

Article

Research on the Construction of the "Five in One" Labor Education System in Applied Universities

Lu Wang^{1,*}¹ School of Civil Engineering, Liaodong University, Dandong, Liaoning, 118003, China

* Correspondence: Lu Wang, School of Civil Engineering, Liaodong University, Dandong, Liaoning, 118003, China

Abstract: This study focuses on the construction of a labor education system in applied universities, deeply explores the problems existing in current labor education in applied universities, and innovatively proposes a five in one education system of "value guidance curriculum reform teacher optimization practice expansion evaluation reconstruction". Aiming to effectively enhance students' labor literacy and comprehensive abilities, it provides new ideas for the reform of labor education in applied universities. This study has important theoretical and practical significance for improving the training mode of applied talents and promoting the connotative development of higher education.

Keywords: application-oriented universities; five in one; labor education; system construction

1. Introduction

With the rapid development of China's economy and the ongoing transformation of industrial structures, application-oriented universities are playing an increasingly vital role in cultivating high-quality talents with practical skills. As a key component of higher education, labor education holds substantial value in enhancing students' practical abilities, fostering innovative thinking, and nurturing a sense of social responsibility.

Despite its recognized importance, labor education in many applied universities still faces developmental challenges. These include areas such as the further improvement of curriculum systems, the enrichment of practical training opportunities, and the enhancement of teaching capacity. These aspects, if further strengthened, could better align with the evolving demands of talent development in the new era.

This study seeks to build a systematic and integrated labor education framework to improve the overall quality and effectiveness of labor education in application-oriented institutions. By proposing an innovative "Five in One" model—encompassing value orientation, curriculum optimization, faculty development, practice expansion, and evaluation refinement—this research explores new directions for labor education reform. It aims to contribute both theoretical insights and practical strategies to support the transformation and high-quality development of higher education.

2. The Current Situation and Problems of Labor Education in Application-Oriented Universities

The current innovation and entrepreneurship education in universities still faces multiple development bottlenecks in the process of promotion. From the perspective of educational mechanisms, the primary issue lies in the lack of coherence in the curriculum structure. Some universities have failed to establish a comprehensive hierarchical system in their curriculum planning, resulting in a mismatch between theoretical teaching and practical needs. Teaching methods are limited to traditional classroom models, making it

Published: 11 June 2025



Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

difficult to effectively mobilize students' enthusiasm for participation and innovative potential. In terms of practical aspects, although some universities have established internship bases and school enterprise cooperation projects, the coverage is limited and the connection with professional courses is not close enough, resulting in ineffective improvement of students' practical abilities [1].

The construction of the teaching staff is another prominent issue. Many applied universities lack specialized labor education teachers and are often staffed by teachers from other disciplines, making it difficult to ensure teaching quality. In addition, the existing evaluation mechanism also has shortcomings, focusing too much on results and neglecting the process, which cannot fully reflect students' labor literacy and practical ability. In terms of value orientation, some universities do not attach enough importance to labor education and have not established an effective value system [2]. The lack of effective publicity and guidance has led to low awareness and participation of students in labor education. The existence of these problems seriously restricts the development of labor education in applied universities, and it is urgent to solve them through systematic reforms [2].

3. Construction of the Five in One Labor Education System

In response to the current problems in labor education in application-oriented universities, this study proposes a "five in one" labor education system construction plan.

3.1. Guide Students to Establish Correct Labor Values

Labor education is the main path to guide students' personal values and attitudes towards labor from the perspective of cultivating morality and nurturing people; The original intention and mission of cultivating morality and talent is to enable students to establish correct employment and labor concepts, form good labor qualities, and acquire labor skills. Labor education enables students to enhance their abilities and skills through practical labor, strengthen their will through labor, and create and realize their own value through labor [3].

Firstly, guide students to establish an awareness of labor equality. Labor should not be distinguished by status, and all professions in society should be viewed fairly and objectively, respecting ordinary workers in various fields. Secondly, pay attention to cultivating students' labor emotions. In today's society, students should understand that a fulfilling life is achieved through personal effort and contribution in the hearts of students, and obtain a happy life through labor. At the same time, enhance students' emotional identification with model workers and national workers, and firmly believe that those who work hard and dedicate themselves are happy. Through the power of role models, guide students to release their enthusiasm for labor into practice. When they personally experience the happiness and sense of achievement of labor, they will admire and love labor more, and realize their life values and ideal pursuits through labor. Furthermore, it is necessary to stimulate students' consciousness of labor. We should guide students to consciously cultivate labor habits, such as regularly cleaning dormitories and classrooms, and also increase practical experience through participating in work study programs to create social value in practice [4].

3.2. Optimize the Curriculum System of Labor Education

Building a "basic + professional + extended" labor education system: setting up compulsory labor general courses and skill training at the basic level; Professional level development of integrated modules for engineering equipment maintenance, management service innovation, and other disciplines; The expansion layer offers elective courses such as handmade crafts and social practice. The implementation path includes:

- 1) Embedding 20% of labor practice hours into professional courses.

- 2) School enterprise joint construction of industry university research practice platform.

Enrich course content, expand teaching forms, strengthen network resource development, and build a "Labor Education Practice" cloud classroom on the Pan Ya teaching platform to support students' independent exploration, collaborative communication, and research-based learning. Diversified teaching methods: Constructing a labor education implementation matrix:

- 1) The theoretical module focuses on the "three spirits and one skill" (labor spirit, craftsmanship spirit, model worker spirit, practical skills), integrating labor regulations and safety production case teaching.
- 2) The implementation of the "three types of labor" project-based teaching in the practical module includes campus service days (daily labor), enterprise training week production labor, and service labor.
- 3) The integration plan of "professional + labor" is implemented through the penetration of disciplines, such as the construction of a "lean manufacturing professional ethics technical aesthetics" teaching chain for engineering majors, the establishment of theoretical to practical projects for management majors, the simultaneous opening of industry development dynamic analysis courses, and the strengthening of vocational foresight cognition and employment competitiveness.

The organic combination of professional education and labor education can improve the quality of talent cultivation and achieve the optimal effect of labor education.

3.3. Build a Specialized Team of Labor Education Teachers

One is to actively select and cultivate a specialized team of labor education teachers. Mainly composed of specialized labor education teachers, counselors, and professional course teachers; At the same time, multiple channels are being used to hire part-time labor education teachers. Take advantage of good school enterprise cooperation, employ industry model worker, outstanding entrepreneurs, enterprise technical backbones, etc. as part-time teachers, and provide students with rich labor curriculum resources in school and outside school. The second is to establish teacher training, assessment, and incentive mechanisms, enhance their value recognition of labor education in the new era, improve their ability and level to carry out labor education, and provide them with a platform and space for continuous development [5].

3.4. Expand the Practical Teaching Platform

Build a collaborative education network among campus enterprises, collaborate with leading enterprises and community institutions to jointly establish a production education integration training base, and promote a dual teacher guidance model of collaboration between enterprise mentors and on campus teachers. Implement a multi-level training system of cognitive internship, on-the-job practice, and on-the-job operation in stages to gradually enhance students' vocational abilities. In the cultivation of professional ethics, we rely on school enterprise cooperation projects to strengthen the cultivation of craftsmanship spirit, strictly regulate equipment operation accuracy standards, strengthen project delivery time management, and promote the transformation of innovative achievements through patent incubation mechanisms [6]. Build an innovation and entrepreneurship support platform, integrate enterprise practical case resources, establish a school enterprise joint special venture capital fund, open a fast service channel for intellectual property rights, and form a full chain labor education ecosystem covering teaching guidance, practical training, and innovation incubation.

3.5. Establish a Scientific Labor Education Evaluation System

To construct a multidimensional evaluation model for labor education, it is necessary to establish a dynamic monitoring and feedback mechanism. Implement a dual track system combining process evaluation and outcome evaluation, setting quantitative indicators including completion of labor tasks, skill mastery level, and professional attitude performance, while incorporating qualitative evaluation dimensions such as shaping labor values and cultivating innovative consciousness. Establish a multi-party participation mechanism, integrate student self-evaluation logs, teacher developmental evaluations, enterprise job competency assessments, and community service feedback data, and form a three-dimensional evaluation map. Firstly, clarify the principles of evaluation. Explicitly stipulate the reward and punishment system for completing and not completing various indicators. Secondly, establish a four-dimensional evaluation index system for labor education, focusing on four core dimensions: labor cognition, practical ability, spiritual qualities, and behavioral norms [6]. The dimension of labor cognition focuses on evaluating students' understanding of the value of labor, including whether they have formed a conscious awareness of respecting the results of labor; The practical ability dimension combines theoretical testing with practical assessment to systematically test students' mastery level of professional labor skills; The dimension of spiritual qualities focuses on examining whether students possess a hardworking style, innovative and enterprising consciousness, and emotional identification with workers; The dimension of behavioral norms records the development of daily work habits such as students' participation in collective labor and compliance with safety regulations through continuous observation. This system combines classroom performance tracking with extracurricular practice archives to construct a dynamic and panoramic labor literacy assessment model. Thirdly, establish a comprehensive evaluation mechanism throughout the entire process. Labor education should be integrated into the entire process of professional education, implementing a "four in one" evaluation system of self-evaluation, peer evaluation, teacher evaluation, and social evaluation. Fourth, actively improve the evaluation and feedback mechanism. Establish a triangular feedback and communication mechanism between schools and teachers, teachers and students, and students and schools, regularly hold feedback and communication meetings, and provide reference and inspiration for the continuous improvement of subsequent teaching implementation and evaluation.

4. Implementation Strategy of the Three in One Labor Education System

To ensure the effective implementation of the "Five in One" labor education system, a series of strategies need to be adopted. Firstly, universities should establish clear labor education goals and implementation plans, and incorporate them into the overall development plan of the school. A specialized labor education guidance committee can be established to coordinate resources from all parties and ensure the implementation of various measures. Secondly, strengthen deep cooperation with enterprises and establish a long-term stable mechanism for school enterprise cooperation. More practical opportunities can be provided for students through co building laboratories, joint research and development projects, and other means, while also promoting the integration of industry, academia, and research.

Thirdly, in the construction of the teaching staff, a sound teacher training and incentive mechanism should be established. Teachers can be regularly organized to participate in corporate practices to enhance their practical abilities; At the same time, encourage teachers to participate in research related to labor education and improve their theoretical level. For teachers who perform well, appropriate rewards and promotion opportunities should be given. In addition, attention should be paid to the personalized development of students, and flexible and diverse labor education programs should be designed according to the characteristics of different majors and students. Pay attention to creating a cultural atmosphere, carry out labor themed activities, create a three-dimensional cultural

matrix of "Model Worker Lecture Hall-Labor Skills Competition-Labor Culture Festival", improve students' participation in labor, and stimulate their enthusiasm for participation.

Finally, it is necessary to fully utilize modern information technology and innovate the form and content of labor education. We can develop digital resources such as online courses and virtual simulation experiments to provide students with a richer and more convenient learning experience. At the same time, utilizing big data technology to track and analyze students' learning processes, adjusting teaching strategies in a timely manner, and improving the pertinence and effectiveness of education.

5. Evaluation of the Effectiveness of the Five in One Labor Education System

To comprehensively evaluate the implementation effect of the "Five in One" labor education system, it is necessary to establish a scientific evaluation index system. The system should include multiple dimensions such as improving students' labor literacy, enhancing practical abilities, and improving employment quality. Data can be collected through various methods such as questionnaire surveys, interviews, and observations for quantitative and qualitative analysis. At the same time, a long-term tracking mechanism should be established to pay attention to students' long-term development and evaluate the impact of labor education on their career.

Build a multi-dimensional collaborative evaluation mechanism that integrates data from student self-evaluation, teacher evaluation, and enterprise feedback to form a multidimensional evaluation system. Introduce third-party professional organizations to conduct independent evaluations, with a focus on verifying the achievement of labor education goals and the level of professional development. The evaluation results will be included in the annual education quality report, and industry recognized quality standards will be established to provide a basis for teaching optimization. Based on the evaluation results, adjust and optimize the labor education system in a timely manner to form a virtuous cycle of continuous improvement. In addition, attention should be paid to summarizing and promoting excellent cases to provide reference for other universities.

To improve the accuracy of evaluation, it is recommended to establish a three-level evaluation mechanism: short-term evaluation focuses on explicit indicators such as course participation and skill mastery rate (such as a pilot project in a certain university showing a labor course participation rate of 98%); Midterm tracking of students' job adaptability and career development speed within 3 years of graduation; In the long run, the lifelong impact of labor education will be analyzed through big data analysis of alumni career trajectories. Soft indicators such as innovation ability and craftsmanship spirit can be transformed into quantifiable observation points, such as the number of invention patents and promotion cycles. Special attention should be paid to the new requirements of new business models for labor education, using artificial intelligence technology to intelligently profile labor behavior data and dynamically generate personalized evaluation reports. Simultaneously establish a digital twin system of "evaluation feedback improvement" to make effectiveness evaluation the core engine driving the iterative upgrading of labor education.

6. Conclusion

The "Five in One" labor education system constructed in this study provides new ideas and methods for the reform of labor education in applied universities. This system has formed a systematic and comprehensive labor education model through the organic combination of five dimensions: curriculum system, practical platform, teaching staff, evaluation mechanism, and cultural atmosphere. Research has shown that this system can effectively enhance students' labor literacy and practical abilities, promoting their comprehensive development.

However, the construction and improvement of the labor education system is a long-term process that requires joint efforts from universities, enterprises, and all sectors of

society. In the future, we should further deepen school enterprise cooperation, expand practical platforms, optimize evaluation mechanisms, and create a stronger labor culture atmosphere. At the same time, attention should be paid to the deep integration of labor education and professional education, exploring more flexible and diverse forms of education to meet the needs of talent cultivation in the new era. I believe that through continuous reform and innovation, labor education in applied universities will achieve greater results and make important contributions to cultivating high-quality applied talents.

Funding: Special Construction Project for "Labor Education Practice" of Teaching Reform and Research Project of Liaodong University in 2024- Research on the Construction of the "Five in One" Labor Education System in Applied Universities.

References

1. I. Bleiklie, "Organizing Higher Education in a Knowledge Society," *High. Educ.*, vol. 49, pp. 31–59, 2005, doi: 10.1007/s10734-004-2913-7.
2. S. Meng, F. Tao, and L. Han, "The Joint Development of College Labor Education and Quality Education Based on the New Era," in *Proc. 2020 Int. Conf. Comput., Inf. Process. Adv. Educ. (CIPAE)*, Ottawa, ON, Canada, 2020, pp. 53–56, doi: 10.1109/CIPAE51077.2020.00021.
3. M. Gow, "The Core Socialist Values of the Chinese Dream: Towards a Chinese Integral State," *Crit. Asian Stud.*, vol. 49, no. 1, pp. 92–116, 2016, doi: 10.1080/14672715.2016.1263803.
4. S. Xiao, J. Sheng, and G. Zhang, "Rising Tides of Knowledge: Exploring China's Higher Education Landscape and Human Capital Growth," *J. Knowl. Econ.*, vol. 16, pp. 4392–4421, 2025, doi: 10.1007/s13132-024-02102-9.
5. G. Fan and J. Zou, "Refreshing China's Labor Education in the New Era: Policy Review on Education Through Physical Labor," *ECNU Rev. Educ.*, vol. 3, no. 1, pp. 169–178, 2020, doi: 10.1177/2096531120903878.
6. J. Zhang and J. Liu, "The Practical Path of Labor View in the New Era to Promote the Innovation of Labor and Education Curriculum," in *Proc. 2021 9th Int. Conf. Inf. Educ. Technol. (ICIET)*, Okayama, Japan, 2021, pp. 307–310, doi: 10.1109/ICIET51873.2021.9419578.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of SOAP and/or the editor(s). SOAP and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.