

The connotation, influencing factors, and cultivation pathways of leadership among student cadres

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Abstract. Student cadres constitute a core group within the student body in higher education institutions. The development of their leadership is not only essential for individual growth but also a critical component of talent cultivation in universities. This study adopts a literature review approach. By retrieving relevant publications from the China National Knowledge Infrastructure (CNKI) over the past five years and tracing their references, a total of 27 Chinese and 14 English articles were ultimately included for systematic analysis. The findings indicate that the connotation of leadership among student cadres can be summarized into three core dimensions: personal qualities, interpersonal relationships, and teamwork. Its development is influenced by factors at three levels: individual characteristics, organizational environment, and student engagement. The cultivation pathways mainly include curriculum-based approaches, practice-oriented training, and peer education. However, current practices in Chinese universities exhibit several limitations, including insufficient systematic design, lack of professionalization, and incomplete evaluation mechanisms. Future research should focus on exploring localized training models and promoting the extension of leadership education from student cadres to the entire student population.

Keywords: student cadres, leadership, college student leadership, literature review

1. Introduction

Talent cultivation constitutes the fundamental function of universities [1]. As higher education enters the stage of massification, improving the quality of talent development and fostering leading individuals with a strong sense of social responsibility and innovative capacity have become critical challenges for universities in China. Leadership, as one of the core competencies of such leading talents, has increasingly attracted scholarly attention [2]. As early as the beginning of the 21st century, American scholars pointed out that higher education should assume responsibility for leadership education, helping college students become drivers of future social change [3]. By comparison, leadership education for college students in China started relatively late. Although some universities have launched leadership training programs—such as the "Tang Zhongying Program" at Tsinghua University and the Student Cadre Leadership Development Program at Beijing Normal University—a systematic curriculum framework and training mechanism have yet to be fully established. Overall, leadership education still occupies a relatively marginal position in university talent cultivation.

Student cadres in higher education institutions, as a backbone group within the student population, are often regarded as possessing a certain level of leadership. Their developmental trajectories also provide a useful lens through which to observe and understand the evolution of leadership among college students. In the context where leadership education for college students in China has not yet been widely implemented, focusing on the student cadre group and examining the connotation, influencing factors, and cultivation pathways of their leadership can not only deepen the understanding of student cadre development but also provide an empirical foundation for extending leadership education to the entire student body. Accordingly, this study adopts a literature review approach to systematically synthesize domestic and international research on student cadre leadership, aiming to address the following three questions: (1) What is the connotation of leadership among student cadres, and what are the main theoretical frameworks used to explain it? (2) What factors influence the development of student cadre leadership? (3) What are the current pathways for cultivating student cadre leadership, what problems exist, and how should future research be further advanced?

2. Literature review and research findings

2.1. Literature retrieval and selection

This study adopts a literature review approach to systematically examine domestic and international research on student cadre leadership. The process of literature retrieval and selection is outlined as follows.

Chinese-language literature was primarily retrieved from the China National Knowledge Infrastructure (CNKI) database. The search covered the most recent five-year period (2020–2024), using keywords such as "student cadres," "leadership," "college student leadership," and "student cadre leadership" for subject-based searches, yielding an initial pool of relevant studies. On this basis, a backward citation tracking method (also known as the "snowballing" technique) was employed to trace the references cited in the initially identified literature. From these, frequently cited, authoritative, and representative works were selected, including early seminal studies and key empirical research. This approach ensured both the timeliness of the literature (with a primary focus on the past five years) and adequate coverage of foundational studies (identified through reference tracing).

The retrieval strategy for English-language literature followed a similar logic. As direct searches using the keyword "student cadres" in English-language databases proved less effective, this study primarily relied on tracing the English references cited in the Chinese literature. During the review of Chinese sources, their cited English-language works were screened, with priority given to influential journal articles and academic monographs in the field of student leadership research. These included foundational works on major theoretical frameworks—such as servant leadership theory, the relational leadership model, and the leadership challenge model—as well as selected empirical studies published in recent years.

During the screening process, the following inclusion criteria were applied: (1) the research topic is directly related to "student cadre leadership" or "college student leadership"; (2) the document type is limited to academic journal articles, theses, or scholarly monographs, excluding non-academic materials such as news reports or conference summaries; and (3) the study demonstrates relatively high academic quality, with priority given to articles published in core journals, highly cited works, and studies making significant contributions to theoretical development or empirical analysis. The exclusion criteria included: (1) studies with thematic deviation, where "leadership" is mentioned but not treated as a central research focus; (2) duplicate publications or works with highly overlapping content; and (3) studies for which the full text could not be accessed.

Through the above retrieval and screening procedures, a total of 27 Chinese-language publications and 14 English-language publications were ultimately included, yielding a combined sample of 41 studies for analysis. These works cover the principal domains of student cadre leadership research, including conceptual analyses (e.g., applications of servant leadership theory), examinations of influencing factors (at the individual, environmental, and participation levels), and studies on cultivation pathways (such as curriculum-based approaches, practice-oriented training, and peer education), as well as a number of comparative and review studies. Collectively, they provide a relatively comprehensive representation of the current research landscape and developmental trajectory of this field.

2.2. The connotation and theoretical framework of student cadre leadership

Understanding the connotation of student cadre leadership constitutes the logical starting point for examining its developmental pathways. As leadership itself is an interdisciplinary concept, no unified definition has been established in the academic community. From a management perspective, leadership is often regarded as a capability [4]—that is, the ability of an individual to translate vision into reality. Other scholars conceptualize it as a form of influence, suggesting that individuals with leadership are able to gain followers by exerting influence over others [5]. From an educational perspective, leadership is viewed as a quality that can be acquired and enhanced through education and practice [6]. Synthesizing these perspectives, leadership can be defined as the ability of an individual to exert influence on oneself and others through personal behavior and competencies, thereby leading a team to achieve specific goals. Within this definition, leadership emphasizes not only individual traits but also interaction and collaboration with others.

Within the specific group of student cadres, the connotation of leadership becomes more concrete. Student cadres are both ordinary members of the student body and individuals who undertake responsibilities such as organizational coordination, event planning, and peer service. Their leadership practices primarily occur in peer-to-peer and student–faculty interactions. Unlike leaders in formal organizational settings, student cadres typically lack formal authority and instead rely more on informal influence, such as personal charisma, a service-oriented mindset, communication skills, and peer trust. Therefore, leadership theories developed for general organizational contexts may not be fully applicable to student cadres without adaptation to the characteristics of student development and contextual localization. A review of the existing literature reveals that three theoretical models are widely applied in the study of student cadre leadership, each illuminating its core elements from different perspectives.

First, Servant Leadership Theory, proposed by Greenleaf, is among the earliest theories applied to the field of student leadership [7]. Its central premise is that leadership emerges from service: a leader should first be a "servant," possessing a genuine willingness to serve others and earning trust by meeting the needs of group members, thereby developing leadership. This theory has particular explanatory power for student cadres. As there is no absolute hierarchical authority between student cadres and their peers, their effectiveness relies largely on service consciousness, dedication, and peer trust. Whether student cadres gain recognition and support depends less on positional authority and more on their service attitude and actual contributions. Consequently, servant leadership theory is frequently used to explain the role positioning and behavioral characteristics of student cadres, and it provides a clear value orientation for leadership development—namely, that the foundation of leadership lies in service [8].

Second, the Relational Leadership Model, developed by Komives and colleagues specifically for college student populations, emphasizes the central role of interpersonal relationships in leadership development. This model conceptualizes leadership not as the unilateral behavior of a leader, but as a collaborative process in which individuals work together to effect positive change while adhering to ethical principles and managing

relationships. It encompasses five core elements: common purpose, inclusivity, empowerment, ethicality, and a process orientation [9]. The leadership practices of student cadres are primarily embedded in peer interactions and student–faculty engagement. Their work essentially involves building interpersonal networks, fostering consensus, managing disagreements, and facilitating cooperation. In such contexts, student cadres must navigate complex relationships—balancing the interests of peers, fulfilling institutional and faculty expectations, and coordinating differing viewpoints within teams. This form of leadership reflects the essence of relational leadership: it is not about command and compliance, but about communication and collaboration. Accordingly, the relational leadership model offers an important theoretical lens for understanding the roles and behaviors of student cadres within organizations.

Third, The Student Leadership Challenge, developed by Kouzes and Posner, is designed for the assessment and development of student leadership. It identifies five core practices—modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart—along with ten corresponding commitments [10]. A distinctive feature of this model is that it translates leadership from an abstract concept into observable and learnable behavioral practices. It emphasizes that leaders influence others through behavioral exemplification and motivate teams through vision-driven guidance. In research on student cadres in China, this model is frequently used to design leadership training programs and evaluate leadership development outcomes. For instance, some studies have applied this framework to assess student cadres' behaviors in organizing activities, finding that those who lead by example and effectively motivate peers tend to achieve higher levels of team recognition and performance [8].

Taken together, these theoretical models reveal that, despite differing emphases, they converge on three core dimensions of leadership. The first is individual qualities, including self-awareness, sense of responsibility, service orientation, and behavioral exemplification. The second is leader–member relationships, which highlight interpersonal competencies such as trust-building, effective communication, and empowering others. The third is collective team action, focusing on organizational capabilities such as goal setting, collaborative processes, and goal attainment. These three dimensions are interrelated and mutually reinforcing, forming a foundational framework for understanding the connotation of student cadre leadership. Individual qualities constitute the basis, determining whether student cadres can earn trust; interpersonal relationships serve as the linkage, shaping their ability to collaborate effectively; and collective action represents the ultimate outcome, determining whether they can lead teams to achieve shared goals. This framework also provides a theoretical foundation for subsequent analysis of the influencing factors and cultivation pathways of student cadre leadership.

2.3. Influencing factors of student cadre leadership

Clarifying the factors that influence the development of student cadre leadership is a prerequisite for designing effective cultivation pathways. Existing studies have examined this issue from multiple perspectives. Overall, these factors can be categorized into three dimensions: the individual level, the organizational environment level, and the student engagement level. These dimensions are interwoven and jointly shape the developmental trajectory of student cadre leadership.

At the individual level, gender, psychological traits, and prior experience are among the most frequently examined factors. The relationship between gender and leadership remains inconclusive in the literature. Some studies suggest that female student cadres demonstrate higher levels of leadership than their male counterparts [11-13], while others find no significant differences between genders [14, 15]. Such inconsistencies may be attributed to variations in sample selection, measurement instruments, and cultural contexts, indicating that the influence of gender on leadership may not be direct but moderated by other variables. In terms of

psychological traits, self-efficacy is widely regarded as a critical factor influencing leadership. Research indicates a positive reciprocal relationship between self-efficacy and leadership: students with higher self-efficacy are more willing to assume leadership roles, and successful leadership experiences further enhance their self-efficacy [16, 17]. Leadership motivation plays a mediating role in this process, serving as a key psychological mechanism linking self-efficacy and leadership capability, and functioning as an intrinsic driving force for leadership development among college students [18]. In addition, emotional intelligence, self-confidence, personality traits, and individuals' subjective perceptions of their own leadership also influence student cadres' performance and development in practice [17, 19]. Regarding prior experience, previous leadership experiences have a positive impact on the development of student cadre leadership [11, 20]. Such experience includes not only serving as student leaders during secondary education but also gaining experience in various levels and types of student organizations during university. Students who have repeatedly assumed leadership roles during their developmental process tend to adapt more quickly to new leadership contexts and demonstrate greater flexibility in applying different leadership styles.

At the organizational environment level, the overall campus climate, institutional arrangements, and resource support constitute the external conditions for the development of student cadre leadership. Studies have shown that diverse campus activities, an open academic atmosphere, accessible library resources, and opportunities for university–industry collaboration provide students with multiple avenues for development [21]. A dynamic campus environment can stimulate students' enthusiasm for participation and create more opportunities and platforms for leadership practice. Institutional culture and professional mentorship at the faculty or departmental level also play a crucial role. An open and inclusive organizational culture—one that encourages experimentation, supports innovation, and tolerates failure—is more conducive to enabling student cadres to gain feedback and grow through practice [22]. Meanwhile, professional mentors not only provide concrete guidance in practical tasks but also offer directional advice when students encounter difficulties and timely recognition when they achieve success. Such continuous support and feedback are indispensable for leadership development. It is important to note that the organizational environment encompasses not only material resources and institutional arrangements but also cultural atmosphere and psychological support. An environment that encourages experimentation, allows for trial and error, and values reflection is more beneficial for leadership development than one that merely provides material resources.

At the student engagement level, the degree and quality of students' involvement in learning and extracurricular activities directly affect their leadership development. This perspective is rooted in the student engagement theory proposed by Kuh and others, which posits that the amount of time and effort students invest determines their level of engagement, and that both the quantity and quality of this investment directly influence learning outcomes and personal development [23, 24]. Existing research primarily examines the impact of student engagement on leadership from three dimensions: organizational involvement, social practice, and academic engagement.

In terms of organizational involvement, participation in student associations or organizations has a significant positive effect on leadership development [25, 26]. This effect operates through two main pathways. On the one hand, organizational participation provides opportunities to practice leadership—developing planning skills through event organization, communication skills through personnel coordination, adaptability through conflict resolution, and learning ability through reflection [27]. On the other hand, holding a student cadre position itself acts as a catalyst for leadership development. Such positions entail greater responsibility, higher expectations, and broader perspectives, all of which promote growth through increased engagement [22]. Some studies even suggest that serving as a student cadre has a more pronounced

impact on leadership development than general organizational participation, as the sense of responsibility and pressure associated with formal roles serves as a powerful driver of growth.

With regard to social practice, activities such as internships, volunteer service, and community engagement have a significantly positive effect on the development of college students' leadership [28, 29]. These experiences enable students to step beyond the "ivory tower" of campus and engage with real-world contexts and diverse groups, thereby enhancing their comprehensive abilities through problem-solving in practical settings. Compared with campus-based organizational activities, social practice often involves more complex situations, a wider range of stakeholders, and greater uncertainty in outcomes—conditions that are particularly conducive to the development of leadership. In such contexts, students must learn to collaborate with individuals from diverse backgrounds, identify solutions under resource constraints, and maintain resilience in the face of setbacks and challenges—core elements of leadership.

In terms of academic engagement, students who participate in leadership-related courses or training programs typically demonstrate higher levels of leadership than those who do not [13]. This finding suggests that leadership is, to some extent, teachable, and that systematic knowledge acquisition and skills training can effectively promote leadership development. In addition, extracurricular academic activities such as research projects and disciplinary competitions also have a positive impact on leadership development [30, 31]. Although these activities do not explicitly target leadership, they require the application of leadership-related competencies in areas such as teamwork, task allocation, time management, and the presentation of outcomes. In this sense, any task that involves collaboration with others can serve as a vehicle for leadership development.

In summary, the development of student cadre leadership results from the interaction of individual, environmental, and engagement-related factors. Individual factors provide the foundation, determining the starting point and developmental potential; environmental factors serve as the conditions, offering support and resources; and engagement factors are the key, representing the pathway through which potential is transformed into actual capability. These factors do not operate in isolation but rather influence and reinforce one another. Strong individual qualities enable students to make better use of environmental resources and participate more actively in activities; abundant environmental resources stimulate participation and foster the enhancement of individual qualities; and rich engagement experiences are internalized into personal competencies, thereby feeding back into individual growth. Understanding this interactive mechanism is of critical importance for designing effective leadership development pathways.

2.4. Cultivation pathways for student cadre leadership

Building on a clarified understanding of its connotation and influencing factors, the question of how to effectively cultivate student cadre leadership has become a focal concern in both research and practice. Existing studies have generated relatively rich discussions across three dimensions: cultivation objectives, cultivation approaches, and existing challenges.

From the perspective of cultivation objectives, the orientation of leadership education is of fundamental importance. In foreign higher education contexts, the goal of student leadership education is often defined as cultivating "new civic leaders," emphasizing a global perspective, multicultural awareness, a sense of social responsibility, a mission for social change, and ethical consciousness [32]. This goal transcends mere skills training, linking leadership closely with civic competence and social responsibility, and reflecting higher education's commitment to the holistic development of individuals. By contrast, although Chinese policy documents frequently refer to concepts such as "leading talents" and "top innovative talents," there remains a lack of systematic and clearly articulated objectives for student leadership development. In the cultivation of

student cadres, a long-standing tendency of "emphasizing utilization over development" persists—student cadres are often treated as a workforce to accomplish tasks rather than as talents requiring systematic cultivation. There is a lack of clear definitions regarding the competencies student cadres should possess and the developmental levels they should achieve, as well as an absence of coherent planning. This ambiguity in objectives constitutes a fundamental constraint on the effective cultivation of student cadre leadership.

In terms of cultivation approaches, existing research has identified three primary pathways. The first is the curriculum-based approach, which involves offering dedicated leadership courses to systematically impart theoretical knowledge. Watt proposed a model for developing core leadership curricula, emphasizing that course design should be aligned with students' developmental levels, grounded in appropriate theoretical frameworks, guided by clear objectives, and supported by evaluation and continuous improvement mechanisms [33]. Wren further argued that leadership education should help students understand conceptual frameworks, develop clear self-awareness, and enhance analytical and communication skills [34]. The strength of this approach lies in its systematic and efficient nature, enabling students to establish a foundational knowledge framework for leadership within a relatively short period. However, its limitation is that leadership is inherently practice-oriented, and classroom learning alone is insufficient for its full development. The second is the practice-based approach, which emphasizes the cultivation of leadership through real-world contexts. Johnson and Hackman proposed that leadership education should consist of four components: coursework, community service, skill development, and mentoring, with the latter two representing key practical elements [35]. Innovation and entrepreneurship projects, student organization activities, and volunteer service have all been shown to be effective platforms for leadership practice [36]. The advantage of this approach lies in enabling students to apply knowledge, test their abilities, and receive feedback in authentic contexts. However, its limitation is the difficulty of ensuring that all students have access to high-quality practical experiences, resulting in variability in outcomes. The third is the peer education approach, which promotes leadership development through mutual learning and support among students. Peer education has been widely applied in student leadership development programs [37], taking forms such as mentorship between senior and junior student cadres, peer experience sharing, and group reflection sessions. Its advantage lies in fostering learning communities, compensating for the shortage of professional instructors, and enhancing students' sense of agency and reflective capacity. However, its effectiveness is highly dependent on participants' competence and level of engagement, making it difficult to standardize and scale.

Despite these diverse approaches, several prominent issues persist in the practice of student cadre cultivation in China. First, there is a lack of systematic design. Current training efforts are often centered on immediate work tasks, lacking clear developmental planning and professional guidance. What is termed "cultivation" frequently remains at the level of "task utilization" [38]. Student cadres are assigned responsibilities without receiving corresponding developmental support; they are required to complete tasks without being guided to reflect on the learning value embedded in those tasks. Leadership education has yet to be fully integrated into institutional talent cultivation frameworks, resulting in incomplete curricula, fragmented practical experiences, and discontinuous training processes. Second, there is a lack of professional guidance. The primary supervisors of student cadres are typically counselors or student affairs staff, who often face heavy workloads and administrative demands. Most have not received systematic training in leadership education, and their understanding of leadership development is therefore limited, making it difficult to provide effective professional support. As a result, student cadres often lack access to mentors who can engage in in-depth guidance when challenges arise or help them distill insights from their achievements. Third, the evaluation mechanisms are underdeveloped. Assessment of student cadres is often based primarily on task completion, with criteria such as timeliness and error rates, while neglecting the evaluation of competency

development and personal growth. Evaluation methods tend to be formalistic and unidimensional, limiting their capacity to guide and motivate development. More critically, existing evaluation systems implicitly convey a value orientation that prioritizes task completion over personal growth, which runs counter to the original intent of cultivating student cadres.

The existence of these challenges does not imply that the cultivation of student cadre leadership is unfeasible. On the contrary, recognizing these issues is the starting point for identifying pathways for improvement. Student cadres possess unique advantages: they operate within student organizations, have access to abundant practical opportunities, engage in authentic peer interactions, and undertake concrete responsibilities with clear task orientations. These advantages cannot be replaced by formal coursework alone. The key issue, therefore, is not the availability of resources, but how to utilize existing resources effectively; not whether to introduce new systems, but how to optimize existing mechanisms. Under current conditions, several strategies can be pursued: optimizing routine work processes by transforming administrative tasks into learning-oriented practices; strengthening the training of supervisors to enhance their professional support capacity; improving evaluation systems to incorporate greater emphasis on competency development; and leveraging peer education resources to build communities of practice. Through the integrated application of these approaches, it is possible to gradually mitigate the arbitrariness of current cultivation practices and provide a practical and feasible foundation for the effective implementation of leadership education among student cadres.

3. Conclusion

Through a systematic review of 41 domestic and international studies, this research synthesizes the principal findings in the field of student cadre leadership and draws the following conclusions.

With regard to the connotation of student cadre leadership, this study finds that it exhibits a multidimensional structural character. Existing theories illuminate its core components from different perspectives: servant leadership theory emphasizes that leadership is grounded in a spirit of service and dedication; the relational leadership model highlights the central role of interpersonal interaction and shared purpose in the leadership process; and the student leadership challenge model translates leadership into observable and learnable behavioral practices. Integrating these theoretical perspectives, the connotation of student cadre leadership can be summarized into three interrelated core dimensions—individual qualities, interpersonal relationships, and team action. This finding suggests that student cadre leadership is not a singular capability, but rather a composite of personal traits, interpersonal competence, and organizational capacity. In practice, this implies that leadership development should not privilege any single dimension, but should instead promote the coordinated development of all three.

With regard to the influencing factors of student cadre leadership, this study finds that its development results from the interaction among individual, environmental, and engagement-related factors. At the individual level, variables such as self-efficacy and prior experience exert significant influence on leadership development; at the organizational environment level, campus culture, institutional support, and professional guidance constitute key external conditions; and at the level of student engagement, organizational involvement, social practice, and academic participation serve as critical pathways through which leadership potential is transformed into actual capability. The theoretical significance of this finding lies in its articulation of an "ecosystem" of leadership development: individuals are not passive recipients of environmental influence, nor does the environment merely provide resources; rather, engagement functions as the bridge connecting individuals and their environment. The interactive nature of these factors indicates that enhancing

student cadre leadership requires systematic design and coordinated advancement, rather than reliance on any single factor.

With regard to the cultivation pathways of student cadre leadership, this study identifies curriculum-based, practice-based, and peer education approaches as the three primary modes. While the curriculum-based approach offers systematic efficiency, the practice-based approach provides authenticity of context, and peer education fosters the formation of learning communities, current practices in Chinese universities face structural challenges. These include ambiguous objectives, unsystematic training processes, insufficient professional guidance, and overly simplistic evaluation mechanisms, all of which contribute to fragmentation and formalism in the cultivation process. This finding highlights a gap between theory and practice: although scholarship has recognized the need for systematic leadership development, university practices often remain focused on "utilization" rather than "education." The root cause of this gap lies in the fact that leadership education has not yet been fully integrated into the institutional framework of higher education talent cultivation.

Based on these findings, this study offers several implications for future research and practice.

At the research level, future studies should advance in two directions: localized theoretical development and high-quality empirical research. On the one hand, greater attention should be paid to the specificities of student cadre leadership within the Chinese cultural context, with efforts to construct theoretical frameworks suited to Chinese higher education rather than simply applying Western models. On the other hand, more rigorous empirical methods—such as large-scale surveys, longitudinal studies, and intervention experiments—should be employed to provide stronger evidence for practical applications. Moreover, as the ultimate purpose of research is to inform practice, scholars should also prioritize translating research findings into actionable training programs and educational strategies.

At the practical level, universities should reassess the positioning and pathways of student cadre cultivation. It is essential to recognize that cultivating student cadres is not merely a means of completing administrative tasks, but an important pathway for achieving educational objectives. On this basis, several improvements can be pursued: integrating leadership education into formal talent cultivation frameworks; strengthening the professional training of supervisors to enhance their capacity for effective guidance; improving evaluation mechanisms by shifting from task-based assessment to a focus on competency development; and leveraging the practical advantages and peer resources within student cadre groups to build communities of learning. These improvements do not necessarily require substantial new resources, but rather the optimization and restructuring of existing institutional mechanisms.

The significance of research on student cadre leadership extends beyond the student cadre group itself. The principles, methods, and mechanisms derived from their cultivation experience that possess broader applicability can serve as valuable references for leadership education targeting the entire student population. Promoting the transition of leadership education from an "elite-oriented" model to a more "universal" one, enabling a wider range of students to benefit, represents both an essential mission of higher education and the future vision anticipated by this study.

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