Asia Pacific Science Press

# Construction of Evaluation System for Higher Vocational Professions in Yunan Province under the Background of Industry-Teaching Integration
# The Construction of Garden Planning and Design Course in Yunan Industrial College as an Example

**Xueyuan Yang, Yeqing Zhang***

Yunnan Agricultural Vocational and Technical College, China
***Corresponding author : Yeqing Zhang**

**Abstract:** After examining the benefits and drawbacks of industry-teaching integration in Germany, Sweden, the Netherlands, South Korea, and Japan, the article compares the policy context of our nation's industry-teaching integration with a thorough examination of the current state of curriculum design and curriculum system modification in the western region. Finally, it uses Yunnan Agricultural Vocational and Technical College of Yun'an Industry College as an example. Aiming to serve as a reference for the development of disciplines, the establishment of contemporary industry, and the reform of the educational system in the western region, the issues identified during the evaluation process of the garden planning and design course are changed and improved in the evaluation system in accordance with the assessment of the quality of instruction currently being carried out.

## 1.Introduction

The western provinces and cities of China have successfully run schools and educated people in the high-quality synergistic development of vocational education, according to the symposium on promoting the development of western China in the new era. Nonetheless, Yunnan Province's higher vocational education still lags somewhat behind the country's vocational education development, with numerous issues and educational inadequacies. Key tasks and management strategies for education integration and education management and reform have been developed by the Ministry of Education's General Offi ce; relevant businesses have established practice bases for integration between schools and businesses; and businesses and social organizations have reinforced the system of integrating industry and education for students and social groups. These actions are part of the vocational education system in Yunnan Province, which was implemented to keep up with thenational team's eff orts to further integrate education and industry in China's western provinces. Businesses and social groups have raised student awareness of the system and encouraged Yunnan Province's vocational education system to integrate industry

teaching. Higher vocational education in Yunnan Province still has a lot of issues, though, like how to make students desirable to employers at the federal, state, and local levels. If you are applying for the same job, how do you compete with undergraduate students? How to complete the teaching objectives of four-year and five-year undergraduate education in three years of teaching work in the same specialty of the relevant universities? How can the situation where some private higher vocational colleges and universities charge exorbitant tuition fees to compensate businesses for their deficit using the excess revenue from education be rectified? How can state and relevant department policies be updated in real time and made more transparent and open to all facets of society? How should the supervision and feedback system be put into place? It is critical that all facets of the community pay adequate attention to and consider these disorderly industrial phenomena.

## 1.1 The present state of China's industry-teaching integration education system's development

Western countries represented by Germany, Sweden, the Netherlands, South Korea, and Japan pay special attention to vocational education. Germany, guided by the engineer training model, focuses on classifying applied technology majors and disciplines in the undergraduate degree of applied technology, integrating curriculum practice with enterprise needs and academic education, and integrating the dual system training model with the country's social needs in talent cultivation [1]. As part of its welfare system policy, Sweden combines curriculum teaching, factory-style teaching, and multi-enterprise associations in the form of multiple synergies to share the responsibility of social education with the decentralized cooperation model of the government, schools, and businesses that was established under the market orientation [2].The main way that the University of Applied Sciences of the Netherlands is represented is through the collaboration between the university and businesses in the integration of education and industry [3]. While encouraging people to look for jobs first and then accept higher quality education at any time, the Jungkook government of South Korea encourages businesses to establish a university within their establishments so that employees can combine academic research with work experience. Additionally, it encourages teachers to start their own businesses and work part-time jobs in businesses, contributing to the practical projects that the students learn in school [4].Japan is more focused on establishing the mechanism of industry-university-government cooperation when it comes to applied personnel training [5].In Western countries, vocational education personnel training objectives are clear: the use of a "dual system" perspective or decentralized cooperation, multi-dimensional synergies in the form of government, business, and universities, combined with the shortcomings of the country's demand for skilled personnel to update and improve the education model, the students in the job market, by the policy to protect the technology-based enterprises in favor. But because of national institutional factors, after a foreign industry-teaching integration system was implemented to serve the enterprise's wealthy and elite class, teaching focused on increasing production capacity and efficiency quickly, neglecting the curriculum process of student learning, spiritual immersion, and improving the process's vocational qualities. And due to the limitations of the learning time, students may not be able to fully comprehend all the contents of the course covered; they are forced to ask for practice in the workplace. The implementation of practical exercises and the project itself may lead to expensive trial and error for; the government, businesses, and schools; the multi-dimensional cooperation system is still in its infancy; and the country's education integration system was not introduced until much later.(Table 1)

*Table 1 ：Statistics on vocational education by country*

| Nation | Vocational education model | Focus of talent developme |
|---|---|---|
| German | Dual education system (e.g. school-based) | Responding to the needs of economic and social development |
| | | Engineer Cooperative Training System |
| | | Practice and Curriculum Integration |
| Sweden | Decentralized and market-oriented decentralized governance models | Decentralized and market-oriented decentralized governance models |
| | | Course practice combined with distance learning |
| | | Factory teaching and apprenticeship training models |
| | | Multi-Enterprise Consortium (MEC) model |

| Nation | Vocational education model | Focus of talent developme |
|---|---|---|
| Korea | Business as a leader, leading practical projects government and university cooperation | Corporate universities (in-house universities) |
| | | Encourage faculty to work part-time and start businesses in enterprises and contribute to practical projects |
| | | Building a learning community to drive the development of neighboring businesses and secondary vocational education institutions |
| | | "Work first, university later" Access to higher education at any time after finding a job |
| | | Establishment of the High School Difficulty in Employment Fund to support working students |
| Netherlands | Dual education system (e.g. school-based) | Alignment of time spent on study and work |
| | | Setting up "professional education and investment" seats, establishing professional knowledge dual education system (e.g. centers, and building a new type of cooperation between the government, enterprises and school-based)vocational colleges and universities. |
| | | Building a learning community to drive the development of neighboring businesses and secondary vocational education institutions |
| Japan | Dual-track vocational education model | Developing "on-the-job" professionals |
| | | Encouraging educational institutions and consortium enterprises to run schools |
| | | Establishment of a specialized vocational college within the company |
| | | Industrial demand-oriented curriculum system |
| | | Participation of government, schools, enterprises, sectors or relevant organizations in the integration of industry and education |

## 1.2 The state of our nation's education system's development at the moment, which integrates production and education

Chinese colleges and universities carry out practical exploration of updating the training mode of applied and technical talents under the perspective of industry-teaching integration. Changjiang Institute of Vocational Technology has reached a cooperative intention with neighboring enterprises and companies to set up an order-type talent cultivation program, focusing on the cultivation of talents' professional qualities and qualities [6].Through the integration of industry and education, Liaoning Ansteel Group and Liaoning University of Science and Technology have investigated the synergistic path between the new productive forces and the new production relations using the embedded synergistic model [7].The E-Hong Kong-Macao Bay Area's creative park construction project, in particular, has investigated a multifaceted, multi-path, and replicable mode of industry-education integration that is deserving of national universities' attention and adoption [8]. Many universities and scholars now hope to combine teaching with enterprise demand in professional master's degree curricula, as well as to combine new industries with professional practice. This is because majors in landscape architecture and gardening are built with the integration of businesses and schools in mind [9].Yunnan Province is actively working on policies pertaining to the integration of industry and education, but as of right now, there is not a trend of using the AHP hierarchical analysis method to examine how the teaching evaluation system is actually used; the different systems that make up the system's coverage are not comprehensive and complete; the system's scientific nature needs to be improved; and the implementation of the evaluation of the content of the various schools, the gathering of data, and the process of identifying the existence of the challenges of resource allocation and integration [10].

# 2.Course design and curriculum reform for landscape planning and design.

## 2.1 The course design for landscape planning is based on student feedback on the course material.

The landscape planning and design course standard, which was developed in response to the National Vocational Skills Competition, uses a modular teaching setup, logical connections, and problem-solving concepts of the content. It begins with the needs of the students and serves as a guide for the shortboards and deficiencies of students in higher education vocational schools in the process of job searching and career development [11].China's policies of ecological civilization building, economic transformation, and social development are the driving forces behind the professional landscape planning and design course. It strongly supports China's efforts to build eco-friendly, kid-friendly, smart, digital, and innovative cities as well as ecological civilization cities.

Through this course, students can improve their overall literacy, creativity, beauty cognitive ability, and ability to appreciate garden art. They can also become more adaptable in the context of globalization and society's rapid development. The teaching content expands students' knowledge in a variety of fields, including botany, architecture, engineering, ecology, and the history of garden planning and construction. This helps students understand the professional background of garden design and the developments in industry. It aids students in building the foundation of a professional knowledge system by helping them comprehend the history of landscape design and the state of the field today. By combining garden art and garden engineering technology, students must design a garden within a specific land area. They must also construct a beautiful living and recreational space by building mountains, stacking stones, controlling water, constructing buildings, setting up garden paths, and planting trees and flowers.

Students can use hand-drawn expressions and program reports to show their mastery of core contents such as the basis and principles of garden design, history of gardens, planting design of gardens, and layout of gardens. Teachers can improve their students' understanding, respect, and appreciation of the natural world while also keeping an eye on their knowledge and emotional reactions in the classroom by transferring professional knowledge and professionalism.(Figure 2)

*Figure 2：Landscape Planning and Design Program Standards*
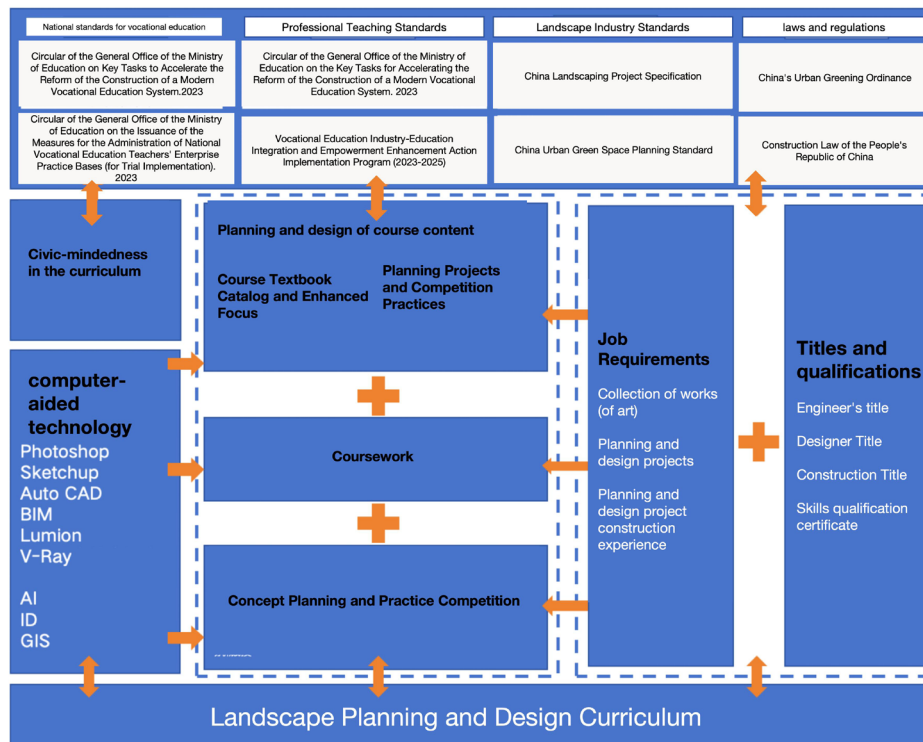


## 2.2 Teaching requirements against the vocational skills competition design.

Students' needs are the focus of the practical simulations that are conducted on campus to encourage teaching by production and competition, as well as to fully prepare students to face the comprehensive quality and comprehensive ability required for future market competition [12]. Delivering technical and composite skills to the construction team and design industry is the

goal of this public, required course for the landscape engineering technology program. The curriculum is designed to meet the skills that students must acquire for their jobs. The course fully utilizes digital resources available online, adapts and enhances the course system by integrating the lecture format with students' study and daily routines, helps students integrate theoretical knowledge with training in practical skills, and monitors how well students absorb and communicate their knowledge. Using project-, competition-, innovation-, and entrepreneurship-oriented teaching, along with the Yunnan Provincial Vocational Skills Competition in landscape construction competition, the course aims to maximize the course material so that students learn the fundamentals of garden design from around the world, improve their level of garden design and creation, and design with human needs in mind. Students will learn more hands-on, develop their brains, see more, ask hard, and think more as they learn. Together with the fundamentals of garden planning and design, planning and design techniques, and design skills, students are motivated to engage in independent project thinking and research, which fosters their creative thinking and practical skills. The entire learning process is the focus of the curriculum, and during lectures, instructors highlight the course's political and ideological education in addition to its subject matter [13]. Make safety education a priority and concentrate on winning over students' hearts and minds [14], in combination with the course content.

All-round enhancement of students' vocational literacy and professional quality. Although this part of the students and undergraduate education students, compared with the stage of learning process by the personal growth environment, learning methods, and learning goals are not clear enough, and many other reasons for the impact of learning foundation is relatively weak, but after the course teaching and education methods of improvement and adjustment, the author still found that they are in the spatial perception, planning and design, practical manipulation has a certain degree of plasticity.(Figure 3)

*Figure 3: Vocational Skills Competition in Yunnan Province*



## 3.Construction of Quality Evaluation Index System for Industry-Teaching Integration in Higher Vocational Education in Yunnan Province.

To standardize the landscape engineering technology curriculum, standardize the flaws in the multi-party collaboration process and the workflow of the thorough evaluation of the profession, and serve as a guide for the advancement of the gardening profession and the suitability of students' learning, a teaching quality evaluation index system is being constructed. The evaluation system must be scientific and adhere to industry standards for indicator evaluation[15].The teaching quality assessment of Yunnan Province's higher vocational colleges and universities is currently carried out in its entirety, and the evaluation system is enhanced in response to the issues found in order to create standardized curriculum, professional teams, and "test questions" for talent development programs. Recap the findings using the actual scoring data and advocate for

enhancements to the teaching methodology and system for developing talent. The school's student body will benefit from the adoption of policies pertaining to the integration of industry and education, not from having to deal with inspections or tasks. All ratings and scores are taken into account, and the index system refers to the scoring logic of the AHP hierarchical analysis method. The object of professional evaluation, such as A1 professional self-assessment, A2 expert scoring, A3 student evaluation, and A4 peer evaluation, is specified in the first-level indicator layer. The overall indicator system scores must play a gradient in order to score the significance of this level of indicators for comparison. The second-level indicators are the type of generalization of the first-level indicators. Each team must prepare tertiary indicators, which are materials and evaluation materials. Each team can give a detailed presentation of the materials before using the questionnaire form to enter the values and summarize them. Yaahp statistical software, SPSS, is used to score errors and guarantee that the data is accurate and scientific.(Table 2)

*Table 2:Indicator System for Evaluating the Value of Industry-Education Integration*

| Value-added indicators | | | Level of importance of the indicator | | | | |
|---|---|---|---|---|---|---|---|
| Level 1 indicators | Level 2 indicators | Level 3 indicators | Vital | Very | Generally | little | Not |
| A1Professional self-assessment | B1Course instructional enrichment | C1Talent Training Program | | | | | |
| | | C2Curriculum standard-setting | | | | | |
| | | C3Writing lesson plans | | | | | |
| | | C4Textbook use | | | | | |
| | | C5Course Assessment System | | | | | |
| | | C6Teaching Presentations and Videos | | | | | |
| | | C7teaching practice | | | | | |
| | | C8Number of school-enterprise cooperation courses developed | | | | | |
| | B2Integration of industry and education and social participation | C9Policies and Regulations | | | | | |
| | | C10Number of practical training bases built and shared by school-enterprise cooperation | | | | | |
| | | C11No. of lead firms/joint ventures | | | | | |
| | | C12No. of engineering research centers | | | | | |
| | | C13No. of Technology Innovation Centers | | | | | |
| | | C14No. of entrepreneurial innovation centers | | | | | |
| | | C15No. of enterprise technology centers | | | | | |
| | B3Soundness of internships | C16No. of internship practice sites | | | | | |
| | | C17No. of practical training equipment | | | | | |
| | | C18Participation rate of students in internships and practical training | | | | | |
| | | C19Effectiveness of internship | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | C20Teachers' qualifications | | | | | |
| | | C21Relevant qualification | | | | | |
| | | C22Percentage of "dual-teacher" teachers | | | | | |
| | B4Completeness of professional team formation | C23Practical Experiences | | | | | |
| | | C24scientific research | | | | | |
| | | C25Competition experience | | | | | |
| | | C26No. of projects | | | | | |
| | | C27Number of fund/subject applications | | | | | |
| | | C28Research Books | | | | | |
| | B5Integrity of International Exchange Programs | C29International Exchange Opportunities for Talents | | | | | |
| | | C30No. of international conferences organized | | | | | |
| | | C31No. of specialized international cooperation projects | | | | | |
| A2Expert evaluation | B6spirit of duty | C32Quality of Teachers' Instruction | | | | | |
| | | C33Practical training safety education | | | | | |
| | | C34Professional responsibility | | | | | |
| | | C35teachers' morale and ethics | | | | | |
| | | C36professional conduct | | | | | |
| | | C37teaching attitude | | | | | |
| | | C38Instructional content monitoring and guidance | | | | | |
| | | C39service-minded | | | | | |
| | B7Dedication | C40Teaching and learning the key points of the course | | | | | |
| | | C41Curriculum Focus Teaching Cycle | | | | | |
| | | C42Curriculum and Instructional Program Match | | | | | |
| | B8Creativity | C43Quality of scientific research results | | | | | |
| | | C44No. of scientific research results | | | | | |
| | | C45Degree of innovation in the curriculum | | | | | |
| | | C46No. of mentoring competitions | | | | | |
| | | C47Guidance on the quality of the competition | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | B9Pragmatism | C48No. of student employment assistance | | | | | |
| | | C49Teaching Content Practice | | | | | |
| | | C50Student Knowledge Acquisition | | | | | |
| | | C51Teachers' mastery of terminology | | | | | |
| | B10Cooperative spirit | C52Course team fit | | | | | |
| | | C53Teacher-student cooperation | | | | | |
| | | C54Parent-Student Collaboration | | | | | |
| | | C55Home-school collaboration | | | | | |
| | | C56Parent-teacher collaboration | | | | | |
| A3Student assessment | B11Integrity of Teachers | C57Sense of responsibility | | | | | |
| | | C58Serve as a model | | | | | |
| | | C59Class discipline | | | | | |
| | | C60Teaching attitude | | | | | |
| | | C61Grooming and demeanor | | | | | |
| | B12Basic Teaching Skills | C62Language and Logic | | | | | |
| | | C63Class handout aesthetics | | | | | |
| | | C64Teaching posture and interaction | | | | | |
| | B13Teaching content | C65Matching of materials to instruction | | | | | |
| | | C66Logic of knowledge system | | | | | |
| | | C67Match of assignments to course | | | | | |
| | B14Teaching methods | C68Classroom atmosphere and activity | | | | | |
| | | C69Multimedia equipment operating proficiency | | | | | |
| | B15Teaching and learning management | C70Classroom discipline | | | | | |
| | | C71Student-teacher relationships | | | | | |
| | | C72Teaching organization and management | | | | | |
| | B16Teaching effectiveness | C73Level of teaching skills | | | | | |
| | | C74Creativity and innovation | | | | | |
| A4Peer review | B17Teaching and research results | C75Teachers' titles | | | | | |
| | | C76Scientific research projects | | | | | |
| | | C77Innovative research projects | | | | | |
| | | C78Authenticity of research projects | | | | | |
| | | C79Fairness in professional competitions | | | | | |
| | | C80Innovative professional competitions | | | | | |
| | | C81Authenticity of professional competitions | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | C82Comprehensive professional evaluation content | | | | | |
| | B18Content of professional evaluations | C83Scientific content of professional evaluations | | | | | |
| | | C84Content integrity of professional evaluations | | | | | |
| | | C85Professional evaluation of content authenticity | | | | | |

# 4.Discussion

In Yunnan, numerous short boards continue to be active in the implementation of the production and education integration policy as well as the development of the vocational education system. The government, businesses, students, teachers, and other societal segments must collaborate to provide solutions and countermeasures.

Macro-strategically, the goal of talent training is to deliver professionals to the country, to the neighborhood, and to the locality. Regulations and management must be used sensibly to encourage businesses to operate schools; teachers are encouraged to work part-time in businesses and on projects involving innovation and entrepreneurship while they are employed by the schools. Schools and teacher teams can use their professional expertise to look for issues in life, develop a relationship between schools and communities, and help develop the surrounding environment. We have come to a cooperative agreement with the local government to analyze project-based teaching and guidance in graduation design in light of hometown and community construction issues. More social attention, learning resources, and job opportunities for exceptional students and families in need can be achieved by appropriately increasing the share of scholarships, grants, and other financial aid in instruction and resource distribution. Establish a high school employment fund to encourage recent high school graduates to work and study simultaneously, and appropriately expand the number of skills competitions, competition participation quotas, and competition promotion to give students the chance to achieve competition results and outcomes.

At the meso-school strategy and resource level, each college and its programs need to hold regular discussions to identify professional needs and problems, set up seats for "professional education and investment," set up centers for the expansion of professional knowledge and research, and build a new type of partnership between the government, enterprises, and vocational colleges and universities, as well as strive for more qualifications for students to participate in competitions and funding for employment assistance. The following are some of the key points of the project. Take a global perspective, compare international standards and the makeup of international competitions, and make extensive, all-encompassing changes to the curriculum system to give students more chances to be themselves, grow, and succeed. Investigate in-depth the companies, the percentage of job competition, and the skill requirements of the job setting. The goal of enterprise cooperation must be made explicit in the employment graduation work, and the interview, contract signing, and resume screening processes must all be documented, as well as the screening and evaluation process. The objectives of cooperative enterprises must be made clear in order for them to operate schools. Regularly update staff and student groups on the state and percentage of revenue and expenditures, as well as the funding percentage for instructional materials.

At the micro level, national policies and international standards are dropped in the course of the teacher's lectures. The pre-class lesson plan is merely a plan and cannot address the issues that present themselves during the actual teaching process. Therefore, in addition to keeping an eye on the state of students' teaching evaluations, educators must also encourage students to take the initiative to accept academic education and enterprise training and to increase their interactions with businesses. Encourage students to take initiative. As much as possible in the course set ps, su, cad, and other software teaching class practical operation class content, compile for matching the results of the job competition demand, and sort out the demand for job competence in the teaching task and classroom interaction as simple and lively as possible. In the classroom, finish the pre-preparation, study, review content, and point acupuncture type to solve the problems in job search. To broaden professional horizons, provide as many opportunities as possible for students to visit, practice, and conduct research during

the course.

# References

[1] Xu, L. Q., & Wang, Z. Y. (2023). Connotation, characteristics, and motivation analysis of the dual system training model in German universities of applied sciences. China Higher Education Research, (05), 71-78. DOI: 10.16298/j.cnki.1004-3667.2023.05.11.

[2] Wu, S. T., & Qi, Z. Y. (2024). The logical dimensions and experiential references of vocational education model recognition in Sweden. Education and Vocational, (15), 80-88. DOI: 10.13615/j.cnki.1004-3985.2024.15.002.

[3] Dong, L. L., & Xu, Z. G. (2023). Characteristics and enlightenment of the cooperation between universities and enterprises in Dutch universities of applied sciences. China Higher Education, (22), 62-64.

[4] Liu, J., Son, H., & Lv, W. J. (2023). How South Korean higher education promotes the integration of industry and education. Higher Engineering Education Research, (01), 148-156.

[5] Chen, Y. Q., & Okada, A. (2018). The cultivation of applied talents in Japan and its enlightenment to Chinese education. Education and Vocational, (19), 107-112. DOI: 10.13615/j.cnki.1004-3985.2018.19.019.

[6] Zhao, P. F., & Chen, X. H. (2013). Practice and reflection on the "modern apprenticeship system". Chinese Vocational and Technical Education, (12), 38-44.

[7] Li, C., Gai, Z. D., Li, S. L., et al. (2024). Symbiosis, symbiosis to synergy: The logic and path of deep integration of industry and education—A study based on Ansteel Group and Liaoning University of Technology. Higher Engineering Education Research, 1-6. Retrieved November 11, 2024.

[8] Chen, J. C., & Wang, F. (2021). A study on the fit between the professional settings of higher vocational education and the industrial structure in the Guangdong-Hong Kong-Macao Greater Bay Area under the perspective of industry-education integration. Education and Vocational, (17), 34-39. DOI: 10.13615/j.cnki.1004-3985.2021.17.005.

[9] Li, F. Y., Qiu, J., He, K., et al. (2022). Cultivation of applied talents in landscape architecture majors based on multidisciplinary and dual integration of industry and education. Chinese Landscape Architecture, 38(12), 38-41. DOI: 10.19775/j.cla.2022.12.0038.

[10] Yuan, Z. W. (2022). An analysis of the practice teaching quality evaluation system in higher vocational colleges under industry-education integration. Entrepreneurship and Innovation (Chinese Version), 6(3), 129-130.

[11] Deng, K., & Li, J. B. (2022). Research on the teaching reform of landscape planning and design courses led by vocational skill competitions—Taking the landscape technology major of Nanyang Agricultural Vocational College as an example. Henan Agriculture, (27), 28-29. DOI: 10.15904/j.cnki.hnny.2022.27.001.

[12] Guo, L., Cheng, Z., & Huang, D. D. (2021). Innovation of the "learning and teaching promotion through competition" teaching model in horticulture majors under the "dual high" background. Journal of Ningbo Institute of Technology, 25(01), 22-26.

[13] Wenjie, L. (2024). Design and optimization of the index system of ideological and political evaluation of higher vocational courses. Education Reform and Development, 6(11), 119-126.

[14] Cui, J., & Shi, J. (2024). Research on the quality evaluation system and improvement path of ideological and political education in college students' national security education courses based on multimodal sentiment analysis. Frontiers in Educational Research, 7(11).

[15] Qi, Y. Y. (2024). Research on the quality evaluation system of industry-education integration in higher vocational colleges. Journal of Hubei Open Vocational College, 37(14).

[16] Yang, Y. (2024). Research on the construction and application of the evaluation system for industry-education integration in higher vocational colleges. Education Forum, 6(2).