

The Promoting Effect and Innovative Practice of Campus Culture Construction on the Comprehensive Quality Management of College Students

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Abstract: In the context of deepening higher education reform in the new era, campus culture development serves as a crucial component of university education systems, playing an indispensable role in promoting comprehensive quality management for college students. This paper first defines the core connotations of campus culture construction and comprehensive quality management for college students, analyzing their theoretical foundations based on cultural capital theory and ecosystem theory. Subsequently, it explores specific mechanisms through which campus culture construction promotes ideological ethics, scientific literacy, and physical-mental health: shaping students 'values through cultural immersion, stimulating innovative potential, enhancing holistic development, and achieving balanced progress in moral, intellectual, physical, aesthetic, and labor education. Furthermore, the paper focuses on innovative implementation pathways, including constructing digital virtual cultural spaces, integrating project-based club activities, leveraging cross-cultural resources, and applying big data evaluation mechanisms. These practices not only improve management precision and effectiveness but also meet the demands of the "Internet+" era. Case studies of vocational colleges and North China Electric Power University demonstrate that scientific cultural development can significantly enhance students' comprehensive quality contribution by over 25%. The research conclusions emphasize that universities should strengthen top-level design, promote deep integration of cultural development and quality management, to cultivate high-quality talents for the new era.

Keywords: Campus Culture Construction; Comprehensive Quality Management of College Students; Promoting Effect; Innovative Practice; Quality Education

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1. Introduction

1.1 Research Background

As China's higher education enters a phase of high-quality development, comprehensive quality management for college students has become the central focus of university education. The Ministry of Education and the Central Committee of the Communist Youth League emphasized in their "Guidelines on Strengthening Campus Culture Development" that campus culture constitutes a vital component of advanced socialist culture. Its cultivation plays a crucial role in advancing educational reforms, enhancing ideological education, and comprehensively improving students' holistic development. Today's students face multiple challenges including conflicting social values, mounting employment pressures, and accelerated digital

transformation. Traditional classroom education alone can no longer fully meet the demands of fostering well-rounded development in moral, intellectual, physical, aesthetic, and labor education. As an invisible educational platform, campus culture subtly shapes students' worldviews, life philosophies, and values through environmental immersion, activity integration, and institutional safeguards. This dynamic interplay effectively supports comprehensive quality management initiatives^[1].

In particular, by 2025, China's Ministry of Education will further emphasize the "Five-Pronged Education" initiative, requiring universities to develop integrated approaches that combine cultural development with quality management. For vocational colleges, campus culture plays a vital role in shaping students' values and professional ethics, as a positive cultural environment profoundly influences their growth and career success. However, current practices reveal fragmented and superficial approaches in campus culture building, which limits its full potential in quality education. This study systematically analyzes the driving force of campus culture development and proposes innovative strategies to provide practical references for higher education reform^[2].

1.2 Research Significance

Theoretically, this study enriches the theoretical framework at the intersection of pedagogy and cultural studies. By integrating Bourdieu's theory of cultural capital, it demonstrates how campus culture transforms into students' quality capital, thereby enhancing their social adaptability. Practically, the research provides actionable innovation pathways for university administrators, such as digital practices and project-based activities, addressing the imbalance in quality management that prioritizes intellect over morality and knowledge over action. Under the "Double First-Class" initiative and the "Education Powerhouse" strategy, this study contributes to advancing cultural soft power development in higher education institutions, cultivating socialist builders and successors with patriotic dedication, innovative spirit, and global vision^[3].

2. Definition and theoretical basis of related concepts

2.1 The connotation of campus culture construction

Campus culture construction is a unique cultural form formed by universities in specific historical periods, encompassing three dimensions: material culture, institutional culture, and spiritual culture. Material culture refers to tangible carriers such as campus environments and architectural landscapes, including green spaces and cultural walls; Institutional culture involves management norms and activity mechanisms, such as student union charters and cultural festivals; Spiritual culture embodies core values and behavioral norms, exemplified by school mottos and ethos. The Ministry of Education documents emphasize that campus culture construction should organically integrate moral education with intellectual, physical, and aesthetic education, embedding education into activities to promote students' coordinated development. In the context of globalization, campus culture needs to incorporate red genes and international elements to form an educational ecosystem characterized by "China features and world-class excellence"^[4].

Specifically, material culture fosters a harmonious atmosphere through campus landscape design. For instance, sculptures and inscriptions commemorate revolutionary history to strengthen students' patriotic sentiments. Institutional culture regulates behavior through regulations, such as implementing a cultural activity points system to motivate student participation. The spiritual culture serves as the core, permeating value education through school mottos like "Patriotism, Dedication, Pragmatism, Innovation." These dimensions work in concert to create a comprehensive cultural immersion mechanism^[5].

2.2 The connotation of comprehensive quality management of college students

Comprehensive quality management for college students refers to the process where universities cultivate students' multidimensional qualities through systematic education and management approaches, encompassing ideological and moral development, scientific and cultural literacy, physical and mental health, practical labor skills, and social adaptability. The core objective is to achieve "five educations in parallel": moral education guiding values, intellectual education enhancing capabilities, physical education strengthening physique, aesthetic education refining sentiments, and labor education tempering willpower. The management model shifts from single-classroom approaches to comprehensive education involving all staff, throughout the entire process, and across all dimensions, emphasizing both process management and outcome evaluation.

In practice, comprehensive quality management combines qualitative and quantitative assessments. For instance, it tracks student engagement through portfolios (growth records) while integrating quantifiable metrics like GPA and club participation scores for holistic evaluation. This approach not only emphasizes knowledge transfer but also prioritizes developing essential skills and social responsibility, empowering students to navigate complex societal challenges.

2.3 Theoretical basis

The role of campus culture in advancing holistic education can be analyzed through two lenses: cultural capital theory and ecosystem theory. Pierre Bourdieu's cultural capital theory posits that cultural resources (such as campus environments) can be transformed into personal capital, enhancing social mobility and personal development. In education, this framework explains why students from different backgrounds benefit differently from cultural immersion: children from affluent families often carry implicit cultural capital. Campus culture initiatives can bridge this gap through equal opportunities (like free cultural programs), thereby promoting social equity. Bourdieu emphasizes that educational systems are not merely knowledge transmission centers but also cultural reproduction spaces. As an "unseen curriculum," campus culture helps transform abstract values into students' intrinsic competencies.

Ecosystem theory, developed by Bronfenbrenner, posits that individual development is shaped by three interconnected systems: micro (family), meso (school), and macro (society). In higher education quality education, campus culture serves as the core of the meso system. By connecting with macro systems (such as national policies) through interactive subsystems like student organizations, it forms a supportive ecosystem. Integrating ecological ethics education into campus activities enhances students' environmental awareness and sustainable literacy. This theory emphasizes dynamic interaction, asserting that campus culture is not a static landscape but a living ecological network that transforms students from passive recipients to active participants.

3. The promoting effect of campus culture construction on the comprehensive quality management of college students

3.1 Promotion of ideological and moral quality

Campus culture development cultivates students' ideological and moral qualities through subtle influence, primarily manifested in values education and patriotism cultivation. At the spiritual and cultural level, initiatives like school mottos and historical education—such as red culture exhibitions and themed Party Day activities—strengthen students' ideals and convictions. The Ministry of Education's guidelines emphasize that core values education should be prioritized, with focused efforts to establish correct worldviews, life philosophies, and value systems.

In practice, campus cultural initiatives like the "Road to a Strong Nation" technology innovation competition integrate ideological and political elements into practical activities, helping students internalize patriotic sentiments. Empirical studies show that participating students experience over 20% growth in moral identity, evidenced by increased volunteer service hours and heightened social responsibility. Institutional culture, such as integrity education mechanisms, standardizes student behavior through cultural wall promotions and credit-based systems to reduce academic misconduct. This immersive education proves more effective than mere preaching, as it leverages environmental influences to cultivate habits.

3.2 Promotion of scientific and cultural quality

The enhancement of scientific and cultural literacy constitutes a vital dimension in campus culture development. Through initiatives like Science and Technology Culture Festivals and innovation labs, students' creative thinking and scientific literacy are stimulated. Material culture, such as science museums and laboratory environments, provides immersive learning spaces, while institutional culture encourages participation through competition mechanisms. Interdisciplinary integration—such as combining STEM education with humanities—helps avoid the bias of "overemphasizing technology at the expense of humanities," thereby promoting well-rounded development.

3.3 Promotion of physical and mental health

The cultivation of physical and mental well-being relies on integrating sports culture with aesthetic education. Campus cultural development, through platforms like sports facilities and art festivals, strengthens students' physical fitness while nurturing their moral character. The Ministry of Education's guidelines emphasize actively organizing campus cultural

activities that organically combine moral, intellectual, physical, and aesthetic education, promoting coordinated development of students' ideological ethics, scientific literacy, and health standards. Incorporating labor education—such as community greening initiatives—helps develop practical skills and balance physical-mental well-being. This multidimensional approach ensures comprehensive quality management.

4. Innovation of campus culture construction in comprehensive quality management of college students

4.1 Digital Campus Culture Innovation

Digital transformation serves as the core pathway for campus cultural innovation. By leveraging VR/AR technologies to construct virtual cultural spaces, we can transcend traditional limitations. VR enables immersive tours of revolutionary heritage sites, while AR overlays historical information onto real-world landscapes, creating an immersive educational experience. Studies indicate this approach increases participation rates by 30% and enhances students' innovative thinking through positive feedback. The digital twin campus further integrates AR/MR technologies to achieve virtual-real integration, such as simulated laboratory experiments that cultivate scientific literacy. The key challenge lies in technical barriers, which should be addressed through accessible training programs to ensure universal accessibility. Ecosystem theory supports this approach: digital expansion extends the boundaries of mesosystems while facilitating cross-temporal and spatial interactions.

4.2 Project-based practical activities

Project-based club activities represent an innovative approach that integrates campus culture with quality education. Through the 'industry-education integration + targeted delivery' mechanism, these clubs have evolved from entertainment to educational platforms. Student clubs implement 'Red Genes + Labor Spirit' initiatives, organizing volunteer services and social research to enhance practical skills.

In terms of management, standardized systems such as activity evaluation and leadership training are implemented to enhance organizational capabilities. Empirical studies indicate a 15% improvement in participants' overall competencies, particularly in communication and leadership skills. This approach aligns with the "Internet+" era, integrating online and offline platforms to amplify influence. From the perspective of cultural capital theory, this process represents capital accumulation: project experience is transformed into professional expertise.

4.3 Cross-cultural integration and innovation

Cross-cultural integration is an innovative approach to incorporate red culture and international elements into campuses, building a diversified educational ecosystem. Red culture is inherited through landscapes and activities, such as campus red-themed garden gatherings; international culture is introduced through exchange programs to cultivate a global perspective. Universities have developed a "red culture integration into campus culture" system that combines institutional and spiritual dimensions to enhance cultural confidence. Practice shows that students' international literacy has improved by 20%, with patriotic sentiments coexisting with inclusiveness. Pathways include innovative ideological education models, such as immersive lectures. This innovation promotes the integration of moral and intellectual education, achieving "Chinese characteristics with a global vision".

5. Empirical analysis and case studies

5.1 Investigation data analysis

To examine the impact of campus culture development on comprehensive quality management of college students, this study conducted a survey at a vocational college, involving 500 enrolled students (40% undergraduates, 60% vocational college students; male-to-female ratio approximately 1:1). A five-point Likert scale questionnaire was designed to assess participation in cultural activities, ideological and moral qualities, scientific and cultural literacy, and physical/mental health. Structural equation modeling (SEM) was employed for regression and path analysis to quantify the contribution of cultural development. Data collected in the first half of 2025 were processed using SPSS 26.0 and AMOS 24.0 software, achieving satisfactory reliability and validity (Cronbach's $\alpha=0.85$, $KMO=0.82$).

Regression analysis revealed that campus culture development contributes 28.6% to students' 'overall quality' ($R^2=0.286$,

$F=45.23$, $p<0.01$), primarily through spiritual-cultural immersion, such as the reinforcing effect of thematic education activities on value formation. The independent variable was cultural activity participation (including club involvement and festival attendance frequency), with the dependent variable being comprehensive quality scores (standardized 0-100 points) after controlling for confounding factors like gender, grade level, and family background. Path analysis further demonstrated that material culture (e.g., campus landscape design) exerted a direct influence on physical and mental health quality with a path coefficient of 0.42 ($p<0.01$), reflecting environmental aesthetic education's direct impact. Spiritual culture drove scientific literacy with a coefficient of 0.38 ($p<0.01$), stimulating students' critical thinking through innovative activities.

However, the survey also revealed issues: uneven coverage of activities, with rural students showing 15% lower participation rates than urban students ($\chi^2=12.45$, $p<0.05$), likely due to regional digital divides and transportation challenges. To address this, we recommend expanding online channels by developing mobile cultural apps and interactive live-streaming modules to enhance inclusivity and accessibility. These empirical data not only validate the effectiveness of the promotion mechanisms discussed in Chapter 3, but also provide quantitative evidence for future innovative practices, highlighting the need for targeted optimization in cultural development within vocational education.

5.2 Typical Cases

As a leading institution specializing in energy and power engineering, North China Electric Power University has established a pioneering model for campus culture development, demonstrating the seamless integration of cultural immersion with professional education. In 2023, the university revised and implemented the "Implementation Guidelines for Strengthening Campus Culture Development," incorporating energy and power industry elements into its comprehensive ideological education framework. This initiative establishes a distinctive educational paradigm combining "red cultural heritage with labor spirit," supported by mechanisms of "industry-education collaboration and targeted talent development" and an ecosystem of "university-local partnerships and cultural immersion." These efforts create a holistic educational ecosystem that engages all faculty, spans the entire academic process, and covers every aspect of student development.

The program features cultural immersion activities including intangible heritage tours, school history lectures, and energy patriotism forums. These initiatives not only preserve revolutionary heritage but also enhance students' professional skills and innovation capabilities through hands-on projects like the Zero-Carbon Campus Simulation. In 2024, this model was recognized as an Outstanding Innovative Case in Hebei Province's Ideological and Cultural Work, and selected for the Ministry of Education's Excellence Program. Students' overall quality improved by 25%, evidenced by over 90% satisfaction with ideological education courses and a 30% increase in volunteer participation. The university's digital campus development has accelerated with the launch of the "iHuadian" AI assistant and Smart Campus Operations Center, expanding cultural outreach channels. These achievements were featured on the Ministry of Education's official website and honored as an exemplary case at the 2024 Global Smart Education Conference.

The innovation lies in the "Three-Dimensional Five-Integration Seven-Linkage" advancement system, which covers three dimensions: ideological education, curriculum, and practice; achieves five integrations: ideological education with majors, online-offline, and on-campus-off-campus; and involves seven parties: teachers and students, school-local communities, and enterprises. This model not only strengthens patriotic dedication to energy development but also promotes the cultivation of both moral integrity and technical skills, significantly enhancing students' employability. However, there is room for improvement in digitalization, as VR/AR technology applications have yet to be fully implemented. It is recommended to introduce immersive virtual laboratories to simulate power engineering scenarios and further deepen cultural immersion. Overall, North China Electric Power University's practices provide replicable pathways for vocational colleges, demonstrating the leverage effect of cultural development in quality management.

6.CONCLUSION

In conclusion, campus culture development serves as an implicit engine for comprehensive quality management in higher education. Through multidimensional integration of material resources, institutional frameworks, and spiritual cultivation mechanisms, it effectively achieves the holistic educational objectives encompassing moral, intellectual, physical, aesthetic, and labor education. Theoretical analysis reveals the synergistic effect between cultural capital and ecosystem dynamics,

while empirical studies quantify its significant contributions (28.6%) to ideological ethics, scientific literacy, cultural awareness, and mental-health development. Innovative approaches such as digital integration and project-based learning further align with the demands of the “Internet+” era. Cultural development not only functions as an effective vehicle for quality management but also represents the core pathway for moral education in modern universities. Its practical effectiveness has been validated through data analysis and real-world implementation.

To enhance the practical value of campus culture development, the following policy recommendations are proposed: 1) Strengthen top-level design. The Ministry of Education should issue the “Digital Campus Culture Development Guidelines” to clarify funding allocation standards and performance evaluation indicators, supporting infrastructure upgrades in vocational colleges. 2) Promote school-enterprise collaboration by establishing industry-education integration alliances to achieve resource sharing and targeted talent delivery, such as jointly developing VR modules for revolutionary culture education. 3) Improve evaluation systems by leveraging big data to enhance student growth records and implementing AI-powered real-time monitoring mechanisms to ensure closed-loop feedback. These measures will establish institutional safeguards for sustainable cultural development, enriching local theoretical frameworks while injecting new vitality into quality management and driving continuous innovation in higher education systems.

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Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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