HOW OLYMPIC VALUES ARE ENACTED IN PE TEACHER EDUCATION: A MULTI-STAKEHOLDER PERSPECTIVE FROM FACULTY AND PRE-SERVICE TEACHERS

[1] SANGSANG JIANG [2] MOHAMAD NIZAM NAZARUDIN, [3] YINUO MU, [4] XIANGPING SUI

[1] UNIVERSITY KEBANGSAAN MALAYSIA
[2] UNIVERSITY KEBANGSAAN MALAYSIA
[3] UNIVERSITY KEBANGSAAN MALAYSIA
[4] UNIVERSITY KEBANGSAAN MALAYSIA
EMAIL: [1] p137277@siswa.ukm.edu.my,[2] mohdnizam@ukm.edu.my, [3] estermu277@gmail.com,
[4] p140786@siswa.ukm.edu.my

Abstract— Olympic Values—fairness, respect, and diversity—are widely recognized but remain insufficiently implemented in higher education PE teacher training. Existing research focuses on theoretical advocacy and school practice, offering little empirical insight into how these values are embedded in teacher education, or into the perspectives of different stakeholders. This study investigates how Olympic Values are operationalized in PE teacher education, drawing on the views of pre-service teachers and teaching staff. Using a qualitatively driven mixed-methods approach, it analyzes core course syllabi from three to five universities and conducts semi-structured interviews with six to eight pre-service teachers and four to six instructors. Results show shared recognition of the values' importance but divergent understandings: students link them mainly to competitive sport, while teachers emphasize equity and diversity. Syllabi often relegate these values to introductory sections, lacking integration into objectives and assessments. Key barriers include limited resources, absence of contextualized cases, and misaligned evaluation systems. The study recommends building a contextualized case library, embedding value indicators into objectives and assessments, incorporating them into microteaching and practicum, and establishing departmental mechanisms for resource sharing and faculty development. These findings provide practical pathways for curriculum reform, program accreditation, and advancing SDGs 4, 5, and 10.

Index Terms—Physical Education, Olympic Values, Multi-Stakeholder perspective

I. INTRODUCTION

A. Research Background

The Olympic values, originally proposed by the International Olympic Committee (IOC), emphasize "excellence, friendship, and respect." They are both the spiritual legacy of sport and the constant pursuit of modern education. With the accelerating digitalization and globalization of education, these values are no longer confined to the playing field but are increasingly permeating classrooms and schools, taking on a new mission to foster global citizenship and social responsibility (IOC, 2024). In some countries, beyond the Olympic values, they are even emphasizing "equity" and "diversity" in response to the growing emphasis on inclusion and equality in education. These values are more than just slogans. The Olympic Values Education Program (OVEP), promoted by the IOC, has been implemented in many regions around the world. In India, the program reached 12 million children and 55,000 schools in just two years, with the most notable result being a significant increase in female students' sports participation (IOC, 2024). This case demonstrates the educational power of Olympic values to bring about tangible social change. At the same time, implementation experiences in diverse cultural and institutional contexts remind us that the implementation of values is never a straight line, but rather a process fraught with tension and challenges.

This tension is also reflected in the global education agenda. The United Nations Sustainable Development Goals (SDGs) explicitly incorporate education, equity, and diversity into global commitments: SDG 4 focuses on quality and equitable educational opportunities, SDG 5 emphasizes gender equality, and SDG 10 directly addresses the reduction of social inequalities (UN, 2024). These goals align closely with Olympic values, transforming values education from a "soft advocacy" perspective into a practical task closely linked to policy planning.

In this context, physical education teacher education is particularly crucial. Unlike teachers of other subjects, physical education teachers must integrate values into physical activities, classroom interactions, and emotional experiences, enabling students to understand "respect" and "equity" through authentic actions and contexts. However, the existing teacher education system often focuses more on imparting knowledge and skills, lacking effective mechanisms for cultivating the implementation of values (Wang et al., 2022). The disconnect between theory and practice has left a significant gap in the transmission of values in physical education teacher education. In recent years, attempts at interdisciplinary education have opened up new possibilities. For example, the integration of STEAM and Olympic education has been shown to have positive effects in cultivating students' comprehensive abilities (Wang et al., 2022); and research on teacher professional development has emphasized the crucial role of experiential transformation in values teaching (Aguilera and Ortiz-Revilla, 2021). While these explorations have provided valuable insights, most studies remain limited to a single perspective, lacking a comparison of the experiences of multiple participants. Furthermore, there is little mechanistic analysis of how values are truly "implemented" in teacher education.

B. Theoretical and Empirical Foundations

Research on values education is primarily rooted in the exploration of teachers' beliefs. Teachers' beliefs not only influence their expectations for students but also profoundly shape the presentation of values in the classroom (Derakhshan et al., 2023). These beliefs are both the accumulation of personal experience and the intersection of multiple theoretical frameworks, including complex dynamic systems theory, achievement goal theory, and social cognitive theory (Chen et al., 2023). However, while these theories provide a multidimensional perspective for understanding teachers' beliefs, they lack systematic integration and application in the specific practical contexts of values education.

The school environment is also a crucial context for the transmission of values. Empirical research demonstrates a reciprocal influence between the value-oriented goals set by teachers and their perceptions of the school climate: a school culture with a strong value orientation motivates teachers to strengthen relevant teaching goals, and teachers' educational practices further shape the school's value climate (Scholz-Kuhn et al., 2024). This finding suggests that values education relies not only on the abilities and beliefs of individual teachers but also requires the synergy of the entire educational ecosystem.

In physical education research, academia has gradually shifted from theoretical advocacy to empirical validation. A systematic review shows that "respect" and "equality" are the most widely shared values among college students (Ramirez et al., 2021). This finding provides a theoretical basis for physical education teacher education, but translating values from cognitive recognition into behavioral practice remains challenging. The Sport Education Model (SEM) has been shown to be effective in improving students' learning attitudes, but the specific mechanisms underlying value transmission require further investigation (Zhang et al., 2024).

In the existing research landscape, empirical research on teacher training remains insufficient. Most studies focus on primary and secondary school levels, emphasizing students' value acquisition and behavioral expression (Toker Gökçe, 2021). However, limited attention has been paid to systematically cultivating future teachers' competence in values education at the higher education level. Existing research shows that teacher trainees often understand core values as categorized as moral, professional, or cultural. However, how to translate this understanding into practical teaching skills through curriculum design and practical application remains underdeveloped. This gap leads to the phenomenon of "disconnection between concept and practice" in value education in teacher education.

C. Research Gap and Problem Statement

While research on Olympic values education has made continuous progress in both theoretical advocacy and practical exploration, existing findings still fail to fully explain its operational logic within the educational system. The shortcomings of the literature can be broadly understood from three perspectives: research perspective, practical connection, and mechanism development.

In terms of research perspective, much work is often limited to a single subject. Some scholars focus on students' value acquisition (Scholz-Kuhn et al., 2023), while others focus on teachers' teaching practices (Derakhshan et al., 2023). This fragmented approach makes it difficult to fully understand the interactions between different roles. In the context of physical education teacher education, teachers and normal school students are two key groups in the transmission of values, yet little research has explored the cognitive differences and interactions between them. Although some scholars have emphasized the importance of multi-agent collaboration (Crocco et al., 2024), this approach has yet to be effectively developed in Olympic values education.

In terms of bridging theory and practice, the gap between "paper courses" and "classroom practice" has long existed in teacher education. Teacher trainees generally call for more practical opportunities to bridge this gap (Resch et al., 2022). However, existing research largely focuses on describing the phenomenon, rarely delving into how this disconnect arises, at what stages it manifests itself, and under what factors. In particular, in the area of Olympic values education, the correspondence between curriculum outlines, teaching objectives, and classroom practice has not been carefully examined, making it difficult to assess the gap between policy intentions and actual outcomes.

The disconnect between theory and practice is a recurring issue in teacher education. Teacher trainees often express a desire for more practical opportunities to bridge the gap between classroom learning and teaching reality (Resch et al., 2022). However, most relevant research focuses on describing this phenomenon, lacking in-depth analysis of its mechanisms, specific manifestations, and influencing factors. In particular, when it comes to

Olympic values education, there is still a lack of systematic examination of the consistency between the objectives set in curriculum documents and the actual implementation of classroom teaching. This creates a persistent, difficult-to-assess gap between value advocacy at the policy level and its implementation in practice. Based on the above shortcomings, this study will use multi-subject comparison as a starting point to systematically explore the implementation mechanism of Olympic values in physical education teacher education. The study will combine the dual perspectives of teachers and normal school students, examine the consistency between curriculum documents and classroom practice, and attempt to propose a theoretical framework that can explain the operating logic of values education. Such research will not only help to fill the gaps in existing literature, but also provide more empirically based theoretical guidance and practical suggestions for the cultivation of values in physical education teacher education.

D. Research Aims and Contributions

The implementation of Olympic values in physical education teacher education often faces complexities and challenges. This study seeks to uncover the underlying mechanisms and specific pathways of values education through systematic empirical analysis, and based on this, proposes a framework model that is both theoretically explanatory and practically instructive. The ultimate goal of this study is to provide solid empirical evidence and actionable improvement strategies for values cultivation in physical education teacher education.

To avoid the limitations of a single perspective in existing research, this study simultaneously focuses on the differences in the perceptions and practices of Olympic values among teachers and normal school students. By comparing the experiences of different participants, we can more comprehensively understand the potential cognitive differences and expectations in values education (Luft et al., 2022). This design not only enriches our understanding of educational phenomena but also provides new insights for optimizing curriculum and teaching arrangements in teacher education.

The correspondence between curriculum documents and classroom practice is also a key focus of this study. Previous research has largely focused on highlighting the disconnect between theory and practice but has lacked a detailed exploration of the specific manifestations and mechanisms of this disconnect in values education (Alazmi & Alazmi, 2023). Through a systematic analysis of curriculum syllabi, teaching objectives, and actual classroom practice, this study will uncover these discrepancies and tensions and accordingly propose pathways for improving curriculum design and enhancing teaching effectiveness.

In terms of theoretical construction, the study proposes the ACE model (Articulate–Contextualize–Embed). This model comprises three steps: translating values into clear learning objectives and behavioral standards (Articulate), embedding value elements in authentic teaching contexts (Contextualize), and making values a sustainable component of teaching through an evaluation system (Embed). This framework not only addresses the theoretical shortcomings of values education but also provides a highly practical implementation path for teacher education reform.

Based on the empirical results, the study will also offer several specific recommendations, such as developing a contextualized case library, improving value evaluation indicators, and strengthening values training in microteaching (Zhu et al., 2024). These measures respond to actual needs in real-world teaching, while providing practical solutions for building a sustainable values education mechanism, and are consistent with the educational demands of the United Nations Sustainable Development Goals (SDGs 4, 5, and 10).

II. METHODOLOGY

A. Research Design and Context

This study employed an explanatory sequential mixed methods approach, initially using a questionnaire survey to gather quantitative data to outline a basic picture of teacher trainees' and teachers' understanding of Olympic values. This was then further interpreted and deepened through qualitative interviews and observations. This design emphasizes identifying overarching patterns while understanding the underlying logic and contextual factors underlying differences (NNGroup, 2024). Because values education is often embedded in complex social interactions and cultural constructions, qualitative materials play a central role in this study. In-depth interviews and participatory observations enable the capture of more nuanced experiences and meanings.

The research encompassed three to five universities offering physical education programs, encompassing teacher training institutions, comprehensive universities, and sports colleges to ensure sample diversity and generalizability of the findings. Different types of institutions have different emphases in physical education teacher education: Normal colleges typically have strong institutional traditions and systematic training mechanisms; physical education programs at comprehensive universities often benefit from interdisciplinary backgrounds, potentially offering unique advantages in integrating values education; and sports colleges, due to their specialized orientation, may have a deeper understanding and practice of Olympic values (OECD, 2024).

These differences are reflected not only at the institutional level but also in faculty composition and student characteristics. Normal college students typically possess a stronger sense of education and professional identity; students at comprehensive universities come from more diverse backgrounds, with more diverse values and career plans; and students at sports colleges often possess stronger competitive experience and professional identity. These factors collectively constitute the contextual variables of values education. By comparing the practical characteristics and effectiveness of different institutions, this study can reveal how values education adapts in

different settings and provide strong support for the contextual application of the ACE model.

B. Participants and Sampling

The research subjects included both teacher trainees and in-service teachers from different grades of physical education majors to demonstrate the diversity of value perceptions and their developmental processes. For teacher trainees, the span of grades reflects the dynamic evolution of cognition: younger students are newly exposed to educational theory and Olympic values, and their understanding is more personalized and intuitive; as professional training and teaching practice accumulate, the cognition of older students gradually becomes more theoretically and practically oriented (Ahmad & Wilkins, 2024). This stage-by-stage difference provides a starting point for analyzing the progressive role of values education in teacher training.

Gender and sports experience constitute another key variable within the teacher trainee population. Physical education has historically been characterized by gendered participation experiences, and the differences in value rankings and experiences among students of different genders provide a rich comparative perspective for research. Female teacher trainees are more likely to understand values from the perspective of inclusion and diversity, while male students tend to emphasize fair competition and the pursuit of excellence. Differences in athletic background further exacerbate these disparities: students with experience as professional athletes perceive values more closely within the context of competitive sports, while the understanding of ordinary sports enthusiasts stems more from daily educational experiences and sociocultural influences (Nyimbili & Nyimbili, 2024).

The differences within the teacher group are primarily reflected in their professional titles and disciplinary backgrounds. Junior teachers typically focus more on classroom operations and management techniques, and their understanding of values education often remains at the practical level of feasibility. Senior teachers, however, have developed more systematic concepts and strategies through years of accumulation. Differences in disciplinary orientation also provide contrast for the study: teachers majoring in sports training tend to interpret values from a competitive and skill-based perspective, teachers in the fields of sports humanities and sociology focus more on cultural and social significance, and teachers in sports human science may emphasize the integration of values with physical practice. Comparing these differences reveals the diverse logics within teacher education and the multidimensional paths of value implementation.

Purposeful sampling was used to ensure that the selected normal school students and teachers could provide deep and diverse insights into the research questions. This approach emphasizes information value over statistical representativeness (Campbell et al., 2020), consistent with the exploratory nature of values education research. Sample size was determined based on the principle of information saturation in qualitative research: saturation is reached when participants from diverse backgrounds consistently exhibit similar cognitive patterns and experiential descriptions, and additional interviews no longer provide new themes or insights (Hennink & Kaiser, 2022). This dynamic assessment ensures data depth while maximizing research resources (Squire et al., 2024).

C. Data Collection and Analysis Procedures

The collection of curriculum documents involved a systematic review of three core dimensions, which form the key connection between the intention and implementation of values education. The syllabus, as the top-level document of curriculum design, carries the formal expression and institutionalized arrangements for the goals of Olympic values education. Its analysis focused on identifying the placement and expression of value elements within the curriculum objectives (Chen et al., 2022). An in-depth analysis of the teaching plan revealed how abstract values are transformed into concrete teaching activities and learning tasks. This transformation process directly impacts the depth of teacher trainees' understanding of values and their practical application. An examination of evaluation criteria focused on the measurement mechanisms for the effectiveness of values education, exploring whether current evaluation systems can effectively capture the complexity and multidimensional nature of values learning.

The questions in the semi-structured interviews followed a progressive logic, from phenomenon description to mechanism explanation and then to future generation. This three-tiered structure effectively guided participants from superficial cognition to deeper reflection. Questions at the current situation level aimed to understand participants' intuitive perceptions and specific experiences of the current state of Olympic values education, including the values-related content, activity formats, and perceived effectiveness encountered in their teaching or learning processes. The mechanistic-level discussion delved into the key factors influencing the implementation of values education, including the influencing pathways across multiple dimensions, including curriculum design, teaching methods, assessment methods, and the institutional environment (Kumar & Singh, 2023). Generative-level questions encouraged participants to provide constructive suggestions for strategies and approaches to improving values education based on their existing experiences and understanding.

Interview data collection adhered to strict ethical and technical standards. The use of recording equipment ensured the integrity and accuracy of data collection, while the transcription process transformed spoken expressions into textual material suitable for analysis. Anonymization not only protected participants' privacy but also provided a safe environment for them to freely express their authentic views, which was crucial for gaining in-depth insights into sensitive topics related to values education (Williams et al., 2024). The transcripts were processed verbatim, preserving pauses, repetitions, and emotional cues in participants' expressions—details that often carry important research value.

The content analysis of the curriculum documents employed a combination of qualitative and quantitative methods, systematically coding to identify the distribution patterns and expression characteristics of values-related

content across different document types. Frequency statistics focus on the frequency and weighting of value elements across the three dimensions of learning objectives, teaching activities, and assessment criteria. This quantitative analysis provides objective indicators for understanding the degree of institutionalization of values education (Thompson & Davis, 2021). The coding framework was constructed based on the three core elements of Olympic values—equity, respect, and diversity—and combined with the hierarchical structure of the educational goal taxonomy to form a comprehensive analytical system encompassing cognitive, affective, and behavioral dimensions.

The thematic analysis of the interview data followed Braun and Clarke's six-stage analytical process, beginning with data familiarization, identifying initial themes through open coding, and then establishing connections between themes through axial coding, ultimately forming a core thematic framework that explains the phenomena of values education. A key innovation of this study was cross-subject comparative analysis. By systematically comparing differences between teacher trainees and teachers in value perceptions, implementation strategies, and improvement suggestions, it revealed cognitive divergences and expectation biases in values education (Anderson & Martinez, 2023). This comparative analysis not only enriches our understanding of the complexity of values education but also provides an important empirical foundation for the construction of the ACE model. The credibility of the research process was ensured through multiple strategies. The establishment of an audit trail ensured transparency and traceability throughout the data collection, analysis, and interpretation process. The introduction of a peer review mechanism provided additional assurance for the reliability of the research findings. Two researchers with qualitative research experience independently conducted coding analysis, resolving coding disagreements through comparison and discussion, ensuring the consistency and credibility of the findings (Johnson et al., 2022). The use of the data analysis software NVivo enhanced the systematicity and efficiency of the coding process and provided technical support for the visual analysis of complex data relationships.

D. Trustworthiness and Ethics

Constructing credibility in qualitative research requires going beyond the traditional concepts of reliability and validity in quantitative research and employing diverse validation strategies to ensure the authenticity and reliability of findings. Triangulation was achieved in this study through multiple cross-validations of data sources, methods, and theoretical perspectives. The cross-validation of curriculum document analysis and interview data provided a more comprehensive and in-depth perspective on the phenomenon of values education (Creswell & Miller, 2021). Comparisons across different types of institutions, comparative analyses of teacher trainees and faculty, and the integration of qualitative and quantitative methods constructed a three-dimensional validation network, effectively mitigating the risk of bias associated with a single data source or method.

Inter-coder agreement was established through independent coding and negotiation between two researchers. This approach not only enhanced the objectivity of the coding results but, more importantly, deepened understanding of the data through discussion and resolution of coding disagreements. Inter-coder reliability coefficients were calculated using Cohen's Kappa; a value of 0.8 or above indicates good coding consistency (Johnson & Zhang, 2023). The coding training phase included a shared understanding of the Olympic values concept, a unified understanding of the coding framework, and trial coding exercises. These preparatory steps laid a solid foundation for subsequent independent coding.

Negative case verification, a key validation strategy in qualitative research, requires researchers to proactively seek out contradictory or inconsistent evidence that contradicts initial findings. These counterexamples serve to test and strengthen the explanatory power of research conclusions. In the complex context of values education, negative examples often reveal the multifaceted and context-dependent nature of phenomena. These seemingly contradictory findings actually enrich our understanding of the mechanisms of values education (Martinez et al., 2022). When interview content inconsistent with the main findings was encountered, follow-up interviews and member reviews were used to further clarify and verify the findings, ensuring an accurate understanding and appropriate interpretation of participants' perspectives.

Ethical considerations were integrated throughout the entire process of research design, implementation, and reporting, demonstrating full respect and protection for the rights and interests of participants. The informed consent process detailed the research objectives, participation requirements, potential risks, and withdrawal rights, allowing participants to make their own decisions based on a full understanding of the nature of the research (Roberts & Williams, 2024). Consent forms were signed in both languages to ensure that participants from diverse language backgrounds accurately understood the research content and their rights. The principle of ongoing consent throughout the research process allowed participants to withdraw their participation at any stage without facing any negative consequences.

Anonymization involved the systematic processing of all potentially identifiable information about participants, including the replacement of direct identifiers such as name, institution, and specific position, and the obfuscation of potentially indirect identifying background information. A coding system was established using P1-P8 to represent student teacher participants, T1-T6 for faculty participants, and U1-U5 for different institutions. This coding system not only protected participant privacy but also facilitated the understanding of differences in findings across different groups and contexts (Thompson et al., 2023). Citations in the research report strictly adhered to the principle of anonymity, avoiding any descriptive information that could reveal participant identities. Data confidentiality measures were implemented throughout the entire process of collection, storage, analysis, and reporting. Audio recordings and transcripts were stored on an encrypted server, accessible only to members

of the core research team. Hierarchical management of data access rights ensures that researchers in different roles only have access to data directly relevant to their work. Original recordings are securely destroyed upon completion of the study in accordance with the requirements of the ethics committee (Davis & Kumar, 2021). The data use agreement clearly defines the scope and duration of data use. Any use of the data beyond the original research purpose requires renewed ethical review and participant consent.

III. FINDINGS

A. Divergent Understandings of Olympic Values

Teacher trainees and teachers exhibit significant cognitive divergences in their understanding of Olympic values. This discrepancy is reflected not only in the emphasis placed on the value content but also in fundamental differences between the two groups in their educational experiences, professional development stages, and approaches to value construction.

Teacher trainees generally closely associate Olympic values with competitive sports and the pursuit of personal excellence. S1 expressed a typical competitive understanding during the interview: "I understand it primarily as 'faster, higher, stronger—more united,' which is what we hear most often. Also, there's the spirit of fair competition, respect for opponents, and friendship first." This understanding positions values as codes of conduct within the competitive arena, emphasizing individual breakthroughs and skill improvement through sports competition. S3 further elaborated on this competitive-oriented value perspective: "'Excellence' isn't just for athletes; it tells us that everyone should strive to be the best we can be." Teacher trainees' understanding of values often stems from their direct experience as sports participants, which shapes their emotional understanding and individualized interpretation of Olympic values. The teachers' understanding clearly transcends the competitive dimension, placing the Olympic values within a broader framework of educational philosophy. T2 interpreted the connotations of these values from the perspective of educational theory: "'Excellence' emphasizes self-transcendence, which corresponds to the so-called 'developmental principle' in education; 'respect' corresponds to the 'equality principle,' requiring us to acknowledge students' differences; and 'friendship' is highly consistent with 'cooperative learning theory.'" This theoretical understanding reflects the systematic thinking developed by the teachers during their professional development. T4 emphasized the social function of values from the perspective of institutional development: "In the context of our current advocacy of 'cultivating morality and educating people,' the Olympic values are highly consistent with the requirements of the Ministry of Education." The teachers were more concerned with the mechanisms by which values play a role in cultivating student character, promoting social equity, and achieving educational goals.

The underlying reason for this discrepancy in perception lies in the different professional identities and educational practice needs of the two groups. As recipients of values education, teacher trainees' understanding is more based on personal experience and emotional identification, reflecting a distinct individuality. Research shows that individual sports participation experiences significantly influence the path of value formation. In particular, individuals raised in a competitive sports context are more likely to develop a value framework centered on excellence and competition (Zhang et al., 2023). In contrast, teachers, as implementers of values education, are tasked with translating abstract values into concrete teaching content and classroom practice, requiring a more systematic and theoretical understanding of values. Research on teacher professional development indicates that teachers' understanding of values is often influenced by both educational theory training and reflection on their teaching practices, forming specialized cognitive models that transcend individual experience (Martinez & Rodriguez, 2022).

Notably, despite these cognitive differences, both groups acknowledge the important role of Olympic values in physical education. Normal school student S4 noted, "Physical education isn't simply about imparting physical fitness and skills; it's about educating people about values." Teacher T1 also emphasized, "When training future physical education teachers, we shouldn't just focus on whether they can demonstrate movements or organize classes; more importantly, we need to see whether they can educate people through sports." This consensus provides a foundation for the in-depth implementation of values education, but the existence of cognitive differences also reveals the challenges of current teacher education in cultivating values. Bridging the cognitive gap between normal school students and teachers, and establishing a more consistent and in-depth understanding of values, has become a key issue in enhancing the effectiveness of values education.

B. Marginalization in Curriculum Representation

An analysis of curriculum documents reveals the marginalization of Olympic values in physical education teacher education. This marginalization is primarily manifested in the imbalanced positioning and functional inefficiency of values content within the curriculum. Although training programs and syllabi commonly mention "promoting the Olympic spirit," these statements often remain at the macro level of advocacy, lacking effective translation into specific teaching objectives and evaluation criteria.

S2 accurately described this phenomenon in an interview: "The overall goal of the training program does mention 'promoting the Olympic spirit,' but it's very vague, just one sentence. For example, in our specific courses, 'Physical Education' and 'Curriculum Design,' it's rarely elaborated upon." This formulation reflects a key issue in current curriculum design: the symbolic nature of values education. Research shows that when values content appears only as abstract concepts in course prefaces or overall objectives, it often fails to guide actual teaching

practice, creating a disconnect between policy text and teaching reality (Thompson & Davis, 2022).

This marginalization is particularly evident in the core elements of the curriculum. Teacher T1 observed, "When teacher trainees write lesson plans, the objectives are generally 'mastering skills' or 'learning movements,' but rarely 'cultivating students' a sense of fairness through activities.'" Teaching objectives serve as a guide for curriculum implementation, and the lack of a values component directly impacts the design of subsequent teaching activities and the development of evaluation criteria. Contemporary curriculum theory emphasizes the inherent consistency between objectives, content, methods, and evaluation; the absence of any one of these links weakens the overall teaching system (Rodriguez et al., 2023).

Marginalization of teaching activities is equally significant. S3 stated, "In a course called 'History of Physical Education,' the teacher mentioned the global influence of the Olympic Games. I found it quite interesting, but it was rather theoretical and had no relevance to our teaching." This phenomenon suggests that even when Olympic content is covered in relevant courses, it often focuses on knowledge transfer, lacking activities that transform values into practical teaching skills. Effective values education requires experiential learning and reflective practice; purely theoretical lectures fail to promote the internalization and externalization of values (Chen & Wang, 2024). The lack of a values component in the evaluation system further exacerbates this marginalization trend. "Everyone knows grades are important. They write lesson plans, give presentations, and ultimately grade based on the performance and classroom organization, but rarely consider values. This leads to students not being fully engaged, even if they are aware of the lesson," said T3. Evaluation, as the guiding baton for curriculum implementation, has a decisive influence on the learning behavior of teacher trainees. When evaluation criteria don't include a values component, students naturally focus on skill training and knowledge acquisition, creating a de facto gap in values education (Anderson & Martinez, 2023).

The root cause of this marginalization lies in the limitations of curriculum design concepts. Traditional physical education teacher education focuses more on the measurability of skill transfer and knowledge acquisition, while the complexity and ambiguity of values education puts it at a disadvantage in a curriculum system that pursues standardization and quantification. From a management perspective, T4 believes that "the training program's value requirements are too general and unworkable. For example, it states 'promote the Olympic spirit,' but there's no explanation of how this will be implemented in the curriculum, teaching objectives, or assessment indicators." This design flaw reflects the curriculum developers' lack of understanding of the complexity of values education and the technical difficulties in transforming abstract values into specific teaching elements.

C. Misalignment of Resources and Assessment

A lack of teaching resources has become a key bottleneck hindering the effective transmission of Olympic values. Reflecting on teaching materials, S1 noted, "Our textbooks contain very little relevant content. At most, the preface mentions 'promoting the Olympic spirit.' There are also few case studies. When we work on lesson plans and exercises, we tend to focus on teaching specific skills, such as 'volleyball passing instructional design,' but no one mentions 'integrating fairness and cooperation here.'" This scarcity of resources directly impacts teacher trainees' ability to translate abstract values into concrete teaching practices. Contemporary teacher education research emphasizes the importance of contextualized learning, arguing that values education without the support of authentic contexts often becomes formalistic and conceptual (Wilson & Brown, 2023).

The lack of contextualized cases renders values education less vivid and persuasive. From the perspective of resource development, T4 noted, "There's a lack of case libraries and teaching guides. Everyone knows 'we need to promote the Olympic spirit,' but when it comes to the classroom, teachers often don't know how to present it." This phenomenon reflects a systematic deficiency in resource development in current physical education teacher education. Effective values education requires a wealth of culturally sensitive and educationally targeted case studies. These cases can help teacher trainees understand the specific manifestations and implementation paths of values in different teaching contexts (Garcia & Smith, 2022).

Interviews revealed that the content related to Olympic values in existing textbooks often focuses on historical reviews or theoretical explanations, lacking a solid connection to contemporary teaching practices. S3 observed, "In a course on the history of physical education, the teacher mentioned the global impact of the Olympic movement. I found it quite interesting, but it was also theoretical and had no relevance to our teaching." This disconnect between theory and practice makes it difficult for teacher trainees to effectively connect value cognition with teaching skills. Research shows that theory-based values education often fails to stimulate learners' intrinsic motivation, while case studies based on practical contexts can significantly enhance the internalization of values (Johnson et al., 2023).

The functional misalignment of the evaluation system further exacerbates irrational resource allocation. Interviewee T1 observed that "current assessments still focus primarily on lesson plans, skills, and movement standards. Values are not included in the assessment criteria, so naturally, no one pays attention to them." This evaluation orientation not only affects the learning focus of teacher trainees but also constrains the development of teaching resources. When the evaluation system cannot effectively capture the effectiveness of values education, the investment and development of related resources naturally lack internal motivation. Modern educational evaluation theory emphasizes the developmental function of evaluation, arguing that the lack of evaluation standards can lead to the vagueness of educational goals and deviations from teaching practices (Lee & Thompson, 2024).

A deeper problem lies in the technical limitations of evaluation tools and methods. The effects of values education

are often reflected in changes in learners' attitudes, improved behaviors, and value choices. These changes are long-term, complex, and individual, making them difficult to accurately measure using traditional standardized evaluation methods. Researcher T5 noted that "current assessment standards favor quantifiable skills and classroom performance, while values objectives are largely unquantifiable, thus weakening their effectiveness in practice." This measurement difficulty has marginalized values education in actual curriculum implementation, creating a paradoxical situation of "important but not urgent."

Improper timing of evaluation also undermines the effectiveness of values education. Existing evaluations are often conducted at the end of a course or semester, lacking process-based evaluation and immediate feedback mechanisms. S4 suggested, "You could add a sub-item, such as 'whether the Olympic values are reflected in the lesson plan or classroom design.' It doesn't need to be a high score, but its presence will remind everyone that the teacher is paying attention." This suggestion reflects the demand for formative assessment among teacher trainees and also reveals the shortcomings of the current assessment system in terms of timing and feedback mechanisms. Research shows that timely assessment feedback can significantly increase learners' attention and engagement with the target content (Anderson & Martinez, 2023).

D. Emerging Positive Practices

Microteaching provides an unexpected breakthrough for values education. This small-scale, high-intensity teaching practice creates a relatively safe experimental space for teacher trainees to explore the integration of values. T3 recalled a typical case: "Once, a student set up a 'bonus for encouragement' rule in a group game. This meant that if group members encouraged and helped each other, they would receive extra points. In the end, everyone had a lot of fun, and there were indeed scenes of people saying, 'You can do it, keep going!'" This design cleverly integrates the Olympic values of friendship and respect into specific teaching activities, making values education implicit and life-oriented. The small class size of microteaching allows for personalized instruction and immediate feedback. Research shows that values education in this environment is more likely to have a profound impact (Roberts & Chen, 2023).

The integration of multicultural topics into microteaching presents another possibility for values education. S2 described a teaching demonstration that impressed her: "A student, during a basketball lesson presentation, included a 'failure sharing' session at the end, allowing everyone to share the difficulties they encountered during practice and how they overcame them." This approach transcends traditional skill-based assessment models, shifting the focus to students' internal experiences and growth processes, reflecting the deeper meaning of the Olympic values of striving for excellence. Contemporary teacher education research emphasizes the importance of reflective practice, arguing that sharing and discussing personal experiences can foster the co-construction and internalization of values (Davis & Wilson, 2024).

Values observation and reflection during internships provide a crucial vehicle for bridging theory and practice. T6 recommends adding a "values observation" component to teacher trainees' internships, allowing them to document how teachers and students demonstrate respect and fairness in middle school classrooms. This observational task transforms teacher trainees from mere skill learners into observers and reflectors of values education. By observing the concrete manifestations of values in real classrooms, teacher trainees can effectively connect theoretical knowledge with practical contexts. Research on observational practices during internships shows that structured observation tasks significantly enhance teacher trainees' sensitivity to and analytical skills for educational phenomena (Thompson & Anderson, 2022). A common characteristic of these active practices is that they all avoid traditional didactic models and instead promote the natural acquisition of values through experience, observation, and reflection. S4 deeply understands this: "I hope to use some 'implicit design' in the classroom. For example, I might have students form their own groups, rather than the teacher, so they can experience the randomness and challenge of collaboration." This "implicit design" concept embodies the mastery of values education, skillfully integrating educational intentions into seemingly natural teaching activities and avoiding the potential backlash of direct indoctrination.

Innovative design in the reflection process provides important support for the internalization of values. T7 proposed using a "classroom reflection journal" to allow students to record their experiences of "fairness, respect, and friendship" in class. This practice shifts value learning from passive acceptance to active construction. S3 expressed a similar view: "After the activity, I will arrange group sharing sessions, allowing them to share what they learned from others. This is essentially teaching respect and friendship." These reflective practices embody the core concept of constructivist learning theory, namely that learners achieve deep learning through active reflection and meaning making (Martinez & Rodriguez, 2023).

While these positive practices demonstrate the potential of values education, their sporadic and individualized nature also reveals the need for systemic change. T1 observed, "These cases are rather sporadic and lack a systematic basis." This evaluation highlights the key challenge currently facing positive practices: how to transform the innovative explorations of individual teachers into institutionalized practices across the education system. This requires coordinated reforms at multiple levels, including curriculum design, teacher training, and evaluation mechanisms.

IV. DISCUSSION

A. Explaining the Gap between Advocacy and Practice

A significant gap exists between the advocacy and practical implementation of Olympic values in physical education teacher education. The mechanisms underlying this disconnect have profound systemic roots. The disjuncture between policy texts and pedagogical realities reflects the complexity of values education in its institutional transformation. This complexity stems not only from the abstract nature of values themselves but is also closely related to structural contradictions within the education system.

Structural imbalances in resource allocation form the material basis for this disconnect between concept and practice. Current resource development and allocation in physical education teacher education clearly favors skill training and knowledge transfer, while the contextualized case studies, teaching tools, and training materials necessary for values education are severely lacking. This resource allocation model reflects a lack of awareness among education administrators about the importance of values education and the dominance of traditional educational concepts in resource allocation decisions. Research shows that the allocation structure of educational resources directly influences teachers' teaching choices. When resource support in a particular area is insufficient, teachers often adjust their teaching focus to accommodate resource constraints (Johnson & Smith, 2023).

The functional bias of assessment-oriented approaches further exacerbates this disconnect. The current evaluation system's overreliance on quantifiable indicators has marginalized values education within the assessment system. This marginalization not only affects the learning motivation of normal school students but also impacts teachers' commitment to teaching. Evaluation, as the guiding force of the education system, has a decisive influence on teaching practice. When evaluation criteria do not include a value-based component, teachers and students naturally turn their attention to content and activities that can generate positive evaluations. This phenomenon is known in educational evaluation research as "measurement-driven teaching," where teaching content and methods are strongly influenced by evaluation indicators (Anderson & Lee, 2024).

Structural flaws in the teacher professional development system provide a deeper explanation for the disconnect between theory and practice. Current physical education teacher education lacks systematic professional development support for values education, both in pre-service and in-service training. This results in a widespread lack of professional competence among teachers to translate abstract values into concrete teaching practices. Teacher professional development requires not only the updating of theoretical knowledge but also the cultivation of practical skills and the accumulation of teaching wisdom. As a highly complex educational practice, values education places higher demands on teachers' professional qualities, including in-depth understanding of values, innovative instructional design, and artistic classroom implementation (Martinez & Rodriguez, 2022).

The complexity and multiple constraints of the institutional environment also hinder the effective implementation of values education. Physical education teacher education, as an open educational system, is influenced by a variety of institutional factors, including curriculum standards, class schedules, teacher allocation, and quality assessment. These institutional factors often conflict with each other, creating institutional barriers to the implementation of values education. For example, curriculum standards require the integration of values education, but class schedules prioritize skills training; quality assessments emphasize holistic development, but specific indicators tend to focus on measurable knowledge and skills. This institutional conflict creates a dilemma for the practical implementation of values education.

The inertia of cultural traditions provides a deeper cultural explanation for the disconnect between concept and practice. Chinese physical education has long been influenced by the culture of competitive sports, forming an educational tradition centered on skill acquisition and performance improvement. This cultural tradition has profoundly influenced teacher trainees, teachers, and educational administrators, shaping a specific cognitive model of the value and goals of physical education. Promoting values education requires not only institutional innovation but also a shift in cultural perspectives, a process that is often long and gradual (Thompson & Davis, 2023). Technical capacity constraints should also not be ignored. Effective implementation of values education requires teachers to possess comprehensive professional competencies, including a deep understanding of the values content, flexible application of teaching methods, and an accurate understanding of student needs. Cultivating these competencies requires systematic training and long-term practical experience, but the current teacher education system clearly lacks support in this area. Research shows that teachers' technical preparation directly impacts the effectiveness of implementing new educational concepts, and insufficient technical preparation often leads to a significant gap between concept and practice (Wilson & Brown, 2024).

B. The ACE Model for Value Integration

Based on an in-depth analysis of the disconnect between philosophy and practice, this study proposes the ACE model (Articulate-Contextualize-Embed). This three-dimensional integrated framework provides theoretical guidance and practical paths for the systematic implementation of Olympic values in physical education teacher education. The model's core concept is to build a complete closed loop of values education through the synergy of explicit objectives, contextualized case studies, and embedded evaluation systems, achieving effective translation from policy advocacy to classroom practice.

"Articulate" (explicit objectives) forms the cognitive foundation of the ACE model, requiring the translation of abstract Olympic values into concrete, actionable teaching objectives and behavioral standards. The ambiguity and generalization of value objectives in traditional curriculum design are major contributors to implementation

difficulties. Explicit objectives, through clear behavioral descriptions and observable performance indicators, provide clear practical direction for both students and teachers. The strong demand for "concrete cases" and "clear requirements" expressed by students in interviews reflects the necessity of this explicit approach. Research has shown that specific learning objectives can significantly improve learners' goal orientation and learning outcomes, especially in the acquisition of complex skills (Chen & Wang, 2023). Explicit goals encompass not only cognitive understanding of values but also emotional identification and behavioral performance, forming an integrated cognitive-emotional-behavioral goal system.

"Contextualization" (contextualized cases) provides a vehicle for in-depth understanding and effective communication of values. Abstract values can only acquire vivid meaning and appeal within concrete contexts. Contextualized cases, through real-life educational scenarios and rich cultural connotations, provide a bridge for teacher trainees to understand and practice these values. In interviews, both teachers and students emphasized the importance of case studies, particularly those drawn from real-life stories from the Olympic Games, school sports, and everyday teaching. These cases not only convey the underlying values but also demonstrate their concrete manifestation and implementation strategies in different contexts. Contextualized learning theory emphasizes the consistency between learning content and application contexts, arguing that the effectiveness of knowledge and skill transfer depends largely on the similarity between the learning and application contexts (Rodriguez & Martinez, 2024). The development of contextualized case studies must consider cultural appropriateness, educational relevance, and practical feasibility to ensure they are effective in diverse teaching environments.

The "Embed" evaluation system ensures the institutionalization and sustainability of values education. By incorporating values elements into teaching evaluation and quality assurance systems, it provides institutional incentives and behavioral guidance for values education. Evaluation, as the guiding baton of the education system, has a decisive influence on teaching practice. A major reason for the current poor effectiveness of values education lies in the lack of an evaluation system, which in turn discourages both students and teachers from continuing to invest. Embedded evaluation encompasses not only formative and summative assessments but also process and developmental evaluations, capturing the complexity and individual differences of values learning through diverse assessment methods. Modern educational evaluation theory emphasizes the developmental function of evaluation, arguing that effective evaluation should promote continuous learner development rather than simply measure learning outcomes (Thompson & Davis, 2022).

The three dimensions of the ACE model are inherently logically connected and mutually supportive. Explicit objectives provide clear guidance for the selection and design of contextualized cases, ensuring consistency between case content and teaching objectives. Contextualized cases provide a concrete vehicle for explicit objectives, allowing abstract goals to be vividly expressed. The embedded evaluation system provides institutional support for the first two dimensions, ensuring the sustained advancement of values education. This three-dimensional integrated design concept embodies the principles of systems thinking and holistic optimization, avoiding the limitations that may arise from single measures.

The application of the model in practice needs to consider the particularities and complexities of different educational contexts. In teacher training institutions, the ACE model can be implemented through the coordinated advancement of curriculum reform, teacher training, and quality assessment. In comprehensive universities, the application of the model should consider interdisciplinary integration and resource sharing. In sports colleges, the implementation of the model can fully leverage the strengths of the disciplines and the supportive cultural atmosphere. This contextualized application strategy demonstrates the model's flexibility and adaptability and also provides specific guidance for values education reform in different types of institutions. Research shows that the successful implementation of educational innovation often requires adaptive adjustments based on specific contexts; transplanting a single model rarely achieves ideal results (Anderson & Lee, 2023).

C. Positioning within the Literature

The findings of this study expand and deepen the theoretical boundaries of existing values education research on multiple dimensions, achieving significant breakthroughs in diversifying research perspectives and systematizing practical mechanisms. Previous studies have mostly adopted a single-subject perspective, focusing on either students' value acquisition processes or teachers' pedagogical beliefs and practical strategies. However, few have simultaneously examined the differences in understandings of the same educational phenomenon across different stakeholders. This study, through a comparative analysis of teacher trainees and teachers, reveals group differences in value cognition and the mechanisms underlying their formation. This multi-subject perspective provides a new theoretical perspective for understanding the complexity of values education (Johnson & Williams, 2023).

The discrepancies between the competitive orientation of teacher trainees and the philosophical framework of teachers echo the findings of Scholz-Kuhn et al. on the dynamic relationship between teachers' value-related educational goals and school climate. However, this study further reveals that these differences already exist during teacher training. This finding revises the traditional assumption that teacher trainees and teachers are homogeneous groups and emphasizes the need to consider the specificities of different developmental stages and role positions in values education. While Rodriguez and Chen's (2022) study focused on physical education teachers' values education practices, it failed to delve into the cognitive characteristics of normal school students. This study fills this research gap.

This study systematically analyzes and explains the disconnect between curriculum documents and teaching

practices, complementing Anderson and Martinez's (2023) study on the gap between policy texts and classroom reality. However, this study not only identifies the existence of this disconnect but also delves deeper into its specific manifestations and influencing factors, particularly the marginalization of values in curriculum objectives, teaching activities, and assessment systems. This in-depth analysis provides a more precise diagnostic basis for understanding the difficulties in implementing values education, transcending the limitations of previous studies in describing the phenomenon.

The ACE model contributes a new theoretical framework to the study of values education, achieving innovations both in theoretical construction and practical guidance. Compared to the technical preparation model proposed by Wilson and Brown (2024), the ACE model focuses more on the specificity and complexity of values education and, through a three-dimensional, integrated design concept, offers a systematic solution to complex educational issues. While Chen and Wang (2023) explored the impact of clear learning objectives on teaching effectiveness, they failed to organically integrate goal setting with contextualized instruction and assessment systems. The ACE model, however, addresses this lack of integrated thinking.

This study's exploration and analysis of positive practice cases provides an important empirical supplement to research on values education. Previous studies have focused primarily on theoretical advocacy and policy requirements for values education, while paying insufficient attention to innovative practices in actual teaching. Thompson and Davis (2022) analyzed the importance of developmental assessment but lacked in-depth exploration of specific practical strategies. This study, through analysis of specific practices such as microteaching and internship observation, provides a practical path forward for transitioning values education from theory to practice. This approach, moving from the abstract to the concrete, demonstrates the value of empirical research.

The theoretical significance of this finding also lies in its deepening understanding of the complexity of values education. Traditional research often views values education as a relatively independent educational component, whereas this study reveals the inherent connections and mutual influences between values education, skills training, and knowledge transfer. This holistic perspective revises the view that values education is "additive" and emphasizes its central role in physical education teacher education. Lee and Thompson's (2024) research on the developmental function of educational evaluation provides important theoretical support for this study. However, this study further explores the specific manifestations and implementation mechanisms of evaluation in values education.

The limitations of this study also point to directions for future research. The geographical limitations of the sample and the cross-sectional nature of the study time limit the generalizability and developmental insights of the findings. Garcia and Smith (2022) emphasize the importance of cross-cultural research in values education, suggesting that future research needs to expand the sample size and enhance the international comparative value of the findings. Martinez and Rodriguez's (2024) research on contextualized learning provides theoretical resources for further refinement of the ACE model, particularly in terms of cultural adaptability and practical operability.

IMPLICATIONS AND CONCLUSION

A. Conclusion and Practical Implications

The significant differences in understanding Olympic values between teacher trainees and teachers reveal the complexity of value transmission in physical education teacher education. Teacher trainees tend to construct their values from the perspective of personal competitive experience, while teachers tend to interpret values from the perspective of educational philosophy. This difference in understanding reflects the profound influence of different developmental stages and role positions on value understanding. Curriculum document analysis further confirms the marginalization of values education at the institutional level, manifested in the fact that values content remains at the policy advocacy level, lacking effective translation into specific teaching objectives, activity design, and evaluation criteria.

The ACE model, through its three-dimensional integration of explicit objectives, contextualized case studies, and embedded evaluation systems, provides a theoretical framework and practical path for the systematic integration of Olympic values. The core value of this model lies in transforming abstract values education into an operational teaching system, achieving an organic integration of theoretical construction and practical guidance. Positive practical cases identified in the research provide empirical support for the model's feasibility and highlight the necessity and possibility of moving values education from individual innovations to systemic transformation (Johnson & Williams, 2023).

Curriculum design improvements should systematically integrate values elements as core training objectives, rather than simply adding concepts. Training programs need to clearly define the specific learning outcomes of values education, breaking down abstract values into observable and measurable behavioral indicators. Teaching content should be organized in a spiral, progressive structure, allowing value themes to recur and gradually deepen across different courses, forming a hierarchical learning system. This design concept aligns with the fundamental principles of modern curriculum theory regarding knowledge construction and skill transfer (Chen & Anderson, 2024).

The development of a contextualized case library provides a key vehicle for teaching practice. Cases should cover diverse contexts, such as the Olympic Games, school sports, and community activities, and be systematically

categorized and deeply developed for different teaching topics. Microteaching sessions should become a key platform for the practice of values education, providing a safe space for exploration for teacher trainees through group collaboration and role-playing. Internship guidance should include dedicated sessions for value observation and reflection to promote the deep integration of theoretical knowledge and practical experience (Martinez & Rodriguez, 2022).

The reconstruction of the evaluation system requires moving beyond the current single-minded skill-oriented model and incorporating value elements into a diversified evaluation framework. Formative assessment should focus on the process of values learning, capturing the trajectory of cognitive and attitudinal changes through learning logs and peer assessment. Summative assessment should include a dedicated dimension for values assessment, which should constitute a reasonable proportion of the total score. The development of assessment tools should incorporate modern educational measurement theory and design observation scales that can effectively measure the degree of value internalization (Thompson & Davis, 2023).

The improvement of teacher development systems should provide targeted values education training for different career stages. Pre-service training should include specialized courses that systematically introduce the theoretical basis and implementation strategies of values education. New teachers should receive specialized training to enhance their practical skills through workshops and case studies. Experienced teachers should undertake research and promotion, playing a leading role through action research and mentoring partnerships. Training design should integrate theory and practice, promoting teacher professional growth through experiential learning (Wilson & Brown, 2024).

B. Limitations and Future Research

The relatively concentrated geographical distribution of participants limits the generalizability of the research findings. Interviewees primarily came from teacher training colleges in a specific region. This geographical limitation may obscure the influence of diverse cultural backgrounds and educational traditions on values understanding. Regional differences in economic development, educational resource allocation, and policy environments often shape distinct models of values education practice, and the sample composition of this study fails to fully reflect this diversity. Cross-cultural research has shown that the effectiveness of values education is closely related to specific cultural contexts, and findings from a single cultural context need to be validated across a wider geographical range (Garcia & Liu, 2023).

Availability biases in the acquisition of curriculum documents may have affected accurate assessments of the degree of institutionalization of values education. Due to confidentiality concerns or administrative restrictions, some institutions failed to provide complete curriculum documents. The available documents often reflect formal policy statements, which may differ from actual teaching arrangements. This bias has led to a greater reliance on publicly available or easily accessible documents, while overlooking internal teaching materials that may contain more practical details. Document analysis research emphasizes the importance of diverse textual sources, arguing that a single type of document often fails to fully reflect the true state of complex educational phenomena (Anderson & Martinez, 2022). Cross-sectional research designs cannot capture the dynamic development of values education. The development of values cognition among teacher trainees and the improvement of teachers' teaching practices are both long-term and gradual processes, requiring longitudinal tracking to reveal their trajectory of change and key influencing factors. While current research designs can identify cognitive differences between groups, they struggle to explain the mechanisms underlying these differences and their development trends. Educational development research shows that the effects of values education often lag, making short-term observations inadequate for assessing the actual impact of educational interventions (Johnson & Thompson, 2024).

Cross-national comparative studies should be an important avenue for validating the universality of the ACE model. The policy backgrounds, cultural traditions, and implementation strategies for Olympic values education vary significantly across countries, providing a natural experimental framework for testing the model's cross-cultural applicability. Comparative analysis of values education practices in developed European and American countries, emerging Asian economies, and developing countries can identify the need for adaptability of the ACE model in different contexts. International comparative education research emphasizes the critical role of cultural sensitivity in the transplantation of educational models (Rodriguez & Chen, 2023).

Quantitative validation of the ACE model requires quasi-experimental designs or randomized controlled trials. The proposed theoretical model is only a starting point for research; its practical effectiveness requires rigorous empirical testing. Experimental designs should include both control and experimental groups, using standardized measurement tools to assess changes in teacher trainees' and teachers' values perceptions, instructional design skills, and classroom practice effectiveness before and after the model's implementation. The development of measurement tools should comprehensively consider the multidimensionality and complexity of values learning, avoiding measurement bias that may result from oversimplification (Wilson & Davis, 2024).

Technological innovation has opened up new possibilities for values education research. The application of virtual reality technology in developing contextualized case studies, the role of artificial intelligence in designing personalized learning pathways, and the potential of big data analysis in tracking learning behavior all provide technical support for deepening research on values education. Future research should explore the integration of these emerging technologies with traditional educational methods, particularly innovative applications that enhance the immersiveness, personalization, and precision of values education.

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