

Influence mechanisms, leadership traits, and educational performance in higher vocational education at Chinese colleges

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Abstract

This study examined the influence mechanisms, leadership traits, and educational performance of higher vocational colleges as bases for developing a strategic enhancement plan for institutional development. A diverse group of respondents, consisting primarily of teachers and students, participated in the study, with representation from institutional leaders and enterprise stakeholders. The findings revealed that the influence mechanisms were moderately strong and consistently observed, with management and resources receiving the highest assessments. Similarly, leadership traits were perceived to be moderately strong, with strategic planning emerging as the most prominent dimension. Educational performance was likewise evaluated positively, indicating a moderately strong and consistently perceived level of institutional performance across higher vocational colleges. The findings further showed that respondents generally shared consistent perceptions regardless of demographic characteristics, although significant differences emerged in selected mechanisms, suggesting the need for further post hoc analysis. Faculty and teaching mechanisms demonstrated minimal influence on service and community engagement and showed no significant relationship with talent cultivation performance. These results highlight the importance of strengthening institutional mechanisms beyond traditional instructional functions to improve overall educational outcomes. Based on the findings, a strategic enhancement plan for institutional development was proposed. The plan emphasizes the collaborative roles of the College President, Industry Liaison Office, Department Heads, Quality Assurance Office, Human Resource Office, and Faculty Development Center in promoting institutional improvement. Future researchers are encouraged to further validate the effectiveness and long-term impact of the proposed enhancement plan. Overall, the study provides insights that may support higher vocational colleges in strengthening governance, industry collaboration, faculty competencies, and talent cultivation toward sustainable institutional development.

Keywords: educational performance, higher vocational education, influence mechanisms, institutional development, leadership traits, strategic enhancement plan, talent cultivation

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1. Introduction

Against the global trend of vocational education shifting toward standardized evaluation and industrial collaboration, China's higher vocational education — the world's largest vocational education system — is undergoing a pivotal transition from scale expansion to quality improvement. With the steady advancement of the second phase of the National High-level Vocational Colleges and Majors Construction Program and the expanded implementation of pilot undergraduate-level vocational education, higher vocational colleges are required to align professional group development and the training of dual-qualified teachers with international advanced standards. Meanwhile, higher demands have been placed on adapting school-running quality to the development needs of undergraduate-level vocational education. Under this backdrop, the interactive relationship between institutional governance capacity and Educational Performance has become a core practical issue restricting the high-quality development of vocational education in China. Centering on leadership traits, influencing mechanisms and Educational Performance of higher vocational colleges, this study systematically explores the logical transmission among institutional leadership, operational mechanisms and school-running outcomes, aiming to address long-standing dilemmas including disjointed governance systems, insufficient teacher competence, and the mismatch between talent training and industrial demands.

First, leadership traits serve as the core independent variable of this research. In the context of higher vocational education, leadership traits refer to the comprehensive behavioral characteristics and governance capabilities demonstrated by institutional administrators in formulating development plans, building teaching staff, allocating educational resources and innovating institutional mechanisms (Zhang et al., 2023). Distinct from leadership in general universities, leadership in higher vocational colleges lays greater emphasis on industrial insight, practical orientation and collaborative governance awareness, specifically covering cognition of standardized management, overall capacity for integrating industry and education, and concepts for supporting teacher development. Existing studies have verified that leadership traits act as a top-tier determinant of institutional operational efficiency. Rigid cognition, empiricism or academically biased management thinking may lead to impractical teacher assessment criteria and superficial school-enterprise cooperation. In contrast, leadership with an open vision, industrial relevance and adherence to standardized norms enables higher vocational colleges to align with international vocational education criteria and keep pace with industrial upgrading (Liu et al., 2024). Accordingly, optimizing leadership traits is a fundamental prerequisite for improving the overall operation of higher vocational colleges.

Second, influencing mechanisms function as the mediating variable in the research framework. In light of the actual development of China's higher vocational education, the teacher-oriented influencing mechanisms constitute a complete institutional operation system driven by institutional leadership. It acts on Educational Performance through three major dimensions: cultivation of teachers' practical competencies, guarantee for teachers' professional development, and implementation of performance assessment (Wang et al., 2025). These mechanisms play a vital role in translating macro institutional governance advantages into micro teaching and educational achievements. They mainly include practical training mechanisms to make up for teachers' deficiencies in industrial competencies, career development mechanisms adapting to technological updates, and diversified assessment and accountability mechanisms regulating teaching practices. Currently, numerous flaws exist in the influencing mechanisms of China's higher vocational colleges. Fragmented assessment systems, formalistic teacher training, and disconnection between practical competency training and industrial requirements have become major barriers linking inadequate leadership governance to low Educational Performance (Chen et al., 2024).

Third, Educational Performance is the dependent variable reflecting the overall development level of higher vocational colleges. It refers to comprehensive school-running achievements in talent cultivation, social services and industrial docking under standardized operation. It encompasses quantitative indicators such as graduate employment quality and vocational certificate pass rate, as well as qualitative evaluations including classroom teaching quality, overall faculty competence and the integration level between industry and education (International Labour Organization, 2023; European Commission, 2018). Compared with general higher education, the core connotation of higher vocational Educational Performance lies in industrial adaptability and vocational practicality. As industrial skill requirements continue to rise and vocational education evaluation standards become increasingly internationalized, improving Educational Performance has become the core goal of vocational education reform and development in China.

Worldwide, skill training standards and industrial service models for vocational education are constantly being updated. As stated in the Global Skills Gap Report released by the International Labour Organization, industries across sectors see a sharp rise in demand for interdisciplinary technical talents equipped with practical capabilities and cross-industry collaboration skills, which also sets higher requirements for higher vocational teachers' industrial adaptability (International Labour Organization, 2023). Constrained by defective leadership traits and imperfect influencing mechanisms, most domestic higher vocational colleges are confronted with prominent development challenges. On the one hand, many administrators lack systematic understanding of the development rules of international vocational education and industrial trends, resulting in unreasonable allocation of educational resources and overly academic, single-dimensional and rigid teacher evaluation criteria (Liu et al., 2024). On the other hand, flawed influencing mechanisms have led to limited industrial practice opportunities for teachers, stagnant career growth and formalized assessment and accountability. This has formed a vicious cycle: defective leadership traits → rigid influencing mechanisms → insufficient teacher competence → poor Educational Performance (Zhang et al., 2023).

Exploring the logical connections and optimization paths among leadership traits, influencing mechanisms and Educational Performance of higher vocational colleges carries important theoretical and practical significance. Theoretically, this study clarifies the mediating role of teacher-related influencing mechanisms between institutional leadership and Educational Performance. It constructs a localized theoretical framework compatible with the development features of China's higher vocational education, supplements empirical evidence for vocational education governance research in the domestic context, and enriches the research system of educational leadership and institutional performance management.

Practically, the research findings have clear application targets and value. First, they provide institutional optimization ideas for college administrators to sort out governance strategies and break development bottlenecks. Second, they offer empirical references for education authorities to formulate policies on faculty training, performance appraisal and industry-education integration. Third, they help China's higher vocational education connect with international evaluation systems, improve the matching degree between talent cultivation and industrial upgrading, and enhance the international competitiveness and industry influence of domestic vocational education.

In conclusion, leadership traits determine the top-level governance direction of higher vocational colleges. Multi-dimensional influencing mechanisms undertake the core transmission function of institutional governance, while Educational Performance embodies the outcomes of vocational education reform and development. To transform China's higher vocational education from scale advantage to quality advantage, it is essential to start with optimizing leadership traits, improve mechanisms concerning teachers' practical training, career development, assessment and accountability, and ultimately achieve steady and high-quality improvement of institutional Educational Performance.

Objectives of the Study - The study assessed leadership traits, influencing mechanisms, and Educational Performance in higher vocational colleges, determined the relationships among the core variables, and proposed

strategies to strengthen governance, enhance leadership development, improve operational mechanisms, and promote the sustainable improvement of Educational Performance.

2. Methods

Research Design - This study adopts a descriptive correlational research method to explore the relationships among influencing mechanisms, leadership traits and educational performance of higher vocational colleges in China. Validated questionnaires are used to collect quantitative data. As a systematic research approach, quantitative research primarily relies on numerical data and statistical methods to quantitatively analyze variable relationships and objective rules, so as to clarify the degree and nature of correlations between variables. This study collects data via questionnaires, a standardized research tool, to generate quantifiable and generalizable findings. This research paradigm processes data, tests hypotheses and verifies theories with statistical methods, and features objectivity and replicability. Creswell et al. (2019) stated that quantitative research collects numerical data and adopts statistical analysis to identify research patterns, test theories and interpret research results. Focusing on accuracy and quantification, this method enables researchers to summarize objective rules based on empirical data and draw universally applicable conclusions for research phenomena.

Participants of the Study - This study aims to explore the internal relationships among influencing mechanisms, leadership traits and educational performance of higher vocational colleges in China. Taking into account the regional distribution and hierarchical differences of domestic higher vocational education, 20 sample colleges are selected from the eastern, central and western regions, including 5 Double High-Level Program colleges, 8 provincial model higher vocational colleges and 7 ordinary higher vocational colleges. The selected samples enable a systematic investigation of the three core variables. With sound representativeness in college type and hierarchical level, they can objectively reflect the overall development characteristics of higher vocational education in China.

Respondents are screened based on four indicators: gender, age, position and length of service. Grounded in the theories concerning influencing mechanisms, leadership traits and educational performance, all participants complete the survey via standardized questionnaires. This study targets core stakeholders of higher vocational colleges to conduct a multi-perspective analysis, consisting of institutional administrators (presidents, vice presidents in charge of teaching, department heads and other middle-level managers), professional course teachers and graduating students. A total of 620 questionnaires are to be distributed in this survey.

Strict inclusion and exclusion criteria are formulated to ensure the suitability and validity of samples. Inclusion criteria: Respondents are on-the-job staff of the sampled colleges (administrators and teachers with at least one year of service) or graduating students. The age range is set from 25 to 60 years old for administrators and teachers, and 18 to 22 years old for graduating students. All respondents hold positions closely related to the research variables and can report real conditions objectively. Personnel not affiliated with the sampled colleges, short-term seconded staff and part-time employees without practical work experience; respondents who fail to fill in key information such as college type and position; invalid questionnaires completed in less than five minutes or with regularly distributed answers; staff engaged merely in administrative work without participation in core teaching and management. The above criteria guarantee that the survey data focus closely on the core research variables.

Data Gathering Instrument - This study adopts three specialized scale questionnaires as the core research tools, corresponding to the three major core variables, to systematically collect empirical data aligned with the research objectives. Prior to the formal questionnaire completion, a section for respondents' basic information is set to collect demographic data including gender, age, position and tenure. It provides fundamental data support for subsequent differential statistical analysis and stratified comparative research.

The questionnaire on influencing mechanisms of higher vocational colleges is developed based on the vocational education development evaluation index system established by Zhuang (2023). All items have been verified in previous empirical studies, possessing sound content validity and practical stability, and are well

applicable to researches on the development mechanisms of higher vocational colleges. The questionnaire consists of 24 items rated on a 4-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree and 4 = Strongly Agree. A higher total score indicates smoother operation and better performance of the college's various influencing mechanisms. It is divided into five dimensions: Faculty and Teaching Mechanism, Management and Resource Mechanism, Policy and Government Support Mechanism, School-Enterprise Cooperation and Industry Participation Mechanism, as well as Social Evaluation and Feedback Mechanism. These dimensions fully cover the key influencing paths of internal governance and external collaboration in higher vocational colleges.

The questionnaire on leadership traits is compiled by referring to the research findings on governance leadership in higher vocational colleges from Zhou et al. (2021) and Dong et al. (2022). It conforms to the job characteristics of administrators in higher vocational colleges under China's Double High-Level Program and adapts to the management context of vocational education. Comprising 20 items in total, the questionnaire includes five core dimensions: Strategic Planning and Policy Implementation Traits, Performance-Oriented and Decision-Making Traits, Resource Integration and Industry-Education Integration Traits, Faculty Development and Team Collaboration Traits, and Student Development and Feedback Response Traits. Scored on a 4-point Likert scale, the questionnaire shows that higher scores represent better comprehensive leadership traits and stronger governance competency of college administrators.

The questionnaire on educational performance draws on the educational performance evaluation index system for higher vocational colleges constructed by Yang et al. (2020). With mature indicators, it fits the school-running orientation and educational functions of higher vocational education. All 17 items are measured using a 4-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). The questionnaire is categorized into three core dimensions: Talent Cultivation Performance, Resource Utilization Performance and Social Service Performance. A higher overall score means more outstanding comprehensive performance of the college in core work including talent training, resource allocation and social services.

To guarantee the scientific, rationality and data reliability of the whole set of questionnaires, a small-scale pilot study was conducted among 30 participants including college administrators, full-time teachers and students from higher vocational colleges at different levels before the formal large-scale survey. All pilot data were collected via Wenjuanxing (www.wjx.cn). After manual inspection and coding, the data were imported into SPSS 26.0 for reliability analysis, and Cronbach's Alpha coefficients of each subscale and the overall questionnaire were calculated. The results show that the Alpha coefficients of the three subscales for influencing mechanisms, leadership traits and educational performance range from 0.85 to 0.92, indicating an excellent overall reliability level. According to the general academic criterion, a Cronbach's Alpha coefficient above 0.70 means acceptable internal consistency (Dörnyei et al., 2010). Therefore, all subscales and the overall questionnaire have good reliability with stable measurement results, which can be effectively applied to the quantitative measurement and empirical analysis of the core variables in this study.

Data Gathering Procedure - The core objective of this study is to explore the intrinsic correlations and functional logic among the influencing mechanisms, leadership traits, and educational performance of higher vocational colleges in China. The data collection phase was carried out centering on the accurate measurement of the core research variables.

In this study, questionnaires were distributed to the core stakeholders of 20 sample higher vocational colleges across the eastern, central and western regions via Questionnaire Star (www.wjx.cn), an online survey platform. The respondents covered three major groups, namely institutional administrators, professional course teachers, and senior-year graduating students, from colleges under the Double High-Level Plan, provincial model higher vocational colleges and general higher vocational colleges. Questionnaires were issued in the form of QR codes in a targeted manner. Prior to distribution, each respondent was informed in detail of the research purpose, the measurement dimensions of core variables and the data usage norms to ensure that all respondents fully understood and earnestly cooperated with the survey. After obtaining the QR code of the questionnaire, willing respondents

could scan the code via WeChat to get the questionnaire link and complete the survey on their mobile devices. To ensure the quantity and quality of questionnaire recovery, respondents who submitted valid questionnaires were awarded with small souvenir gifts as incentives.

After the completion of data collection, SPSS 27.0 statistical software was used to conduct systematic interpretation, analysis and comparison of the respondents' answers regarding the operation effect of influencing mechanisms, the performance of leadership traits and the level of educational performance by adopting statistical methods such as frequency count, percentage, ranking and weighted mean, laying a solid data foundation for the subsequent correlation analysis, regression analysis and mediating effect test.

Data Analysis - Centering on the core theme of “A Study on the Influencing Mechanisms, Leadership Traits and Educational Performance of Higher Vocational Colleges in China”, this study conducted a systematic analysis using the statistical software SPSS 26.0 and AMOS 24.0 in light of data characteristics and research objectives. All statistical tests adopted a significance level of $\alpha=0.05$ to ensure the reliability and scientificity of the research conclusions. Indicators including Percentage, Mean (M) and Standard Deviation (SD) were used to comprehensively analyze the basic characteristics of the sample, the operation level of each dimension of the influencing mechanisms, the performance of each dimension of leadership traits, and the scores of each dimension of educational performance. A semantic interpretation of the scores of each dimension was conducted in combination with the Likert scale rating intervals, laying a foundation for further in-depth analysis.

In the correlation analysis phase, the Spearman's rho correlation coefficient was applied to examine the direction and intensity of the correlation between each dimension of the influencing mechanisms (e.g., the school-enterprise cooperation and industry participation mechanism), each dimension of leadership traits (e.g., the resource integration and industry-education integration trait) and each dimension of educational performance (e.g., talent cultivation performance), clarifying the significance of the correlation among variables ($p < 0.05$ or $p < 0.01$), which provided a prerequisite for the construction of the mediating effect model.

Ethical Considerations - This research strictly abides by academic ethical standards to fully protect the legitimate rights and personal privacy of Chinese university teachers surveyed. Prior to data collection, researchers obtained consent from cooperating institutions and participating teachers separately to lay a compliant foundation for the survey. All questionnaire distribution and face-to-face interviews were conducted anonymously, and all data that could identify individual identities were kept strictly confidential. Researchers fully explained the original intentions of this research to respondents and fully respected participants' right to choose participation voluntarily. This study minimizes all potential risks that respondents may encounter, and all survey data and analytical findings are solely applied for academic research. Such comprehensive ethical control rules not only ensure the research complies with moral norms, but also fully safeguard all rights of participating teachers. In terms of information confidentiality: Apart from four basic categories including gender, age, years of employment and educational background, all other private materials of respondents will not be disclosed to the public. Throughout the whole research process, all participants were clearly informed of answering requirements, survey procedures and core objectives of this study. The voluntary participation design further protects respondents' personal rights, with information confidentiality regarded as the core principle during data collection. This research has acquired an ethical review approval document issued by the Research Center of Lyceum of the Philippines University.

3. Results and discussion

Table 1 summarizes and presents the overall evaluation results of the five major Influence Mechanisms in higher vocational colleges, including the Faculty and Teaching Mechanism, Management and Resource Allocation Mechanism, Policy and Government Support Mechanism, School-Enterprise Cooperation and Industry Participation Mechanism, and Social Evaluation and Feedback Mechanism. The overall Composite Mean is 3.22, falling within the “Agree” range of the Likert Scale. Correlation analysis also indicates that the influence mechanisms as a whole have not formed extensive significant correlations with Leadership Traits and Educational

Performance. The overall characteristics can be summarized as a complete system, balanced operation, yet relatively weak transmission and linkage.

Table 1

Summary Table on the Influence Mechanisms of Higher Vocational Colleges

Indicators	WM	VI	Rank
Faculty and Teaching Mechanism	3.22	Agree	2.5
Management and Resource Mechanism	3.24	Agree	1
Policy and Government Support Mechanism	3.22	Agree	2.5
School-Enterprise Cooperation and Industry Participation Mechanism	3.21	Agree	4.5
Social Evaluation and Feedback Mechanism	3.21	Agree	4.5
Composite Mean	3.22	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

In terms of the ranking of mean values across dimensions, the Management and Resource Allocation Mechanism ranks first with a weighted mean of 3.24, representing the most highly recognized dimension among the five mechanisms, which is consistent with the findings of the item-by-item analysis in previous sections. Based on Service-Oriented Governance Theory, New Public Management Theory, and national policies related to the digital development of vocational education, colleges have established more comprehensive institutional systems in the overall planning of teaching funds, investment in practical training equipment, construction of online teaching resources, and optimization of digital management procedures (Zhuang, 2023). Correlation results further reveal that this internal guarantee-oriented mechanism mainly serves the routine daily operation of colleges, with relatively limited direct correlation with external Leadership Traits and school-running performance, and it functions more as a basic bottom-line guarantee.

The Faculty and Teaching Mechanism and the Policy and Government Support Mechanism both have an identical Composite Mean of 3.22, tying for the second place and aligning with the overall average, forming a balanced structural feature of “internal faculty education + external policy support”. The Policy and Government Support Mechanism forms an external guarantee system relying on hierarchical fiscal support, policy implementation and transmission, and performance-oriented incentive evaluation (Liu et al., 2024). According to overall correlation analysis, although both mechanisms operate steadily on the whole, only a few individual items show weak correlations with certain leadership dimensions, and the linkage of intermediary transmission still needs to be strengthened.

The School-Enterprise Cooperation and Industry Participation Mechanism and the Social Evaluation and Feedback Mechanism have a weighted mean of 3.21, ranking relatively lower yet still within the “Agree” range with stable overall operation. Both belong to outward-oriented coordination and feedback mechanisms. Rooted in Collaborative Governance Theory, Industry-Education Integration Theory and Stakeholder Theory, they undertake the functions of connecting industrial demands, receiving social evaluations, and reversely optimizing school-running (Dong et al., 2022; Yang et al., 2020). Overall correlation data demonstrate that these two external mechanisms also have relatively few significant correlations with Leadership Traits and Educational Performance, and the closed-loop transmission chain of outward coordination has not been fully connected.

From the logical chain of the overall structural hierarchy, the five influence mechanisms form a clear hierarchical sequence: the Management and Resource Allocation Mechanism acts as the internal basic guarantee; the Faculty and Teaching Mechanism serves as the core of educational implementation; the Policy and Government Support Mechanism provides external institutional support; the School-Enterprise Cooperation Mechanism functions as the bond of industrial coordination; and the Social Evaluation and Feedback Mechanism serves as the outlet for optimization and adjustment. On the whole, the five mechanisms feature a complete framework and relatively balanced operation, without obvious imbalance caused by any under-performing dimension. It reflects that the institutional system construction of higher vocational colleges in China is generally standardized, and each mechanism has basically achieved institutionalized and regular operation, which is also consistent with the overall institutional design of hierarchical governance and internal-external coordination in China’s vocational education.

Placed within the overall theoretical model of “Leadership Traits – Influence Mechanisms – Educational Performance” in this study, the five influence mechanisms serve as key intermediary bridges connecting the independent variable and the dependent variable. Synthesizing the empirical results, it can be concluded that higher vocational colleges in China have gradually constructed an integrated intermediary mechanism system covering internal management guarantee, faculty and teaching implementation, government policy support, school-enterprise and industry docking, as well as social evaluation and feedback, featuring a complete overall structure and balanced operational foundation, and achieving solid progress in institutional construction. Nevertheless, from the perspective of empirical correlation characteristics, the whole system is still in a development stage where institutional framework formation outweighs linkage and empowerment. The transmission and connection between various mechanisms, as well as between mechanisms and leadership, and between mechanisms and educational performance, remain insufficiently close, and a dynamic, circular and continuously optimized governance closed loop has not been fully established.

For the future high-quality and sustainable development of higher vocational colleges, the optimization of college governance should not merely focus on improving individual separate systems. Instead, systematic optimization should be carried out based on the overall governance chain. On the basis of further consolidating mature internal mechanisms such as management and resource allocation as well as faculty and teaching, more emphasis should be placed on in-depth implementation and closed-loop management of outward-oriented mechanisms including school-enterprise cooperation and social evaluation. It is necessary to further open up the complete intermediary path from the exertion of administrators’ Leadership Traits, through the transmission of various influence mechanisms, to the ultimate improvement of educational performance. By strengthening linkage and connection among different mechanisms, refining feedback and rectification procedures, and highlighting result-oriented dynamic adjustment, the five mechanisms can be transformed from relatively independent institutional segments into an integrated and coordinated governance system. This will continuously improve the systematicness, linkage and effectiveness of overall governance in higher vocational colleges, and provide a smoother and more efficient mechanism support for the transformation of vocational education from scale expansion to connotative high-quality development.

Strategic Planning and Policy Transformation Leadership represents the top-leading dimension within the governance system of higher vocational colleges, and also serves as the core source dimension among the five leadership traits. It mainly measures administrators’ core governance capabilities, including the understanding and grasp of macro vocational education policies, cognition of the school-running orientation of type-based education, formulation of medium- and long-term institutional development plans, dynamic adjustment of specialty structures, and forward-looking resource planning for educational reform.

Table 2

Summary Table on Evaluation of Leadership Traits in Higher Vocational Colleges

Indicators	WM	VI	Rank
Strategic Planning and Policy Transformation Traits	3.24	Agree	1
Performance-Oriented and Decision-Making Traits	3.22	Agree	4
Resource Integration and Industry-Education Connection Traits	3.22	Agree	4
Faculty Development and Team Collaboration Traits	3.22	Agree	4
Student Development and Feedback Response Traits	3.23	Agree	2
Composite Mean	3.23	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 2 systematically summarizes and presents the overall evaluation results of the five major leadership trait dimensions in higher vocational colleges, comprehensively covering five core dimensions: Strategic Planning and Policy Transformation Traits, Performance-Oriented and Decision-Making Traits, Resource Integration and Industry-Education Connection Traits, Faculty Development and Team Collaboration Traits, as well as Student Development and Feedback Response Traits.

The overall composite mean of the five leadership traits is 3.23, falling within the “Agree” range of the Likert

Scale. This indicates that multiple stakeholders including college administrators, full-time teachers, on-campus students, and school-enterprise supervisors participating in this survey hold positive recognition of the overall effectiveness of leadership construction in higher vocational colleges, with a generally positive and stable overall evaluation.

In terms of overall distribution, the mean values of the five dimensions are concentrated between 3.22 and 3.24 with a narrow score range and no obvious gaps among dimensions. The overall leadership system features a complete structure and relatively balanced hierarchy, without any dimension showing obvious weakness or unbalanced development. From the specific ranking order and mean gradient, the five leadership traits show a clear echelon distribution. The weighted mean of Strategic Planning and Policy Transformation Traits is 3.24, ranking first among the five dimensions and belonging to the first echelon as the most highly recognized dimension in the overall leadership system. As a top-leading type of leadership, this dimension undertakes overall work including controlling the general direction of college development, interpreting and implementing policies, adjusting specialty structures, and formulating medium- and long-term development plans. Its top ranking fully demonstrates that against the background of deepening vocational education reform, top-level strategic planning and policy transformation are the core leading factors for high-quality operation of higher vocational colleges. It also reflects that higher vocational college administrators possess relatively outstanding overall capabilities in macro overall planning and policy judgment.

The composite mean of Student Development and Feedback Response Traits is 3.23, ranking second among the five dimensions and following closely after the strategic planning dimension in the second echelon. This ranking highlights the core educational value of “student-centered and employment-oriented” in higher vocational colleges, and also embodies the fundamental orientation that leadership construction ultimately targets talent cultivation. Compared with top-level strategic overall planning, this dimension leans more toward terminal educational services, focusing on specific educational links such as students’ practical training, support for competitions and innovation and entrepreneurship, employment tracking, and teaching feedback. Its second ranking indicates that administrators also attach high importance to fulfilling educational objectives and serving student development, forming an orderly hierarchical pattern of “setting direction at the top and implementing education at the terminal”.

The other three dimensions all have an identical composite mean of 3.22, tying for the third place and jointly forming the intermediate process guarantee echelon that connects the upper and lower levels. The identical mean values of the three dimensions indicate that the development of three process-oriented governance segments in higher vocational colleges — internal performance decision-making, external industry-education resource integration, and internal faculty team management — is generally balanced, without obvious strength or weakness in any single segment. Among them, Performance-Oriented and Decision-Making Traits focus on benefit control and scientific decision-making in internal college management; Resource Integration and Industry-Education Connection Traits emphasize external coordination and linkage among multiple stakeholders including governments, schools and enterprises; Faculty Development and Team Collaboration Traits center on internal organizational operation and faculty team construction. These complement and support one another from the perspectives of internal management, external coordination and team support, and together build an intermediate transmission bridge connecting top-level strategies and terminal educational goals.

From the perspective of overall internal logical structure, the five leadership traits form a complete governance chain with clear hierarchy and positioning: Strategic Planning and Policy Transformation Traits belong to the top-leading layer that determines the overall school-running direction; the three traits of performance orientation, resource integration and faculty collaboration constitute the process guarantee layer with functions of overall planning, coordination and support; Student Development and Feedback Response Traits serve as the terminal implementation layer targeting the ultimate goal of talent cultivation. The score gaps among overall dimensions are small with gentle echelon transitions. The whole leadership system has a complete framework and balanced operational structure, demonstrating that administrators in higher vocational colleges have established a systematic

leadership system covering the full chain of top-level design, process control, internal and external coordination, team building and student services.

Comprehensive judgment combined with correlation analysis results shows that there is no extensive and concentrated significant correlation among the five leadership traits, five influence mechanisms and three educational performance dimensions. Most rho correlation coefficients between variables are generally low, mostly ranging from -0.08 to 0.07, and most p-values are greater than 0.05. Only a few paths reach significant correlation, such as the correlation between Faculty Development and Team Collaboration Traits and the Faculty and Teaching Mechanism ($\rho = -0.086$, $p = 0.049$), which shows a significant correlation. This correlation feature can be reasonably explained based on the hierarchical structure: the five leadership traits function as antecedent variables in the research model, presenting a chain structure of “top-level leadership — intermediate process — terminal implementation”. The effect of leadership on educational performance is not direct; instead, it needs to be transmitted layer by layer through the five influence mechanisms as intermediary links. The transmission chain is relatively long with many intermediate links, and multiple mediating paths gradually weaken the direct linear correlation between leadership traits and educational performance, thus resulting in generally small correlation coefficients and few significant correlations. This also indicates that current leadership construction in higher vocational colleges has mostly realized the improvement of the framework of each dimension, yet the dynamic transmission and interactive empowerment linking leadership traits, influence mechanisms and educational performance have not been fully smoothed.

The further optimization and improvement of leadership in higher vocational colleges should, on the basis of maintaining the balanced development of the five leadership dimensions, consolidate the leading role of the two advantageous dimensions of strategic planning and student development. It is necessary to further strengthen the connectivity and linkage of the three process-oriented leadership dimensions, continuously straighten out the transmission path of “Leadership Traits – Influence Mechanisms – Educational Performance”, and promote the development of leadership from independent and balanced development of individual dimensions toward an integrated governance pattern with overall coordination and chained connection. This will further enhance the systematicness and linkage of the governance system in higher vocational colleges.

Table 3

Summary Table on the Perception of Educational Performance in Higher Vocational Colleges

Indicators	Weighted Mean	Verbal Interpretation	Rank
Talent Cultivation Performance	3.22	Agree	2.5
Resource Utilization Performance	3.26	Agree	1
Social Service Performance	3.22	Agree	2.5
Composite Mean	3.24	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 3 summarizes and horizontally compares three core dimensions of educational performance in higher vocational colleges, namely talent cultivation performance, resource utilization performance and social service performance. The overall composite mean value of the three educational performance dimensions is 3.24, all falling within the “Agree” range of the Likert scale. This indicates that multiple research respondents, including college administrators, full-time teachers, students and school-enterprise cooperative supervisors, hold positive recognition toward the overall school-running effectiveness, resource governance quality and social service level of higher vocational colleges. The scores of each dimension are relatively concentrated with small inter-group gaps. The overall educational performance system features a complete structure and balanced operation without obvious structural imbalance, which clearly reflects the phased characteristics of steady quality improvement and balanced development of current higher vocational education.

In terms of the ranking of dimensional mean values, resource utilization performance ranks first with a mean of 3.26, making it the most recognized and mature performance dimension in higher vocational colleges at this stage. Based on the New Public Management Theory and relevant policies on the digital reform of vocational education, higher vocational colleges in China have gradually established a full-chain institutional system covering

teaching fund control, training site scheduling, training equipment operation and maintenance, online teaching resource construction and supervision over resource waste (Zhuang, 2023). The internal resource governance of colleges has a high degree of standardization and solid implementation of regulations. Basic work such as input-output control of funds and daily utilization of venues and equipment has gradually become standardized and regularized (Zhang et al., 2023).

Compared with resource utilization performance ranking first, the overall recognition of talent cultivation performance and social service performance is relatively moderate. These two dimensions share consistent phased development characteristics, showing a pattern of solid basic work yet requiring further deepening of connotation construction. In terms of talent cultivation performance, higher vocational colleges achieve prominent results and a mature operation system in explicit educational outcomes such as the overall employment rate, starting salary level and career stability of graduates. However, there remains room for steady improvement in connotative and targeted educational links, including precise matching between majors and posts, regular vocational skills competition cultivation, in-depth integration of major-curriculum-competition-certificate, and enterprise-oriented practical assessment. In terms of social service performance, inclusive public welfare services, basic vocational skills training for the public and institutional reputation building have been carried out on a regular basis and widely recognized by respondents. As market-oriented and industry-connected external performance outputs, the two dimensions are more vulnerable to external constraints such as enterprise participation willingness, regional industrial structure and industrial development level. Compared with internal resource management that can be independently coordinated by colleges, external linkage links feature weaker controllability and longer optimization cycles, thus their overall evaluations fail to reach the optimal level of internal resource governance.

From the perspective of internal logical structure, the three educational performance dimensions form a closed-loop governance chain of “internal resource guarantee — talent cultivation output — social service extension”. Resource utilization performance acts as the fundamental support for college operation; standardized and efficient resource allocation provides basic conditions for daily teaching, practical training and talent cultivation. Talent cultivation performance is the core output of higher vocational education, which directly determines the quality of technical and skilled talents supplied by colleges for regional industries. Social service performance represents the external extension of college school-running value, which feeds back into major construction and internal resource optimization through industrial services and local empowerment. The three dimensions support and interact with each other in a dynamic cycle, forming an educational performance system with clear levels and complementary functions.

Further analysis based on the theoretical model of “Leadership Traits — Influence Mechanisms — Educational Performance” in this study reveals a clear corresponding transmission relationship between the three performance dimensions, antecedent leadership traits and intermediate influence mechanisms. Resource utilization performance is mainly implemented through management and resource allocation mechanisms driven by strategic planning, performance decision-making and resource integration leadership traits. Talent cultivation performance relies on leadership in faculty team development, student development and feedback, and improves educational quality through faculty and teaching mechanisms.

Against the transformation background of higher vocational education in China, the basic internal institutional construction of current higher vocational colleges has been basically improved, and routine governance such as resource management, fund control and venue operation is standardized. However, connotative and collaborative links including targeted talent cultivation, in-depth industry-education integration, industrialization of research achievements and industrial technical services are still under continuous improvement.

Synthesizing the overall empirical data, dimensional structure and theoretical logic, the overall educational performance of higher vocational colleges operates steadily with a balanced development pattern. Resource utilization performance shows prominent advantages, while talent cultivation performance and social service performance maintain overall positive recognition. Most deficiencies belong to phased problems in reform and

development rather than structural imbalance. In the follow-up optimization of college governance, on the basis of consolidating the advantages of refined internal resource management, colleges should continuously focus on key links such as targeted talent cultivation, integration of major-curriculum-competition-certificate, long-term school-enterprise coordination and transformation of research achievements. It is necessary to further connect the whole transmission chain of “Leadership Traits — Influence Mechanisms — Educational Performance”, promote coordinated and balanced development of the three performance dimensions, and facilitate the steady transformation of higher vocational colleges from standardized institutional construction to high-quality connotative development.

From the perspective of variable correlations, the “Leadership Traits — Influence Mechanisms — Educational Performance” model constructed in this study is a multi-level chained mediation model, rather than a simple direct linear relationship among variables. As the antecedent variable, leadership needs to be transmitted layer by layer through five influence mechanisms before acting on educational performance. The long transmission chain gradually weakens the direct impact of independent variables on dependent variables, resulting in generally low correlation coefficients and difficulty in forming concentrated significant correlations. Higher vocational education governance is a collaborative governance system involving multiple stakeholders. It is also regulated and restricted by multiple external factors such as regional industrial environment, local financial investment, enterprise participation enthusiasm and industrial maturity, which further weakens the direct correlations among core variables and constitutes an important reason for the weak overall significance.

Comprehensively judged from the development stage of higher vocational education in China, the institutional framework, management norms and evaluation systems of higher vocational colleges have been basically established. The institutional foundation for leadership construction, various influence mechanisms and performance evaluation is relatively sound, and the static institutional construction is generally mature. Nevertheless, horizontal linkage among various mechanisms is insufficient, and dynamic feedback and closed-loop adjustment have not been fully connected. Each governance module operates relatively independently. It is difficult for administrators’ leadership advantages to fully penetrate multi-level management links and transmit to the end educational performance. Although the degree of institutional standardization is relatively high, there is still room for improvement in the collaborative transmission efficiency of the whole process.

In general, the non-significant results of most paths do not mean the absence of theoretical logical connections among variables. Instead, they reflect the phased characteristics of current higher vocational college governance: the institutional system is relatively complete and the overall operation is relatively balanced, yet chained collaborative transmission and multi-link dynamic linkage still need to be strengthened. In the follow-up high-quality governance construction of higher vocational education, it is insufficient to only focus on improving individual regulations. It is more critical to straighten out the complete transmission path of “leadership guidance — mechanism operation — performance output”, strengthen linkage and closed-loop feedback among all links, and continuously improve the systematicness, coherence and collaborative efficiency of the higher vocational governance system.

Table 4 presents the relationship between influence mechanisms and leadership traits using Spearman's rank-order correlation analysis. The findings indicate that most of the relationships between the influence mechanisms and leadership traits were not statistically significant, suggesting that the respondents' perceptions of influence mechanisms were generally independent of their assessments of leadership traits. The correlation coefficients were generally very weak, indicating minimal associations among the variables examined.

Among the dimensions of the Faculty and Teaching Mechanism, only its relationship with Faculty Development and Team Collaboration Traits was found to be significant. Although statistically significant, the relationship was very weak and negative, implying that higher perceptions of faculty and teaching mechanisms were associated with a slight decrease in perceptions of faculty development and team collaboration traits. However, the magnitude of the correlation suggests that the practical effect of this relationship is minimal. The

remaining leadership traits, namely Strategic Planning and Policy Transformation Traits, Performance-Oriented and Decision-Making Traits, Resource Integration and Industry-Education Connection Traits, and Student Development and Feedback Response Traits, did not exhibit significant relationships.

Table 4
Relationship Between Influence Mechanisms and Leadership Traits

Faculty and Teaching Mechanism	rho-value	p-value	Interpretation
Strategic Planning and Policy Transformation Traits	-0.021	0.628	Not Significant
Performance-Oriented and Decision-Making Traits	-0.019	0.668	Not Significant
Resource Integration and Industry-Education Connection Traits	-0.005	0.907	Not Significant
Faculty Development and Team Collaboration Traits	-.086*	0.049	Significant
Student Development and Feedback Response Traits	-0.035	0.417	Not Significant
Management and Resource Mechanism			
Strategic Planning and Policy Transformation Traits	-0.026	0.553	Not Significant
Performance-Oriented and Decision-Making Traits	0.005	0.908	Not Significant
Resource Integration and Industry-Education Connection Traits	0.049	0.265	Not Significant
Faculty Development and Team Collaboration Traits	0.011	0.801	Not Significant
Student Development and Feedback Response Traits	-0.009	0.838	Not Significant
Policy and Government Support Mechanism			
Strategic Planning and Policy Transformation Traits	0.061	0.160	Not Significant
Performance-Oriented and Decision-Making Traits	-0.02	0.651	Not Significant
Resource Integration and Industry-Education Connection Traits	-0.022	0.620	Not Significant
Faculty Development and Team Collaboration Traits	0.032	0.463	Not Significant
Student Development and Feedback Response Traits	0.058	0.182	Not Significant
School-Enterprise Cooperation and Industry Participation Mechanism			
Strategic Planning and Policy Transformation Traits	0.018	0.686	Not Significant
Performance-Oriented and Decision-Making Traits	-0.028	0.525	Not Significant
Resource Integration and Industry-Education Connection Traits	-0.007	0.881	Not Significant
Faculty Development and Team Collaboration Traits	0.003	0.939	Not Significant
Student Development and Feedback Response Traits	-0.004	0.925	Not Significant
Social Evaluation and Feedback Mechanism			
Strategic Planning and Policy Transformation Traits	-0.02	0.640	Not Significant
Performance-Oriented and Decision-Making Traits	.107*	0.014	Significant
Resource Integration and Industry-Education Connection Traits	-0.054	0.214	Not Significant
Faculty Development and Team Collaboration Traits	-0.014	0.751	Not Significant
Student Development and Feedback Response Traits	0.003	0.947	Not Significant

Legend: Significant at p-value < 0.05

The Management and Resource Mechanism showed no significant relationship with any of the leadership trait dimensions, with correlation coefficients ranging only from -0.009 to 0.049. The Policy and Government Support Mechanism was not significantly associated with any leadership trait, indicating that variations in perceptions of policy support and government involvement did not correspond to variations in leadership trait assessments. The School-Enterprise Cooperation and Industry Participation Mechanism also demonstrated no significant relationships across all leadership trait dimensions, suggesting that industry collaboration and external participation mechanisms were not directly related to perceived leadership characteristics.

On the other hand, the Social Evaluation and Feedback Mechanism exhibited a significant positive relationship with Performance-Oriented and Decision-Making Traits. Although the relationship was statistically significant, it remained very weak in strength. This finding suggests that respondents who perceived stronger social evaluation and feedback mechanisms tended to report slightly higher levels of performance-oriented and decision-making leadership traits. Nevertheless, the low correlation coefficient indicates that the association is limited and that other factors may contribute more substantially to leadership effectiveness.

Table 5 presents the relationship between influence mechanisms and educational performance using Spearman's rank-order correlation analysis. Results generally indicate that there were no significant relationships between the various influence mechanisms and the dimensions of educational performance. Most correlation coefficients were weak and close to zero, suggesting minimal associations between the variables. Based on the significance level of $p < 0.01$, only one relationship was found to be statistically significant.

Table 5
Relationship Between Influence Mechanisms and Educational Performance

Faculty and Teaching Mechanism	rho-value	p-value	Interpretation
Talent Cultivation Performance	-0.059	0.173	Not Significant
Resource Utilization Performance	-0.031	0.473	Not Significant
Social Service Performance	.118**	0.006	Significant
Management and Resource Mechanism			
Talent Cultivation Performance	-0.039	0.370	Not Significant
Resource Utilization Performance	0.055	0.203	Not Significant
Social Service Performance	-0.021	0.623	Not Significant
Policy and Government Support Mechanism			
Talent Cultivation Performance	0.005	0.903	Not Significant
Resource Utilization Performance	-0.009	0.834	Not Significant
Social Service Performance	0.084	0.053	Not Significant
School-Enterprise Cooperation and Industry Participation Mechanism			
Talent Cultivation Performance	-0.034	0.440	Not Significant
Resource Utilization Performance	0.039	0.367	Not Significant
Social Service Performance	-0.068	0.117	Not Significant
Social Evaluation and Feedback Mechanism			
Talent Cultivation Performance	0.063	0.146	Not Significant
Resource Utilization Performance	-0.068	0.118	Not Significant
Social Service Performance	0.049	0.262	Not Significant

Legend: Significant at p-value < 0.01

Specifically, the Faculty and Teaching Mechanism demonstrated a significant positive relationship with Social Service Performance. Although the correlation was statistically significant, its magnitude was very weak, indicating that stronger perceptions of faculty and teaching mechanisms were associated with only a slight increase in social service performance.

This finding suggests that effective faculty practices and teaching-related mechanisms may contribute, albeit minimally, to the institution's ability to extend services and engage with the community. However, no significant relationships were found between Faculty and Teaching Mechanism and Talent Cultivation Performance or Resource Utilization Performance. The Management and Resource Mechanism did not exhibit significant relationships with any dimension of educational performance. The correlations with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance were all very weak and statistically non-significant. These results indicate that respondents' perceptions of management and resource-related mechanisms were not associated with variations in educational performance outcomes. Similarly, the Policy and Government Support Mechanism showed no significant relationships with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. Although the relationship with Social Service Performance approached significance, it did not meet the required significance level of $p < 0.01$. Likewise, the School-Enterprise Cooperation and Industry Participation Mechanism was not significantly associated with any educational performance dimension, indicating that industry involvement and external collaboration mechanisms were not directly linked to perceived educational outcomes.

The Social Evaluation and Feedback Mechanism also failed to demonstrate significant relationships with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. These findings suggest that feedback and evaluation systems alone may not substantially influence educational performance indicators as perceived by the respondents.

Table 6 presents the relationship between leadership traits and educational performance using Spearman's rank-order correlation analysis. Results indicate that none of the leadership trait dimensions were significantly related to any of the educational performance dimensions. All correlation coefficients were weak, ranging from -0.074 to 0.069, and all p-values exceeded the 0.05 level of significance. Findings suggest that respondents' perceptions of leadership traits were not associated with variations in educational performance outcomes.

Table 6
Relationship Between Leadership Traits and Educational Performance

Strategic Planning and Policy Transformation Traits	rho-value	p-value	Interpretation
Talent Cultivation Performance	0.021	0.626	Not Significant
Resource Utilization Performance	-0.045	0.306	Not Significant
Social Service Performance	0.061	0.158	Not Significant
Performance-Oriented and Decision-Making Traits			
Talent Cultivation Performance	0.059	0.177	Not Significant
Resource Utilization Performance	0.024	0.584	Not Significant
Social Service Performance	-0.019	0.667	Not Significant
Resource Integration and Industry-Education Connection Traits			
Talent Cultivation Performance	0.017	0.702	Not Significant
Resource Utilization Performance	-0.035	0.423	Not Significant
Social Service Performance	0.032	0.460	Not Significant
Faculty Development and Team Collaboration Traits			
Talent Cultivation Performance	0.069	0.110	Not Significant
Resource Utilization Performance	-0.074	0.091	Not Significant
Social Service Performance	-0.018	0.684	Not Significant
Student Development and Feedback Response Traits			
Talent Cultivation Performance	-0.001	0.990	Not Significant
Resource Utilization Performance	0.023	0.591	Not Significant
Social Service Performance	-0.044	0.313	Not Significant

Legend: Significant at p-value < 0.01

For Strategic Planning and Policy Transformation Traits, no significant relationships were found with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. The correlation coefficients were very weak, indicating negligible associations between strategic leadership capabilities and educational performance indicators. Similarly, Performance-Oriented and Decision-Making Traits did not demonstrate significant relationships with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. These findings suggest that respondents who perceived leaders as performance-oriented and effective decision-makers did not necessarily report higher levels of educational performance.

The results further revealed that Resource Integration and Industry-Education Connection Traits were not significantly associated with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance indicating that the ability of leaders to integrate resources and foster industry-education linkages was not directly related to educational performance outcomes as perceived by the respondents. Likewise, Faculty Development and Team Collaboration Traits showed no significant relationships with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. Although the correlation with Resource Utilization Performance was the strongest observed in the table, it remained very weak and statistically non-significant. This suggests that leadership efforts focused on faculty development and collaboration may not directly translate into measurable educational performance outcomes.

Finally, Student Development and Feedback Response Traits did not exhibit significant relationships with Talent Cultivation Performance, Resource Utilization Performance, and Social Service Performance. The near-zero correlation coefficients indicate virtually no relationship between leaders' responsiveness to student needs and educational performance indicators.

The proposed plan focuses on strengthening key areas of institutional development in higher vocational education, including industry collaboration, stakeholder feedback systems, leadership and decision-making, resource integration, faculty development, and student talent cultivation. Through targeted strategies such as partnerships with enterprises, data-driven management, continuous professional development, and community engagement, the plan aims to enhance instructional quality, graduate employability, and overall institutional performance.

Table 7

“Strategic Enhancement Plan for Institutional Development: Strengthening Industry Linkages, Governance, Faculty Development, and Talent Cultivation in Higher Vocational Education”

Key Result Area	Objectives/Goals	Activities/Strategies	Success Indicators	Persons Involved
School–Enterprise Cooperation and Industry Participation	Strengthen collaboration between higher vocational colleges and industry partners to improve practical training and graduate employability.	• Establish new industry partnerships and internship agreements. • Conduct regular industry advisory board meetings. • Develop collaborative research and training projects with enterprises.	• Increased number of active industry partners. • More student internships and work-based learning opportunities. • Higher employer satisfaction with graduates.	College President, Industry Liaison Office, Department Heads, Enterprise Partners
Social Evaluation and Feedback Mechanism	Improve stakeholder feedback systems for continuous institutional improvement.	• Conduct regular surveys among students, alumni, employers, and community partners. • Create an online feedback management system. • Hold annual stakeholder consultation forums.	• Increased stakeholder participation. • Timely implementation of improvement initiatives. • Improved stakeholder satisfaction ratings.	Quality Assurance Office, Student Affairs Office, Alumni Office, Employers, Community Representatives
Performance-Oriented Leadership and Decision-Making	Enhance leadership effectiveness through evidence-based decision-making and performance monitoring.	• Conduct leadership development workshops. • Implement data-driven performance dashboards • Establish periodic leadership performance reviews.	• Improved leadership performance evaluations. • Increased use of institutional data in decision-making. • Timely achievement of institutional targets.	College Administrators, Human Resource Office, Quality Assurance Office
Resource Integration and Industry–Education Connection	Strengthen resource sharing and industry–education integration to support quality instruction.	• Expand collaborative resource-sharing agreements. • Invite industry experts for curriculum enhancement. • Upgrade laboratories and training facilities through partnerships.	• Increased industry-supported facilities and resources. • Updated competency-based curricula. • Greater participation of industry experts in academic programs.	Academic Affairs Office, Industry Partners, Department Chairs, Finance Office
Faculty Development and Team Collaboration	Improve faculty competencies and collaborative practices to enhance instructional quality.	• Organize faculty development and mentoring programs • Promote interdisciplinary research and collaborative teaching. • Support participation in conferences and professional training.	• Increased faculty participation in professional development. • More collaborative research and teaching initiatives. • Improved faculty performance evaluation results.	Human Resource Office, Faculty Development Center, Department Heads
Talent Cultivation and Social Service Performance	Enhance student competencies and strengthen community engagement initiatives.	• Review and update curricula based on industry needs. • Expand community extension and service-learning programs. • Strengthen career guidance and employability programs.	• Improved graduate employability. • Increased community extension activities. • Higher student competency assessment results.	Academic Affairs Office, Career Services Office, Community Extension Office, Faculty Members

4. Conclusion and recommendation

Majority of the Respondents agreed that all influence mechanisms are present, with management and resources ranked highest. Overall, the mechanisms are moderately strong and consistently observed. Respondents agreed that leadership traits are present, with strategic planning ranked highest. Overall, the traits are moderately strong and consistently observed. Respondents agreed on the level of educational performance in higher vocational colleges. Overall, the results indicate a moderately strong and consistently perceived educational performance across institutions. Faculty and teaching mechanisms have minimal impact on service and community engagement, and no significant link was found with talent cultivation performance. Strategic Enhancement Plan for Institutional Development: Strengthening Industry Linkages, Governance, Faculty Development, and Talent Cultivation in Higher Vocational Education has been proposed as a measure for the findings.

The College President may provide overall leadership and ensure alignment of the strategic enhancement plan with institutional goals and development priorities. The Industry Liaison Office may strengthen partnerships with enterprise stakeholders to enhance industry linkage and collaboration. Department Heads may facilitate the implementation of initiatives within academic units and ensure effective coordination at the departmental level. The Quality Assurance Office may monitor and evaluate the effectiveness of governance practices and program implementation for continuous improvement. The Human Resource Office may support faculty recruitment, development, and capacity-building programs to strengthen instructional quality. The Faculty Development Center

may design and implement professional development programs to enhance faculty competencies and teaching performance. Future Researchers may further examine and validate the effectiveness of the strategic enhancement plan and its long-term impact on institutional development.

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