

Leadership-Driven University Labor Education Reform via PDCA Cycle

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Abstract

Under the “five-education development” strategy, the reform of labor education in universities is crucial to the quality of talent cultivation, yet it often falls into difficulties due to insufficient driving force, poor coordination among main stakeholders, lack of process management, and unclear effectiveness evaluation. The core issue lies in the inadequate alignment between school leadership and systematic promotion mechanisms. The closed-loop management logic of the PDCA cycle provides a methodology for this, but its effective operation urgently requires leadership empowerment throughout the process. This study uses a mixed-methods approach, combining qualitative and quantitative methods, to construct an integrated analytical framework of “Leadership-PDCA”. Research has found that the effective advancement of reforms depends on a four-dimensional leadership system encompassing “vision guidance-coordinated planning-process control-reflective iteration”, and it needs to dynamically align with each stage of the PDCA cycle: the planning stage relies on transformational leadership to create a blueprint, the execution stage requires distributed leadership to promote collaboration, the checking stage guides reflection through instructional leadership, and the action stage depends on strategic leadership to drive institutionalization. Research conclusions indicate that combining systematic process control with flexible interpersonal influence to form a “dual-drive” strategy is key to overcoming collaboration barriers, preventing process derailment, and advancing labor education reform from “fragmented” to a “systematic” depth. This study provides a theoretical reference and practical approach for optimizing governance in higher education.

Keywords: University labor education; PDCA cycle; Leadership; Educational governance; Collaborative mechanism

Introduction

In March 2020, the Central Committee of the Communist Party of China and the State Council issued the "Opinions on Comprehensively Strengthening Labor Education in Primary, Secondary, and Higher Education in the New Era," clearly integrating labor education into the entire process of talent cultivation, promoting the "Five Educations Together" strategy in coordination with moral, intellectual, physical, and aesthetic education. As the core arena for talent development, the reform of labor education in universities is not only an inevitable requirement for implementing national education policies but also a key pathway to addressing current issues such as the weakening labor values and insufficient practical abilities among young students ([Central Committee of the Communist Party of China, & State Council, 2020](#)). However, reforms in university labor education currently face many practical difficulties: some universities have a skewed perception of the value of labor education, viewing it as an “additional task”, which leads to a lack of motivation for advancement;

multiple stakeholders, including faculties, administrative departments, families, and society, have unclear responsibilities, resulting in an ineffective collaborative education mechanism; the reform process lacks systematic control, with a disconnect between course design and practical implementation; outcome evaluations are mostly results-oriented, with vague indicators and a lack of feedback and iterative functions. [Zhang & Cao \(2025\)](#) run through an empirical survey of 20 ordinary undergraduate universities in Henan Province, found that university labor education generally suffers from issues such as a lack of systematic course planning, a shortage of specialized teachers, and an imperfect evaluation system. These difficulties essentially reflect a mismatch between school leadership and the systematic promotion mechanisms of labor education.

The PDCA cycle (Plan-Do-Check-Act), as a closed-loop management tool, originates from the field of quality management. Its core logic of dynamic iteration aligns closely with the systematic requirements of labor education reform in higher education institutions. Existing studies have shown that the PDCA model is significantly applicable in the planning, implementation, and evaluation phases of labor education in vocational colleges, effectively optimizing educational processes and outcomes. However, the mechanical application of the PDCA cycle struggles to address complex issues in reform, such as interpersonal collaboration and motivation activation, and requires leadership as a core empowering element throughout the process. Based on this, this study constructs an integrated “Leadership-PDCA” framework to explore strategies for their dynamic alignment, providing support for the systematic advancement of labor education reform in higher education institutions.

At the theoretical level, this study goes beyond the limitations of a single perspective by combining leadership theory with PDCA cycle management to construct a “FourDimensional Leadership-PDCA Stage” dynamic matching model. This enriches the theoretical framework of labor education reform in higher education and provides a new analytical perspective for the integrated application of leadership and management tools in educational governance.

At the practical level, in response to the current challenges of labor education reform, it proposes actionable “dual-driven” advancement strategies that can help universities overcome collaboration barriers, strengthen process management, improve long-term mechanisms, and promote labor education to move from “fragmented implementation” to “systematic deepening”, thereby effectively enhancing the quality of talent cultivation.

Existing studies predominantly address labor education reform from isolated pedagogical or policy perspectives, lacking systematic integration of leadership dynamics and process management tools. This study fills the gap by introducing the PDCA cycle into leadership-driven reform, constructing a “Four-Dimensional Leadership-PDCA Stage” dynamic matching model. It innovatively bridges leadership theory and quality management, transforming fragmented practices into a (closed-loop) governance framework, thereby offering both theoretical extension and practical pathways for systematic deepening of labor education in universities.

Methodology

This study adopts a mixed research methodology, focusing on literature review and qualitative research methods. Firstly, it systematically reviews domestic and international literature on labor education in universities, leadership theory, and the application of the PDCA cycle, clarifying the current state of research

and key controversies to establish a theoretical foundation. To ensure rigor, a systematic search was conducted across Web of Science, Scopus, ERIC, and CNKI for literature published between 2010 and 2025. The search utilized keywords including 'labor education, "leadership" and "PDCA cycle"'. Inclusion criteria prioritized peer-reviewed studies focusing on higher education contexts, while non-academic articles and studies on primary/secondary education were excluded. Secondly, a comprehensive university is selected as a case study, and practical data on the university's labor education reform are collected through in-depth interviews, policy document analysis, and field observation, in order to identify the specific mechanisms through which leadership influences each stage of the PDCA cycle. Finally, based on the literature review and qualitative analysis results, a "Leadership PDCA" integrated framework is constructed, and targeted strategies for promotion are proposed.

The case university was purposively chosen based on its representativeness as a private institution, its engagement in labor education reform for over two years, the accessibility of its leadership at multiple levels (strategic, managerial, and operational), and formal research approval. Data are drawn from semi-structured interviews with 15 – 20 stakeholders (including university leaders, faculty, and students), internal policy documents and reports, and non-participant observations of classes and meetings. These diverse sources enable triangulation and empirically validate how different leadership behaviors shape goal-setting in the Plan phase, resource mobilization in Do, progress monitoring in Check, and institutionalization of improvements in Act, thereby grounding the theoretical model in real-world practice. Finally, based on the literature review and qualitative analysis results, a "Leadership- PDCA" integrated framework is constructed, and targeted strategies for promotion are proposed.

Results and Discussion

Theoretical Foundation

The Core Connotation of Labor Education Reform in Universities

Labor education in universities is not simply a form of physical labor training; it is a comprehensive educational activity centered on "moral education and talent cultivation", covering ideological education, skill development, and value shaping. Its goal is to cultivate students' correct labor values, necessary labor skills, and a strong sense of social responsibility. In the new era, university labor education has three main characteristics: comprehensiveness, practicality, and synergy. Comprehensiveness is reflected in the deep integration of labor education with professional education, ideological and political education, and innovation and entrepreneurship education; practicality emphasizes using real labor scenarios as a platform to guide students in improving their abilities through practice; synergy requires integrating diverse resources from schools, families, and society to build an all-encompassing education system. The core task of current reforms is to break the fragmentation and formalism of traditional labor education and to establish a systematic and long-term implementation mechanism.

The Core Logic of the PDCA Cycle and Its Educational Adaptability

The PDCA cycle was proposed by American quality management expert Walter Shewhart and later promoted and refined by [Deming, \(2019\)](#). Its core logic is to achieve process optimization and continuous improvement through the closedloop operation of the four stages: "Plan-Do-Check-Act". The Plan stage

focuses on setting objectives and planning schemes; the Do stage emphasizes putting plans into practice and exploring implementation; the Check stage stresses performance evaluation and problem diagnosis; and the Act stage summarizes findings, promotes best practices, and addresses shortcomings, forming an iterative cycle. [Wang \(2023\)](#), based on research on the integration of "labor and innovation" in universities, pointed out that the PDCA spiral cycle theory can construct a complete system of "plan preparation–implementation–process monitoring–outcome evaluation". Its adaptability and dynamism make it significantly valuable in systematic work such as higher education reform and curriculum optimization. Applying the PDCA cycle to labor education reform in universities can achieve standardized control over the reform process, avoiding blind progression and formalism.

Core Dimensions of Leadership Theory and Educational Value

Leadership is not merely positional power but an interpersonal influence process that guides organizational members to achieve common goals. In the context of higher education governance, this study distills a four-dimensional leadership system: Transformational leadership focuses on vision building and value guidance, driving change by stimulating members' intrinsic motivation; Distributed leadership emphasizes power decentralization and diverse participation, breaking hierarchical barriers to promote collaborative cooperation; Instructional leadership centers on professional guidance, focusing on the guidance and optimization of teaching practice; Strategic leadership emphasizes long-term planning and institutional development, ensuring the consolidation and iteration of reform outcomes. Existing research shows that transformational leadership can significantly promote teaching innovation among university faculty. Through empirical research on distributed leadership in higher education, found that distributed leadership can indirectly enhance interdepartmental collaboration and work performance by improving teachers' job satisfaction. These findings provide practical support for empowering leadership in labor education reform ([Chen & Wang, 2023](#); [Chen, 2021](#)).

Construction and Dynamic Matching Mechanism of The "Leadership-PDCA" Integrated Framework

Based on theoretical review and qualitative analysis, this study constructs an integrated analysis framework of "Four Dimensional Leadership-PDCA Phases", clarifying the dynamic matching relationship between different types of leadership and each PDCA phase, enabling leadership to empower the entire process of closed-loop management.

Planning Stage (P): Transformational Leadership Guides Blueprint Development

The planning stage is the starting point of labor education reform. Its core task is to clarify reform objectives, plan the implementation path, and allocate key resources, with the effectiveness directly determining the correctness of the reform direction. This stage relies on transformational leadership to provide vision guidance and value shaping, addressing the challenges of 'cognitive bias' and "lack of motivation".

Transformational leadership, through dimensions such as idealized influence, inspirational motivation, and intellectual stimulation, first corrects the cognitive biases of university management and faculty and students regarding labor education, integrates labor education into the school's overall development strategy, and clarifies its core role in the 'fivefold education' approach. Second, by combining the school's unique characteristics and professional strengths, it constructs a personalized vision and goal system for labor

education reform, abandoning a “one-size-fits-all” planning model. Finally, through resource integration and incentive mechanism design, it mobilizes the participation enthusiasm of departments, teachers, and students, laying a solid foundation for reform. Research by [Binnewies et al. \(2012\)](#) confirms that leaders’ support and incentives can effectively stimulate organizational members’ willingness to innovate, a conclusion that applies equally to the planning of labor education reform.

For example, at University A, the Student Affairs Office led the establishment of a labor education reform leadership team, holding specialized seminars to build consensus and establish the reform vision of “cultivating virtue through labor, enhancing intelligence through labor, strengthening the body through labor, and nurturing aesthetics through labor”. Combining the layout of literature, science, and engineering disciplines, they developed a three-dimensional curriculum plan of “basic labor + professional labor + volunteer service labor”, allocated special funds to build on-campus labor practice bases, and linked labor education outcomes to teacher title evaluations and student award recognition. This effectively activated motivation for participation across the board and provided a clear blueprint for subsequent reform, exemplifying the empowerment of the PDCA planning stage through transformational leadership.

Execution Phase (D): Distributed Leadership Promotes Collaborative Implementation

The implementation phase is the core stage of translating reform plans into practice and requires addressing issues such as “poor coordination among participants” and “disconnection from practice”. The key leadership capability in this phase is distributed leadership. Distributed leadership breaks the traditional hierarchical management model, distributing power to various entities such as colleges, departments, teachers, and students, and promotes the implementation of reforms through role division and collaborative cooperation.

In the process of implementing labor education reforms, the role of distributed leadership is reflected at three levels: First, cross-departmental collaboration: a collaborative working group is formed, comprising the Academic Affairs Office, Student Affairs Office, Youth League Committee, various colleges, and off-campus practice bases, with clearly defined responsibilities to overcome the barriers of “working separately”. The Academic Affairs Office is responsible for integrating curriculum systems, the Youth League Committee coordinates volunteer labor activities, colleges develop practical courses based on their majors, and off-campus bases provide real labor scenarios for support. Second, empowering teachers and students: teachers are encouraged to develop labor education course modules based on their professional expertise, and students are granted the autonomy to choose labor projects and form teams, stimulating proactive participation. Third, resource coordination: through a distributed decision-making mechanism, internal campus facilities, faculty, and external resources are efficiently connected to compensate for shortcomings such as insufficient practice bases and weak faculty strength.

During the implementation phase, the school fully demonstrated the value of distributed leadership, with the reform leadership group at the core, establishing a four-level collaborative mechanism: “Student Affairs Office-Colleges-Off-campus partners-Student organizations”. The Student Affairs Office leads the integration of labor education resources across the university, while the College of Humanities, College of Science, and College of Engineering develop professional labor modules in copywriting, data research, and equipment operation, respectively, and coestablish multiple off-campus practice bases with local communities, research institutes, and enterprises. Based on the Student Affairs Office, a Labor Practice Center is established, allowing students to form teams and apply for projects like “Community Public Service” and “Research

Assistance Labor” according to their interests, guided jointly by on-campus teachers and off-campus experts, forming a diversified collaborative execution pattern. This effectively addresses the issues of disconnection between professional labor and practical experience, as well as imbalanced resource allocation. Studies by [Zhang & Cau, \(2025\)](#) indicate that insufficient resource allocation is a prominent challenge for labor education in universities, and distributed leadership, through multi-entity participation in decision-making, can accurately match resource needs and improve resource utilization efficiency.

Check Stage (C): Reflective Assessment Guided by Instructional Leadership

The core task of the inspection stage is to comprehensively evaluate the effectiveness of labor education reform, diagnose the problems and deficiencies in the implementation process, and provide a basis for subsequent improvements. At this stage, it is necessary to rely on teaching leadership to play a professional leading role and solve the dilemma of “ambiguous evaluation” and “loss of control of the process”.

Teaching leadership focuses on improving teaching quality, and mainly plays a role in the inspection stage through the construction of evaluation system and reflection guidance to solve the dilemma of “vague evaluation” and “loss of control of the process”. First of all, take the lead in building a

diversified and procedural labor education evaluation system, break through the limitations of the traditional “result-oriented” single evaluation, incorporate labor concepts, labor skills, teamwork, innovation achievements, etc. into the core indicators, and adopt a composite evaluation method that combines student self-evaluation, teacher mutual evaluation, departmental evaluation, and third-party evaluation to ensure the scientific and comprehensive evaluation results. Secondly, guide teachers and students to carry out practical reflection, systematically sort out the problems and deficiencies in curriculum design, activity organization, guidance methods and other links through teaching seminars, practice summary meetings, etc., and optimize the implementation path in a targeted manner. Finally, establish and improve the feedback mechanism of evaluation results, and timely transmit evaluation information to all implementing entities to provide support for accurate improvement. In the inspection stage, the head of labor education in the student affairs department takes the lead in teaching leadership, and unites key teachers, offcampus practice experts and student representatives of various departments to build a four-dimensional evaluation system of “labor attitude, professional adaptability, practical effectiveness, and social feedback”, and sets evaluation weights for the differentiation of different disciplines and majors - liberal arts focus on copywriting achievements and service quality, science focuses on data accuracy and research depth, and engineering focuses on practical ability and innovative breakthroughs. Through the normalization mechanism of monthly teaching seminars and review of practical results every semester, after collecting feedback such as “formalization of some basic labor projects” and “scarcity of interdisciplinary labor modules”, the project design was immediately adjusted, in-depth practical content such as “interdisciplinary public welfare research” and “science and technology innovation labor workshop” were added, and the detailed rules of evaluation indicators were simultaneously optimized, effectively improving the quality of labor education, which fully confirmed the empowering value of teaching leadership in the PDCA inspection stage.

Processing Stage (A): Strategic Leadership Drives Iterative Institutionalization

The handling stage is the concluding and elevating phase of the PDCA cycle. Its core tasks are to consolidate the results of reforms, address prominent issues, and initiate the next cycle, relying on strategic

leadership to achieve long-term and systematic reform. Strategic leadership focuses on the longterm development of the organization, transforming the achievements of labor education reforms into regularized mechanisms through institutional construction, strategic adjustments, and other means.

The role of strategic leadership in the handling stage is mainly reflected in two aspects: first, the consolidation and promotion of results. Effective experiences summarized during the inspection stage, such as high-quality course modules, collaboration mechanisms, and evaluation methods, are solidified through institutional documents, teaching standards, and other means, and promoted across the school. Specifically, mature labor education courses are incorporated into talent training programs with defined mandatory requirements; collaboration mechanisms are formalized through school-local agreements and departmental work regulations to ensure longterm operation. Second, problem rectification and iteration. For common issues identified during the inspection stage, such as insufficient teacher professionalism and a lack of interdisciplinary modules, special rectification plans are formulated and included in the next round of reform plans, while the objectives and content system of labor education are dynamically adjusted based on contemporary developments and policy guidance.

During the handling stage, the student affairs leadership team at the school fully leverages strategic leadership, transforming mature reform experiences into institutional norms: establishing the mandatory status of the threedimensional curriculum system of “basic labor + professional labor + volunteer service labor”, including labor education teacher training in the annual school faculty training plan, and inviting industry experts to provide specialized training. In response to issues identified during the inspection stage, the school has developed a three-year rectification and iteration plan: the first year focuses on improving teacher capabilities, the second year on creating two interdisciplinary labor education demonstration modules, and the third year on optimizing a closed-loop management mechanism. Through strategic coordination, continuous upgrades of labor education reforms are achieved, forming a complete iterative cycle of “practice-evaluation-improvement-enhancement”, promoting the reform from “phased advancement” to “long-term implementation”, providing strong support for the PDCA cycle’s closed-loop execution.

The “Dual-Drive” Strategy for Promoting Labor Education Reform in Colleges and Universities

Based on the “Leadership-PDCA” integrated framework and considering the practical difficulties of labor education reform in universities, a dual-driven strategy of “process control and interpersonal influence” is proposed to achieve the deep integration of leadership empowerment and PDCA closed-loop management, promoting the systematic advancement of the reform.

Build a composite leadership team and strengthen interpersonal influence-driven capabilities

Break the limitations of a single type of leadership and form a composite team that encompasses transformational, distributed, instructional, and strategic leadership traits to achieve seamless leadership across different stages. First, clarify the team composition: led by the Student Affairs Office (leveraging strategic and transformational leadership), incorporating academic management staff, professional teachers, student representatives, and external practice experts (leveraging instructional and distributed leadership), forming a diverse and collaborative leadership core. Second, strengthen leadership training by conducting specialized training for team members to enhance their abilities in vision building, coordinated management, evaluation guidance, and system development, adapting to the reform needs at different stages. Third,

establish incentives and accountability mechanisms by including the results of labor education reform in team members' performance assessments, encouraging proactive actions, holding accountable those who shirk responsibilities or fail in implementation, and stimulating the internal drive for leadership effectiveness.

Optimize the PDCA closed-loop mechanism and strengthen process control-driven management

Focusing on the PDCA cycle, a standardized and refined process management system is established to ensure the orderly progress of each stage of the reform. In the planning phase, a three-tier mechanism of "research - demonstration - public announcement" is set up. Through methods such as questionnaires, teacher-student discussions, and expert evaluations, the scientific validity and feasibility of plans are enhanced. In the execution phase, a "dynamic monitoring timely correction" mechanism is implemented, with regular special inspections conducted to promptly adjust activities that deviate from goals. In the checking phase, a "diverse evaluation - results disclosure" mechanism is improved to ensure that evaluation results are objective and fair, and publicly disclosed across the school for supervision. In the handling phase, a "rectification - tracking - feedback" mechanism is established to fully follow up on rectification actions, ensuring that issues are effectively resolved. At the same time, a labor education management platform is built using big data technology to achieve real-time collection, analysis, and sharing of data across all PDCA stages, enhancing the intelligence level of process management.

Break through core barriers and improve the support and guarantee system

To address the key bottlenecks in the reform, a comprehensive support and guarantee system should be established. First, break down coordination barriers by creating a tri-party collaborative mechanism of "school-family-society". Through parent meetings, community publicity, and other methods, guide families to value labor education, and jointly build practical bases with enterprises, communities, and research institutes to expand labor education scenarios. Second, overcome the teacher resource barrier by forming a "full-time + part-time + mentor" teaching team. Select outstanding teachers as full-time labor education instructors, invite industry experts and skilled technicians as part-time teachers, and provide professional mentors to guide students' labor practice, while establishing a regular training mechanism to enhance teachers' professional capabilities. Third, break through resource barriers by increasing investment in labor education, used for building practice bases, teacher training, curriculum development, etc., integrating on-campus resources such as laboratories, libraries, and campus environments, tapping into their value for labor education, and achieving efficient use of resources.

Conclusion

This study, based on a qualitative analysis of a comprehensive university, constructs an integrated "Leadership-PDCA" analytical framework, revealing the dynamic matching mechanisms between four-dimensional leadership and each stage of PDCA: the planning stage relies on transformational leadership to build reform visions and implementation plans; the execution stage depends on distributed leadership to overcome collaboration barriers and promote plan implementation; the checking stage uses instructional leadership to optimize evaluation and reflection and calibrate implementation directions; the acting stage leverages strategic leadership to institutionalize outcomes and iterate reforms. The study confirms that

combining the interpersonal influence of leadership with the process control of PDCA to form a “dual-drive” strategy can effectively address the core challenges in labor education reform in higher educationssuch as insufficient motivation, poor collaboration, lack of control, and unclear evaluation– and promote labor education from “fragmented implementation” to “systematic deepening”. The case practice at the university also confirms the feasibility of this strategy, as it constructs a sustainable labor education mechanism through precise empowerment of four-dimensional leadership across all PDCA stages. The findings of this study not only provide a practical reference path for labor education reform in higher education but also offer theoretical guidance for the integrated application of leadership and management tools in educational governance.

This study selected a single comprehensive university as a case, so the sample type is relatively homogeneous, and the generalizability of the research conclusions still needs further verification. In the future, the sample range can be expanded to include universities of science and engineering, humanities, and vocational colleges, conducting cross-institutional comparative studies to test the adaptability of the “LeadershipPDCA” framework in universities with different educational characteristics. At the same time, with the widespread application of technologies such as artificial intelligence and big data in the field of education, the integration of leadership and the PDCA cycle under technology empowerment can be further explored, building an intelligent system for promoting labor education reform. In addition, for the new forms of labor education in the new era (such as digital labor and green labor), in-depth research can be conducted on the adaptive adjustments between leadership and the PDCA cycle, providing support for the ongoing modernization of labor education reform.

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