 2: Sixteen questionnaires were distributed, and fourteen valid responses were returned, yielding a recovery rate of 87.5%. Experts focused primarily on the revisions from Round 1. One recommendation addressed potential overlap between the merged C4 and C1 (Clarity of Ideological Objectives), which could result in redundant evaluation. Consequently, C1 was redefined as "Normativeness of Goal Expression", with the criterion "coverage rate of ideological and political keywords in the syllabus," while C4 was revised to "Systematic Design of Goals", with the criterion "number of connection points between ideological elements and sports skills in lesson plans." These revisions were adopted, producing the finalized evaluation indicator system (Table 5).

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3.5. Analytic Hierarchy Process (AHP) and Weight Assignment

The AHP method was applied to determine the relative importance of the indicators. Using Saaty's 1–9 scale, experts performed pairwise comparisons of indicators at the same level. Mean values of expert judgments were used to construct the integrated judgment matrix. The scale of relative importance and its definitions are presented in Table 2.

Table 2. Scale of Relative Importance in the Analytic Hierarchy Process (AHP).

No.	Meaning of the Scale	Value
1	Elements *i* and *j* are equally important	a_{ij}=1
2	Element *i* is slightly more important than element *j*	a_{ij}=3
3	Element *i* is obviously more important than element *j*	a_{ij}=5
4	Element *i* is strongly more important than element *j*	a_{ij}=7
5	Element *i* is absolutely more important than element *j*	a_{ij}=9
6	The importance of *i* vs. *j* falls between the above judgments.	a_{ij}=2,4,6,8
7	If the relative importance of element *i* to element *j* is a_{ij}, then the relative importance of *j* to *i* is the reciprocal	Reciprocal

3.5.1. Determination of Indicator Weights

To comprehensively evaluate the effectiveness of ideological and political integration in university PE courses (Evaluation A), a matrix was constructed using the five first-level indicators: teaching objectives and design (B1), teaching competence (B2), teaching methods and implementation (B3), teaching content and resources (B4), and teaching outcomes and feedback (B5). Mean values of relative importance ratings from 14 experts were used to generate the integrated matrix (Table 3). Indicator weights at different levels were calculated by deriving the maximum eigenvalue of the pairwise comparison matrix, with the corresponding normalized eigenvector used as the weight vector.

Table 3. Pairwise Comparison Judgment Matrix of First-Level Indicators.

First-Level Indicators	Teaching Objectives and Design	Teaching Competence of Instructors	Teaching Methods and Implementation	Teaching Content and Resources	Teaching Outcomes and Feedback
Teaching Objectives and Design	1.0	1.3197	1.8964	1.5187	0.5017
Teaching Competence of Instructors	0.7578	1.0	1.6337	1.1764	0.456
Teaching Methods and Implementation	0.5273	0.6121	1.0	0.5147	0.5118
Teaching Content and Resources	0.6585	0.8501	1.9431	1.0	0.5024
Teaching Outcomes and Feedback	1.9932	2.1931	1.9538	1.9903	1.0

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(1) Based on the above table, the integrated judgment matrix *I* is obtained.

$$I = \begin{bmatrix} 1.0 & 1.3197 & 1.8964 & 1.5187 & 0.5017 \\ 0.7578 & 1.0 & 1.6337 & 1.1764 & 0.4560 \\ 0.5273 & 0.6121 & 1.0 & 0.5147 & 0.5118 \\ 0.6585 & 0.8501 & 1.9431 & 1.0 & 0.5024 \\ 1.9932 & 2.1931 & 1.9538 & 1.9903 & 1.0 \end{bmatrix}$$

(2) Each row element of *I* is multiplied to form a new vector *B*.

$$B = \begin{bmatrix} 1.9069 \\ 0.6641 \\ 0.0850 \\ 0.5465 \\ 16.9984 \end{bmatrix}$$

(3) Each component of vector *B* is then raised to the fifth root to obtain the eigenvector *M*.

$$M = \begin{bmatrix} 1.1378 \\ 0.9214 \\ 0.6108 \\ 0.8862 \\ 1.7623 \end{bmatrix}$$

(4) The resulting vector *M* is normalized to yield the weight vector *W*.

$$W = \begin{bmatrix} 0.2139 \\ 0.1732 \\ 0.1148 \\ 0.1666 \\ 0.3314 \end{bmatrix}$$

(5) The maximum eigenvalue λ_{max} is calculated, where the computation principle involves multiplying each row element of the matrix by its corresponding weight.

$$IW = \begin{bmatrix} 1.0 & 1.3197 & 1.8964 & 1.5187 & 0.5017 \\ 0.7578 & 1.0 & 1.6337 & 1.1764 & 0.4560 \\ 0.5273 & 0.6121 & 1.0 & 0.5147 & 0.5118 \\ 0.6585 & 0.8501 & 1.9431 & 1.0 & 0.5024 \\ 1.9932 & 2.1931 & 1.9538 & 1.9903 & 1.0 \end{bmatrix} \times \begin{bmatrix} 0.2139 \\ 0.1732 \\ 0.1148 \\ 0.1666 \\ 0.3314 \end{bmatrix} = \begin{bmatrix} 1.0796 \\ 0.8701 \\ 0.5890 \\ 0.8444 \\ 1.6937 \end{bmatrix}$$

$$\lambda_{max} = \frac{1}{n}\sum_{i=1}^{n}\frac{[IW]_i}{W_i} = \frac{1}{5}\left(\frac{1.0796}{0.2139} + \frac{0.8701}{0.1732} + \frac{0.5890}{0.1148} + \frac{0.8444}{0.8444} + \frac{1.6937}{0.3314}\right) = 5.0755$$

(6) Consistency Test.

Since the experts' judgments regarding the relative importance of indicators are inherently subjective, contradictions may arise within the pairwise comparison matrix. Therefore, it is necessary to test the consistency of the matrix. In practice, the consistency ratio (CR) is commonly used to determine whether the pairwise comparison matrix meets the consistency requirement. According to the reference table of average random consistency indices (Table 4), the random index for a 5-order matrix is R_I=1.12，CR<0.1，the judgment matrix satisfies the consistency condition.

$$CI = \frac{\lambda_{max} - n}{(n-1)} = \frac{5.0755 - 5}{5 - 1} = 0.0189$$

$$CR = \frac{CI}{RI} = \frac{0.0189}{1.12} = 0.0168 < 0.1$$

Table 4. Average Random Consistency Index (RI) for Judgment Matrices of Different Orders.

Matrix Order (n)	1	2	3	4	5	6	7	8	9	10	11	12
RI Value	0	0	0.52	0.89	1.12	1.26	1.36	1.41	1.46	1.49	1.52	1.54

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3.5.2. Hierarchical Overall Ranking

Following the same procedure and calculation method used for the first-level indicators, the sub-weights of the second-level indicators were determined. The results indicate that all second-level indicators have consistency ratio (CR) values below 0.1, confirming that their judgment matrices meet the consistency criterion. Consequently, the sub-weights and overall weights of the evaluation indicators for ideological and political education in PE courses were established, as shown in Table 5.

Table 5. Comprehensive Evaluation of the Implementation Effectiveness of Ideological and Political Education in University Physical Education Courses.

Goal Level	Primary Indicators	Weight	Secondary Indicators	Evaluation Standards	Weight	Final Weight
Comprehensive Evaluation of Implementation Effectiveness of Curriculum Civics in University PE Courses (A)	Teaching Objectives and Design (B1)	21.39%	C1 Normativity of Goal Statement	Coverage rate of ideological and political keywords in the syllabus	22.67%	4.85%
			C2 Diversity of Objectives	Integration of knowledge, skills, and values across three dimensions	28.44%	6.08%
			C3 Ability of Student Analysis	Differentiated design for diverse student groups	34.14%	7.30%
			C4 Systematicity of Goal Design	Connection points between ideological elements and sports skills in lesson plans	14.75%	3.16%
			C5 Teachers' Political Literacy	Political stance and professional ethics of instructors	39.99%	6.93%
	Teaching Competence of Instructors (B2)	17.32%	C6 Digital Teaching Competence	Enhancement of ideological and political effects through information technology	17.85%	3.09%
			C7Ability to Integrate Ideological and Political Elements	Integration of ideological elements with sports history and sports spirit	25.47%	4.41%
			C8 Interdisciplinary Collaboration Ability	Collaboration with ideological and	16.69%	2.89%

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Goal Level	Primary Indicators	Weight	Secondary Indicators	Evaluation Standards	Weight	Final Weight
				political instructors and student counselors		
			C9 Diversity of Teaching Methods	Case-based teaching, scenario simulations, etc.	22.21%	2.55%
			C10 Classroom Interactivity	Student participation and depth of discussion	28.46%	3.27%
	Teaching Methods and Implementation (B3)	11.48%	C11 Application of Digital Tools	Application of smart classrooms and online platforms	15.32%	1.76%
			C12 Teaching Organization and Management	Classroom discipline and cultivation of ideological and political atmosphere	34.01%	3.90%
			C13 Abundance of Course Resources	Richness of teaching resources (textbooks, videos, case libraries, etc.)	33.81%	5.63%
	Teaching Content and Resources (B4)	16.66%	C14 Proportion of Practical Teaching	Proportion of practical teaching (e.g., sports event volunteering)	26.46%	4.41%
			C15 Integration of Industry Trends and Policies	Proportion of cases related to the “Sports Power” policy	39.72%	6.62%
			C16 Improvement of Students’ Ideological and Political Literacy	Enhancement of patriotism, teamwork, and ideological literacy	28.21%	9.35%
	Teaching Outcomes and Feedback (B5)	33.14%	C17 Integration of Professional Knowledge and Values	Application of ideological and political perspective in problem analysis	23.23%	7.70%

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Goal Level	Primary Indicators	Weight	Secondary Indicators	Evaluation Standards	Weight	Final Weight
			C18 Teaching Satisfaction	Student and peer evaluation of teaching	21.58%	7.15%
			C19 Social Influence	Number of media reports	11.61%	3.85%
			C20 Mechanism of Continuous Improvement	Dynamic optimization of the ideological and political case database through student evaluations	15.37%	5.09%

As presented in Table 5, the evaluation system comprises five first-level indicators and twenty second-level indicators. The importance ranking of the first-level indicators is as follows: Teaching Outcomes and Feedback (33.14%), Teaching Objectives and Design (21.39%), Teaching Competence of Instructors (17.32%), Teaching Content and Resources (16.66%), and Teaching Methods and Implementation (11.48%). Notably, the combined weight of Teaching Outcomes and Feedback and Teaching Objectives and Design exceeds 50%, considerably higher than that of the other indicators. At the second-level, the most critical indicators are Improvement of Students' Ideological and Political Literacy (9.35%), Integration of Professional Knowledge and Values (7.70%), and Student Analysis Ability (7.30%). These findings suggest that experts regard Teaching Outcomes and Feedback and Teaching Objectives and Design as the most pivotal factors in evaluating IPE in PE courses, reinforcing the principle that physical education should not only focus on skill acquisition but also aim to cultivate well-rounded talents across moral, intellectual, physical, aesthetic, and labor domains.

Overall, the indicator system reflects the general requirements of ideological and political education while highlighting the distinctive features of PE. The weight distribution emphasizes the internalization of values during sports skill development and the instructor's capacity to transform sports spirit and culture into educational resources. This orientation encourages a shift from traditional skill-centered PE to a "value-based education through sports" approach, providing substantial support for cultivating well-rounded talents in the contemporary era.

4. Conclusions

This study developed a scientific and operational evaluation indicator system for IPE in university PE courses. Utilizing the Delphi method and AHP, five first-level indicators and twenty second-level indicators were identified, with corresponding weights assigned. The results highlight Teaching Outcomes and Feedback (33.14%) and Teaching Objectives and Design (21.39%) as the core evaluation dimensions, with Improvement of Students' Ideological and Political Literacy (9.35%) carrying the highest weight, underscoring the importance of value internalization and goal orientation.

The developed system addresses the limitations of traditional PE evaluation, which often overemphasizes technical skills while neglecting moral education. It provides a quantitative tool for optimizing teaching strategies and enhancing the quality of ideological and political education. Key features of the system include the integration of sports spirit with ideological elements (e.g., the proportion of cases related to the "Sports Power" policy) and a dynamic improvement mechanism

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(e.g., updating the case database). Consistency testing (CR < 0.1) confirmed the scientific validity of the indicators, offering practical guidance for implementing value-based education through sports in universities. Moreover, the framework provides a reference point for evaluating IPE across other disciplinary courses.

Future research should focus on empirical validation of the indicators' effectiveness and explore the relationship between digitalized teaching methods and outcomes in ideological and political education.

5. Ethical Considerations

This study adhered to standard academic ethical procedures. All experts participated voluntarily and provided informed consent prior to the consultation rounds. Responses were anonymized and used exclusively for research purposes to ensure confidentiality and minimize potential conflicts of interest. Ethical approval was obtained from the university's Academic Committee on Educational Research.

6. Transparency and Replicability

To facilitate replicability, detailed indicator frameworks, judgment matrices, and weight calculation procedures are documented in the appendices. Consultation questionnaires and raw scoring data are available upon reasonable request, enabling other researchers to replicate, validate, or extend the evaluation system in different disciplinary contexts.

References

Chunxia, X. (2021). Curriculum ideological and political evaluation system for universities based on SWOT analysis. *2021 International Conference on Education, Information Management and Service Science (EIMSS)*, 66–70. https://doi.org/10.1109/EIMSS53851.2021.00023

Feng, X., Zhang, N., Li, J., & Nan, J. (2024). *Research on the construction of ideological and political education teaching evaluation system in university courses–taking public finance as an example*. https://doi.org/10.32629/rerr.v6i1.1595

Guo, Z., & Zhang, Y. (2022). Study on the interactive factors between physical exercise and mental health promotion of teenagers. *Journal of Healthcare Engineering*, *2022*, 1–4. https://doi.org/10.1155/2022/4750133

Hong, P. S. (2023). Rational practice and deep reflection on integrating ideological and political theory courses into college physical education teaching. *International Journal of Science and Engineering Applications*, 144–146. https://doi.org/10.7753/ijsea1204.1048

Liu, M. (2023). Ideological and political evaluation of English courses in heterogeneous campuses based on UAV network. *Journal of Multimedia Information System*, *10*(3), 279–290. https://doi.org/10.33851/JMIS.2023.10.3.279

Ludwiczak, M., & Bronikowska, M. (2022). Fair play in a context of physical education and sports behaviours. *International Journal of Environmental Research and Public Health*, *19*(4), 2452. https://doi.org/10.3390/ijerph19042452

Ma, Mengwei., Wang Xi, Li, J., & Zang, H. (2024). Research on the weight of the teaching evaluation index of" ideological and political theory education in courses" in nursing undergraduate professional course based on analytic hierarchy process. *Journal of Bengbu Medical University*, *49*(5), 690–694.

Mouratidou, K., Goutza, S., & Chatzopoulos, D. (2007). Physical education and moral development: An intervention programme to promote moral reasoning through physical education in high school students. *European Physical Education Review*, *13*(1), 41–56. https://doi.org/10.1177/1356336X07072675

Ouaddou, A., & Kanbaai, A. (2025). Developing life skills through physical education: Social skills and teamwork in moroccan secondary school students. *Central European Journal of Sport Sciences and Medicine*, *49*, 93–105. https://doi.org/10.18276/cej.2025.1-07

Song, L. (2025). *Research on the quality assessment model of ideological and political education in colleges and universities based on improved cluster analysis*. https://housingscience.org/2025/Issue%203/20253-695-IJHSA.pdf

 doi:10.20944/preprints202509.1035.v1

Tang, M., Qin, Y., & Jiang, L. (2023). Research on the teaching effectiveness evaluation of the integration of ideological and political education and insurance teaching in curriculum. *World Scientific Research Journal*, *9*(11), 70–75.

Wang, L., & Liu, J. (2023). Reflection on physical education teaching practice in colleges and universities from the perspective of curriculum ideology and politics. *International Journal of New Developments in Education*, *5*(5). https://doi.org/10.25236/IJNDE.2023.050502

Wang, N. (2021). Ideological and political education recommendation system based on AHP and improved collaborative filtering algorithm. *Scientific Programming*, *2021*, 1–9. https://doi.org/10.1155/2021/2648352

Wu, Li.. *AHP and FCE fusion method-based evaluation model for the teaching quality of ideological and political education in physical education courses*. Retrieved 26 August 2025, from https://housingscience.org/2025/Issue%204/20254-412-IJHSA.pdf

Zhang, L. (2023). Reform and Innovation of College Physical Education Courses from the Perspective of Ideological and Political Education. *Frontiers in Educational Research*, *6*(28). https://doi.org/10.25236/FER.2023.062821

Zhao, J. (2022). Cognitive structure of college students and teaching strategies of ideological and political education under educational psychology. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.892110

Zhou, W., Li, C., & Huang, S. (2023). Analysis on the dilemma and path of ideological and political implementation of theoretical courses in physical education in universities. *International Journal of New Developments in Education*, *5*(22). https://doi.org/10.25236/IJNDE.2023.052228