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**RESEARCH ARTICLE**

# Evaluation and Improvement Path of Higher Vocational Teachers' Development Index under the Background of High-Quality Development

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**ABSTRACT**

This study focuses on the high-quality development of higher vocational teachers, utilizing the "two alls and three characteristics" development theory model and evaluation system to investigate and assess their current development status. The aim is to determine the overall level of development and identify existing deficiencies. Key findings include:

The development index of higher vocational teachers is 72.9, indicating a "good" level of development.

The development of higher vocational teachers exhibits three main characteristics: region, school type, and identity.

The three main negative factors affecting development are the lack of participation in teaching and skill competitions, difficulty in competing for vocational skill training opportunities, and high professional and life pressure.

Life development, professional development, social development, and organizational development show a strong positive linear correlation with the overall development index, indicating these are the primary influencing factors.

Regression analysis confirms that all four dimensions—life development, professional development, social development, and organizational development—positively contribute to the development of higher vocational teachers.

Based on these findings, the study proposes five practical strategies to enhance the quality of higher vocational teacher development. These strategies aim to build a "dual-qualified" teaching team characterized by high quality, deep dedication, strong skills, and vitality. The study provides a valuable theoretical framework and practical guidance, with important academic and practical implications for the field.

## INTRODUCTION

### Introduce the Problem

The level and quality of the teaching staff directly influence the teaching quality and talent training outcomes in higher vocational colleges. Kong (2012) noted that since vocational education entered a new era, significant progress has been made in establishing a teacher training system, improving teacher management mechanisms, and enhancing the status and treatment of teachers. These advancements have collectively raised the overall quality and capacity of educators, providing robust

intellectual support for the reform and development of vocational education. However, challenges persist, including an insufficient number of teachers, limited recruitment sources, inadequate two-way flow between schools and enterprises, structural imbalances, and inflexible management systems. Additionally, there is a scarcity of high-level talent, such as renowned teachers, professional leaders, and young backbone educators with strong theoretical and practical teaching skills, advanced educational backgrounds, and expertise (Guangdong Provincial Department of Education, 2021). Low digital literacy also hinders the high-quality development of vocational education. If the construction of the teaching workforce falls behind, higher vocational education will lose its "source of fresh water" (Qiu & Huang, 2024). As China's vocational education enters a transformative golden era, with efforts to promote the "new double highs," building a high-level "dual-qualified" teaching team has become an urgent and strategic priority for vocational colleges, deserving greater attention and resources (Guangdong Provincial Department of Education, 2021).

Teacher development refers to the continuous career growth of teachers, progressing from novice to experienced, and ultimately to expert status through the influence of internal and external forces within the educational ecosystem and school environment (Sui, 2020). The theory of teacher development emerged in Europe and the United States in the late 1960s, spearheaded by Fuller (1969) with the development of the Teacher Concern Questionnaire. Over decades of exploration, various theoretical frameworks have been established, including the stage theory of teacher development, teacher development model theory, and expert teacher theory (Yang, 1999). Research on higher vocational teacher development in China began in the early 2000s but remains relatively underdeveloped. While recent years have seen an increase in academic activity, with over 50 related papers, most focus on teachers in traditional universities and rely heavily on literature reviews, observations, interviews, and logical analysis rather than rigorous empirical research (Qiu & Huang, 2024). The absence of modern theoretical and evaluation models limits the understanding of the mechanisms driving teacher development, hindering sustainable progress for vocational educators.

**Explore Importance of the Problem**

Research on the evaluation and improvement of vocational teachers' development indices is critical for advancing high-quality vocational education, particularly in the context of China's modernization goals. Vocational education plays a key role in national development by training a skilled workforce aligned with modern industrial needs. This sector supports economic and social growth by providing practical and relevant education. However, achieving these outcomes requires a teaching staff capable of blending theoretical knowledge with practical skills. Thus, the continuous evaluation and development of educators are paramount (Zhou, 2021).

The teaching workforce in vocational education faces several challenges that hinder its contribution to high-quality development. Many institutions lack sufficient "dual-qualified" teachers who possess both teaching expertise and real-world industrial experience. Structural issues, such as limited collaboration between academia and industries, exacerbate this problem (Li & Chen, 2021). Furthermore, digital and technological literacy among educators remains low, limiting their ability to integrate modern educational tools into their teaching practices (Wang & Zhang, 2022). Addressing these gaps is essential to improving the overall quality and relevance of vocational education.

This research also aligns with national policies and global trends emphasizing high-quality development in education. Policies like China's "Double High Plan" prioritize building a robust teaching workforce to enhance vocational education standards. Evaluating and improving vocational teachers' development indices is critical to meeting these policy goals and addressing the broader demands of a rapidly evolving job market. By tackling these challenges, this research contributes to the long-term growth and sustainability of vocational education.

### Describe Relevant Scholarship

The development and evaluation of higher vocational teachers are critical components in the pursuit of high-quality vocational education. Recent studies have explored various frameworks and models to assess and enhance teaching quality in this sector.

Jiang and Liu (2021) introduced the Context, Input, Process, and Product (CIPP) evaluation model to construct a teaching quality evaluation system for project-based curricula in higher vocational education. Their study emphasizes the necessity of evaluating comprehensive teaching quality, including implementation background, conditions, processes, and results, to promote connotative development in China's higher vocational education. Ling, Chung, and Wang (2023) discussed the reform of management systems in higher vocational education in China, highlighting the shift from a knowledge-based to an ability-based education model. They argue for the establishment of a personality-based education model to cultivate well-rounded students, thereby innovating talent training modes and enhancing personnel quality. The Chinese central authorities have issued guidelines to promote high-quality development in modern vocational education. These guidelines advocate for improved teacher quality, innovative teaching models, and enhanced cooperation with enterprises to align vocational education with market demands and emerging industries. Lv (2024) examined the reform path of practical teaching quality evaluation in five-year higher vocational colleges. The study underscores the importance of a robust practical teaching quality evaluation system as a measure to test talent training effectiveness and promote continuous teaching quality improvement.

These studies collectively contribute to understanding the evaluation and improvement pathways for higher vocational teachers' development indices, aligning with the goals of high-quality vocational education development.

### State Hypotheses and Their Correspondence to Research Design

This study addresses these gaps by proposing the "two alls and three qualities" development concept for higher vocational teachers in the new era. It aims to establish a theoretical model and evaluation system for teacher development, assess current development indices, identify deficiencies, and explore the adverse factors affecting teacher growth. By analyzing differences in responses to the primary influencing factors, the study seeks to reveal the mechanisms underpinning teacher development and provide theoretical and practical pathways for building high-quality "dual-qualified" teaching teams characterized by professionalism, deep commitment, strong skills, and vitality.

## METHOD

The research is mix-method research, including qualitiative research and quantitive research. There is questionnaire to survey the current situation related to the higher vocational teachers' development of index under the high-quality development. There is focus-interview to creat the strategies for improving the higher vocational teachers' development of index under the high-quality development. And there is also evaluation form to evaluate adaptiability and feasibility of the higher vocational teachers' development of index under the high-quality development.

### Participant (Subject) Characteristics

There are almost 50,000 teachers on staff in 93 higher vocational colleges in Guangdong Province as the participants in this research.

Higher vocational college teachers refer to those who have been in teaching in colleges or vocational colleges in higher vocational and technical colleges. Not only do they have solid disciplines, they are also familiar with the teaching methods and theories of vocational education. They are committed to

cultivating high -quality skill talents with practical operational skills and adapting to the needs of the industry.

There are divided into 2 sections of those who participate in the research, 1) there are 4 vocational colleges in the east, west and north of Guangdong with almost 12,000 teachers on staff, and 2) there are 4 vocational colleges in the Guangdong – HongKong – Macao Greater Bay with almost 38,000 teachers on staff.

**Sampling Procedures**

When design the research sampling procedures, there are 3 phases in processing.

Phase 1 is to survey the current situation related to the higher vocational teachers' development of index under the high-quality development.

Phase 2 is to creat the strategies for improving the higher vocational teachers' development of index under the high-quality development.

Phase 3 is to evaluate adaptiability and feasibility of the higher vocational teachers' development of index under the high-quality development.

**Sample Size, Power, and Precision**

The sample group for this study consists of 381 teachers from higher vocational colleges in Guangdong Province. The sample was selected using the random sampling table provided by Krejcie and Morgan (1970). A stratified random sampling method was applied, dividing the participants into subgroups based on specific criteria. This approach ensures representative sampling and improves the reliability of the study's findings.

Phase 1, there are 92 teachers from higher vocational colleges in the east, west and north of Guangdong Province and 289 teachers from higher vocational colleges in the Guangdong – HongKong – Macao Greater Bay Area.

Phase 2, there are 2 teachers from higher vocational colleges in Guangdong Province with 1-5 years of teaching experience, 2 teachers with 6-15 years of teaching experience, 2 teachers with 16-25 years of teaching years, and 3 teachers with more than 25 years of teaching experience.

Phase 3, there are 1 expert who has worked in this area for more than 15 years, 2 experts with senior professional titles, and 2 administors at or above the director level.

**Measures and Covariates**

Through the measures of matching objectives, Table 1 is shown the measure, research instrument and participants.

**Table 1. The measures and covariates**

| Phase | Objective | Methodology | Research Instrument | Type of Research |
|---|---|---|---|---|
| 1 | To survey the current situation related to the higher vocational teachers' development of index under the high-quality development | Survey | Questionnaire | Quantitative Analysis |
| 2 | To creat the strategies for improving the higher vocational teachers' development of index under the high-quality development | Interview | Interview | Qualitative Analysis |

| | | | | |
|---|---|---|---|---|
| 3 | To evaluate adaptiability and feasibility of the higher vocational teachers' development of index under the high-quality development | Evaluate | Evaluation Form | Quantitative Analysis |

The dependent variable in this study is Higher Vocational Teachers' Development Index. This variable represents the growth and progress of teachers working in higher vocational institutions, encompassing their ability to meet professional and pedagogical expectations in a high-quality educational context.

The independent variables influencing vocational teacher development include multiple dimensions: life development, professional development, organizational development, and social development. Life development refers to the personal growth and well-being of teachers, while professional development involves enhancing their teaching skills, knowledge, and career progression. Organizational development focuses on the structural and managerial aspects within the institutions that support teacher growth. Social development includes external societal factors, such as community engagement and societal support, which impact the overall development of higher vocational teachers.

The development identifies 4 core dimensions: life development, professional development, social development, and organizational development. These dimensions not only represent the areas of teacher development but also serve as the primary factors influencing it. Each dimension directly impacts teachers' overall growth and effectiveness in their roles. The conceptual framework shows as Figure 1. This conceptual framework emphasizes the multidimensional nature of teacher development and integrates several key theoretical perspectives.

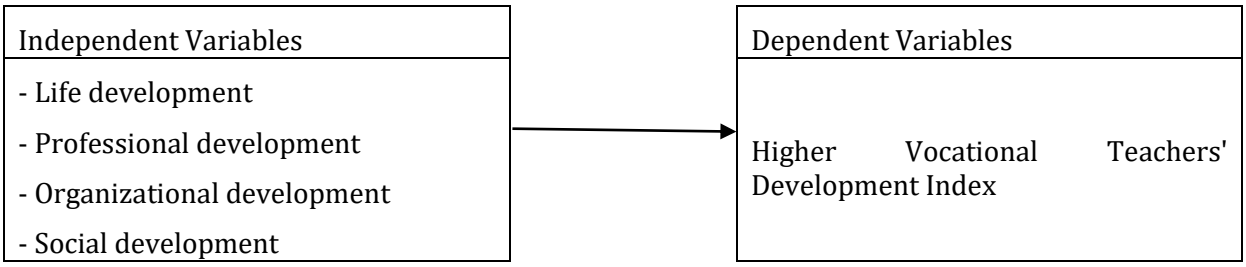


**Figure 1. Conceptual Framework**

In this framework, organizational development holds a unique position as it not only directly influences teacher development but also acts indirectly through other dimensions. For example, organizational development can influence life development, professional development, and social development, which in turn mediate its effect on overall teacher growth. Similarly, professional development can indirectly impact teacher development through its interactions with life development and social development, highlighting the interconnectedness of these dimensions.

**Research Design**

The questionnaire is designed with 4 primary dimensions: life development, professional development, social development, and organizational development. These primary dimensions are further divided into nine secondary dimensions, comprising a total of 43 items. Specifically, life development includes 12 items, professional development contains 15 items, social development comprises 7 items, and organizational development has 10 items.

A 5-point Likert scale is used for the questionnaire, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Additionally, the questionnaire collects demographic information,

including individual characteristics such as identity, gender, and teaching experience, as well as school attributes such as regional location and school type.

The reliability and validity of the questionnaire were tested using SPSS 27.0. The overall reliability, measured by Cronbach's alpha coefficient, was 0.960, while the split-half reliability alpha coefficient was 0.881. The content structural validity, as indicated by the KMO coefficient, was 0.955. These results demonstrate that the evaluation form has excellent reliability and validity, making it suitable for data analysis.

## RESULTS

### Recruitment

The survey targeted teachers from higher vocational colleges across the province. Participants were randomly selected based on key criteria, including economic and social development regions, school types, and teacher identities. A total of 381 valid responses were collected, representing a diverse demographic. The demographic characteristics of the participants are detailed in Table 2.

**Table 2. Demographic characteristics of survey samples (N=381)**

| Variable | | Number of people | Proportion (%) | Variable | | Number of people | Proportion (%) |
|---|---|---|---|---|---|---|---|
| Administrative area | The Greater Bay Area | 289 | 75.9 | School type | National high-level vocational education | 73 | 19.2 |
| | Guangdong, East, West and North regions | 92 | 24.1 | | Provincial Demonstration Vocational College | 128 | 33.6 |
| Gender | male | 210 | 55.1 | | Ordinary higher vocational | 180 | 47.2 |
| | female | 171 | 44.9 | Teaching experience | 0-3 years | 114 | 29.9 |
| Teacher identity | Ordinary Teacher | 236 | 61.9 | | 4 to 15 years | 151 | 39.6 |
| | Ideological and political teachers | 48 | 42.6 | | 16-25 years | 71 | 18.6 |
| | Teaching management staff | 97 | 25.5 | | 25+ years | 45 | 11.8 |

### Statistics and Data Analysis

### Development Index and Basic Characteristics of Higher Vocational Teachers

### General Overview

According to the data presented in Table 3, the overall development index of higher vocational teachers stands at 72.9, indicating a "good" level. This suggests that while the general development

level of higher vocational teachers is commendable, there remains a noticeable gap from achieving high-quality development, leaving considerable room for improvement.

Analyzing the four dimensions of development, three dimensions—life development (77.2), organizational development (75.4), and professional development (75.0)—have achieved a "good" level. However, the social development dimension (64.0) is at a "basic qualified" level, highlighting a weaker area in the overall development framework.

These findings suggest that while the overall development of higher vocational teachers is generally positive, there are notable shortcomings. The social development dimension, in particular, represents a significant area of deficiency, indicating the need for targeted efforts to address this gap.

**Table 3. Higher vocational teacher development index table (N=381)**

| Item Class | Development Index | Life Development | Professional Development | Social Development | Organizational Development |
|---|---|---|---|---|---|
| average value | 72.9 | 77.2 | 75.0 | 64.0 | 75.4 |
| Standard Deviation | 15.19 | 11.81 | 15.92 | 23.80 | 17.46 |

Further analysis of the data in Table 4 reveals the distribution of development levels among higher vocational teachers. Specifically, 121 teachers (31.8%) are at a "high" development level, 78 teachers (20.5%) are at a "relatively high" level, 99 teachers (26.0%) are at a "normal" level, and 83 teachers (21.8%) are at a "poor" level.

This indicates that nearly half of the higher vocational teachers fall into the "normal" or "poor" development categories, while slightly more than half are at a "relatively high" level or above. These findings highlight a significant imbalance in the development levels of higher vocational teachers, underscoring the need for focused interventions to support teachers at the lower end of the development spectrum.

**Table 4. Distribution of higher vocational teachers by development level (%)**

| Item Class | High | Relatively high | Generally | Difference |
|---|---|---|---|---|
| Number of people | 121 | 78 | 99 | 83 |
| percentage | 31.8 | 20.5 | 26.0 | 21.8 |

**Basic Feature Analysis**

The data in Table 5 reveals several key characteristics regarding the development of higher vocational teachers: First, regional differences are evident. The development index of teachers in the nine cities of the Greater Bay Area is 76.4, which is significantly higher than that of teachers in the eastern, western, and northern regions of Guangdong, whose development index is 61.8. This substantial gap is statistically significant and highlights the regional imbalance in teacher development. Second, there are differences based on school types. Teachers in national double-high schools have a development index of 81.7, which is much higher than those in provincial demonstrative higher vocational schools (69.2) and ordinary higher vocational schools (72.0). These differences are also statistically significant, indicating that national double-high schools provide better opportunities or support for teacher development. Third, teacher roles show notable disparities. The development index of ordinary teachers is 74.7, outperforming ideological and political teachers, whose development index stands at 67.5. This gap is statistically significant and suggests that differences in teacher roles may impact development opportunities or resources. In contrast, no significant differences were observed in terms of gender or teaching experience. This suggests that these factors do not play a significant role in the development index of higher vocational teachers.

Overall, these findings highlight the existence of disparities in teacher development across regions, school types, and roles, emphasizing the need for targeted policies and interventions to bridge these gaps and promote equitable development opportunities for all teachers.

**Table 5. Basic characteristics of higher vocational teacher development (N=381)**

| Variable | | Number of people | Average value | Standard Deviation | Variance test | |
|---|---|---|---|---|---|---|
| | | | | | F-number | Significance |
| Area | Nine Cities in the Greater Bay Area | 289 | 76.4 | 15.11 | 77.552 | 0.000 |
| | Guangdong, East, West and North | 92 | 61.8 | 8.76 | | |
| School Type | National high-level vocational education | 73 | 81.7 | 14.74 | 17.870 | 0.000 |
| | Provincial Demonstration Vocational College | 128 | 69.2 | 14.56 | | |
| | Ordinary higher vocational | 180 | 72.0 | 14.47 | | |
| Teacher status | Ordinary Teacher | 236 | 74.7 | 13.97 | 5.365 | 0.005 |
| | Ideological and political teachers | 48 | 67.5 | 12.01 | | |
| | Teaching management staff | 97 | 71.2 | 18.43 | | |
| gender | male | 210 | 72.6 | 15.52 | 0.190 | 0.664 |
| | female | 171 | 73.3 | 14.80 | | |
| Teaching year | 0-3 years | 114 | 72.3 | 14.07 | 1.862 | 0.136 |
| | 6-15 years | 151 | 72.3 | 15.13 | | |
| | 16-25 years | 71 | 71.9 | 14.53 | | |
| | 25+ years | 45 | 77.9 | 18.39 | | |

The results indicate that the development of higher vocational teachers is characterized by three key factors: region, school type, and teacher identity. These findings reveal the general patterns and fundamental characteristics of higher vocational teacher development.

## Shortcomings and Challenges in the Overall Development of Higher Vocational Teachers

### Secondary Indicator Analysis of Higher Vocational Teachers' Development

The data in Table 6 highlights key strengths and weaknesses in the secondary dimensions of higher vocational teachers' development. Among these dimensions, teacher ethics development stands out as a significant strength, with an evaluation index of 84.3, which is categorized as "excellent." This indicates that higher vocational teachers demonstrate strong ethical standards and professionalism.

However, notable shortcomings are evident in three secondary dimensions: social services, physical and mental health, and scientific research development. All three dimensions are evaluated at a "general" qualified level, reflecting relatively low development quality. These areas represent critical weaknesses and highlight the need for targeted interventions and support to enhance the overall development of higher vocational teachers.

**Table 6. Secondary indicator index of higher vocational teacher development (N=381)**

| Item Class | Teacher ethics develop | Body and mind healthy | Autonomy develop | Teaching develop | Research develop | Society Serve | Educate people Work | Profession Ecology | Support Assure |
|---|---|---|---|---|---|---|---|---|---|
| average value | 84.3 | 65.7 | 76.9 | 77.1 | 68.4 | 62.2 | 71.4 | 75.6 | 75.3 |
| Standard Deviation | 12.33 | 18.81 | 15.25 | 14.16 | 21.66 | 25.58 | 23.07 | 17.49 | 18.77 |
| Sorting | 1 | 8 | 3 | 2 | 7 | 9 | 6 | 4 | 5 |

Further analysis of Table 7 reveals nine factors with an average score of less than 3.50, falling below the median. These factors negatively influence the development of higher vocational teachers, playing a detrimental role in their growth. The findings identify three primary negative factors: the lack of participation in teaching and skills competitions, the difficulty in competing for vocational skills training opportunities, and the high pressure of career and life. These factors directly hinder teachers' ability to develop professionally and maintain work-life balance. Additionally, six secondary unfriendly factors are highlighted: the lack of participation in academic activities, the difficulty in joining academic organizations, the limited time spent in enterprises, the small number of scientific research achievements, the insufficient transformation of teaching and research results, and the lack of physical health. These factors predominantly concentrate on deficits in professional development and life development, indicating significant areas for targeted intervention and support to improve the overall development of higher vocational teachers.

**Table 7. List of main negative factors affecting the development of higher vocational teachers (N=381)**

| Sorting | factor | Minimum | Maximum | average value | Standard Deviation |
|---|---|---|---|---|---|
| 1 | Participation in teaching, technology, professional skills and other competitions | 1 | 5 | 2.80 | 1.480 |
| 2 | Undertake vocational courses and skills training business | 1 | 5 | 2.94 | 1.539 |
| 3 | Perceived professional and life stress | 1 | 5 | 2.95 | 1.104 |
| 4 | Go out to participate in lectures, reviews, academic exchanges, etc. | 1 | 5 | 3.06 | 1. 361 |
| 5 | Host or participate in social groups, academic organizations, etc. | 1 | 5 | 3.17 | 1.510 |
| 6 | The time of enterprises, institutions, industries, etc. in the next year | 1 | 5 | 3.25 | 1.573 |
| 7 | Annual papers, monographs, patents and other achievements | 1 | 5 | 3.27 | 1.540 |
| 8 | Economic or social benefits of transformation of teaching and scientific research results | 1 | 5 | 3.40 | 1.304 |

| | | | | | |
|---|---|---|---|---|---|
| 9 | Chronic diseases such as high blood sugar, high blood pressure, and high uric acid | 1 | 5 | 3.41 | 1.378 |

**Main Influencing Factors of Higher Vocational Teacher Development and Their Contribution**

**Correlation Between Development and Key Influencing Factors**

The data presented in Table 8 demonstrates the correlations between the development of higher vocational teachers and four key influencing factors: life development, professional development, social development, and organizational development. Using region as a control variable, the correlation coefficients for these factors with teacher development are 0.814, 0.910, 0.891, and 0.817, respectively, all of which are statistically significant.

These results indicate a strong positive linear correlation between each of the four dimensions and the overall development of higher vocational teachers. This finding underscores the close internal connection between these dimensions and highlights their role as primary influencing or response factors in teacher development.

Furthermore, the results validate the appropriateness of the "first-order four-dimensional" theoretical model. This model aligns with the fundamental characteristics and basic principles of higher vocational teacher development, providing a robust framework for understanding and enhancing teacher growth.

**Table 8. Correlation between the development of higher vocational teachers and the main influencing factors (N=381)**

| Control variables | | Development Index | Life Development | Professional Development | Social Development | Organizational Development |
|---|---|---|---|---|---|---|
| Area | Development Index | 1.000 | | | | |
| | Life Development | 0.814 ** | 1.000 | | | |
| | Professional Development | 0.910 ** | 0.670 ** | 1.000 | | |
| | Social Development | 0.891 ** | 0.557 ** | 0.834 ** | 1.000 | |
| | Organizational Development | 0.817 ** | 0.718 ** | 0.604 ** | 0.547 ** | 1.000 |

Note: **$p < 0.01$

**Contribution Measurement of Key Influencing Factors to Higher Vocational Teacher Development**

The data in Table 9 provides insights into the contribution of four key independent variables—life development, professional development, social development, and organizational development—to the development of higher vocational teachers.

First, the analysis confirms that all four independent variables hypothesized to influence teacher development are included in the structural equation model. The adjusted R-square coefficient is 1.00, indicating an ideal goodness of fit. This suggests that a multivariate linear equation can be reliably established to represent the relationships among the variables.

Second, the goodness-of-fit test for the multivariate linear equation shows a zero residual, with results that are highly significant. This confirms that the linear relationship between the dependent variable (teacher development) and the four independent variables is fully established. These findings validate the theoretical model and demonstrate that the independent variables effectively explain the changes in the dependent variable.

Third, the regression coefficient significance tests indicate that the unstandardized coefficients for the contributions of life development, professional development, social development, and organizational development are all 0.25. The standardized coefficients are 0.194, 0.262, 0.287, and 0.392, respectively. These results reveal that organizational development has the greatest impact on the teacher development index, with an explanatory power of 39.2%, followed by social development at 28.7%, professional development at 26.2%, and life development at 19.4%.

Overall, these findings highlight that life development, professional development, social development, and organizational development all have a positive and significant impact on the development of higher vocational teachers. Among these, organizational development emerges as the most influential factor, indicating the critical role of institutional support and structure in driving teacher growth.

**Table 9. List of predicted contribution coefficients a of various influencing factors in the higher vocational teacher development model**

| Model | Unstandardized Coefficients | | Standard coefficient | t-value | Significance |
|---|---|---|---|---|---|
| | B | Standard error | Beta | | |
| Constant | 6.395E-14 | 0.000 | | 0.000 | 1.000 |
| Life Development | 0.250 | 0.000 | 0.194 | 68815910.322 | 0.000 |
| Professional Development | 0.250 | 0.000 | 0.262 | 68915329.954 | 0.000 |
| Social Development | 0.250 | 0.000 | 0.287 | 105200386.779 | 0.000 |
| Organizational Development | 0.250 | 0.000 | 0.392 | 114201969.898 | 0.000 |

Note: a. Dependent variable: Development index

## DISCUSSION

Phase 1: Survey the Current Situation of Higher Vocational Teachers' Development Index Under High-Quality Development

The findings from this study reveal that the overall development index of higher vocational teachers is at a "good" level, with a score of 72.9. However, significant disparities exist across the four dimensions of development. Life development, professional development, and organizational development achieved relatively high scores, indicating areas of strength. In contrast, social development scored only 64.0, falling into the "basic qualified" category, highlighting it as a critical area requiring improvement.

The demographic analysis further revealed uneven development based on regions, school types, and teacher roles. Teachers in national-level high-vocational schools (81.7) and the Greater Bay Area

(76.4) demonstrated stronger development indices compared to their counterparts in provincial and ordinary vocational schools and less developed regions. Similarly, ordinary teachers scored higher than ideological and political teachers, indicating disparities based on teacher identity. These findings underscore the need for targeted policies and interventions to address these gaps and promote balanced development.

Phase 2 Strategies for Improving the Higher Vocational Teachers' Development Index

The contribution analysis provided valuable insights for crafting strategies to improve the development index. Organizational development emerged as the most influential factor, with an explanatory power of 39.2%, followed by social development (28.7%), professional development (26.2%), and life development (19.4%). These findings suggest that strengthening organizational structures and support mechanisms can significantly enhance teacher development.

Strategies proposed to address these issues include:

1) Expanding opportunities for participation in teaching, technology, and skill competitions.

2) Increasing involvement in academic activities and organizations to improve social development.

3) Enhancing support for research and professional development, including time for enterprise engagement and the transformation of research outcomes.

4) Providing resources to alleviate life stress and improve physical and mental health.

These targeted interventions aim to improve weaker dimensions, particularly social development, while maintaining progress in stronger areas like organizational development.

Phase 3 Adaptability and Feasibility of Proposed Strategies

The proposed strategies were evaluated using a structural equation model, which demonstrated excellent goodness-of-fit. The adjusted R-square coefficient of 1.00 and zero residual confirmed the strong linear relationships between the dependent variable (development index) and the four independent variables. This validation supports the theoretical model and its applicability across diverse contexts.

The significant contributions of all four dimensions underscore the feasibility of these strategies. Particularly, the high standardized coefficient of organizational development (0.392) suggests that institutional reforms, such as enhanced resource allocation and management structures, would yield substantial benefits. Similarly, improving opportunities for professional and social engagement could significantly enhance social development and overall teacher growth.

These findings demonstrate the practicality of implementing these strategies and highlight their potential for addressing disparities in teacher development, particularly for underperforming regions and school types.

## REFERENCES

Jiang, H., & Liu, Y. (2021). Construction of Teaching Quality Evaluation System of Higher Vocational Project-Based Curriculum Based on CIPP Model. *International Journal of Information and Education Technology*, *11*(6), 262–268.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Li, M. (2019). The philosophical logic of "all-round development of people" in the new era. *Guangming Daily*.

Liu, B. (2004). The rise of holistic education and the transformation of educational goals. *Comparative Education Research*, *15*(9), 17–22.

Ling, Y., Chung, S. J., & Wang, L. (2023). Research on the Reform of Management System of Higher Vocational Education in China Based on Personality Standard. *Current Psychology*, *42*, 1225–1237. https://doi.org/10.1007/s12144-021-01480-6

Lv, F. (2024). Research and consideration on the reform path of practical teaching quality evaluation in the five-year system of higher vocational colleges. *Education Reform and Development*, *6*(10).

Sui, X. (2020). The meaning and characteristics of university teacher development. *Party Building and Ideological Education in Schools*, *7*, 91–93.

The State Council of the People's Republic of China. (2021). China Issues Guidelines on High-Quality Vocational Education. Retrieved from https://english.www.gov.cn.

Wang, L., & Zhang, Y. (2022). Study of Diagnosis and Improvement Index System of Higher Vocational Classroom Teaching Based Upon AHP. In *Proceedings of the 2022 IEEE International Conference on Computer Science and Educational Informatization* (pp. 123-127). IEEE.

Zhou, X. (2021). Quality Evaluation Model of Vocational Education in China: A Qualitative Study Based on Grounded Theory. *Education Sciences*, *11*(8), 819. https://doi.org/10.3390/educsci11080819

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