

## Article

# Development of Higher Vocational Education and Innovative Talent Cultivation Practices in a Selected University in Haikou City, China

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**Abstract:** This study explores the implementation of higher vocational education (HVE) reforms and innovative talent cultivation practices in Haikou City, China. Using mixed methods, the research examines administrative strategies in global perspectives, curriculum development, faculty development, infrastructure and resources, research and innovation, and student support services. The findings revealed that while institutional efforts were generally rated as "Implemented," areas such as faculty development and collaboration were perceived as strengths, whereas research, student support, and innovative teaching methods required further enhancement. Significant differences in perceptions were observed based on demographic factors such as age, educational attainment, sex, and grade level, emphasizing the need for inclusive and equitable strategies. Correlation analysis underscored the interconnectedness between higher vocational education developments and talent cultivation practices, with global perspectives and curriculum development strongly linked to teaching innovation and ethical education.

**Keywords:** vocational education; talent cultivation; global perspectives; curriculum development; faculty development; infrastructure and resources; research and innovation; student support services

## 1. Introduction

The rapid evolution of the global economy and the increasing complexity of industrial demands have significantly shaped the landscape of higher vocational education (HVE). In China, HVE plays a crucial role in bridging the gap between academic knowledge and practical application, thereby ensuring that graduates are well-equipped to meet the technical and practical requirements of modern industries. As China continues to advance its industrial and economic landscape, the importance of a skilled workforce becomes paramount. This paper aims to explore the development of HVE and innovative talent cultivation practices in a selected college in Haikou City, China [1].

HVE in China has been profoundly influenced by the integration of international best practices and lifelong learning models. According to Xing, the development of a robust vocational education system that incorporates lifelong education and vocational skills training is essential for supporting economic growth and enhancing global competitiveness [2]. This approach not only optimizes the education structure but also clarifies the development path in various directions, aligning with China's broader educational reform initiatives.

The reform of HVE in China is also geared towards meeting international standards and facilitating the country's participation in the global market. Zhao emphasizes the significance of proficiency in English for occupational purposes (EOP), which is crucial for Chinese graduates to engage effectively in international business environments [3]. Moreover, the focus on professional development for vocational education and training

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(VET) teachers, as highlighted by Serafini, ensures that educators are well-prepared to deliver high-quality vocational training [4]. This alignment with global benchmarks fosters a culture of excellence and continuous improvement within the vocational education system.

In addition, the integration of intercultural education and the adoption of innovative teaching methods are vital for enhancing the effectiveness of vocational education programs. Ye advocates for an approach that incorporates multimedia, international exchange cooperation, and teacher training to broaden students' international perspectives and cultural understanding [5]. This holistic approach is essential for cultivating global talents who can thrive in diverse professional environments.

Understanding the motivations and aspirations of vocational education students is crucial for aligning training programs with industry demands. A comparative study was conducted on the sociological portrait of students in popular and promising vocational specialties, highlighting the importance of aligning vocational training with students' aspirations and industry needs [3]. Furthermore, the informatization of vocational education through the "Education Informatization 2.0" action plan, aims to enhance teaching methods and foster international competence using advanced technology.

Health and well-being are also critical considerations in vocational education. The need for a holistic approach that considers students' physical and mental health, ensuring a supportive environment that promotes both professional competence and personal well-being. Moreover, the adoption of models like the Austrian dual system of apprenticeship provides valuable insights into sustainable and effective vocational training practices [4].

In summary, the development of HVE in China is marked by strategic reforms and the adoption of international best practices to enhance the quality and relevance of vocational training. This paper will delve into the specific practices and innovations implemented at a selected college in Haikou City, exploring how these efforts contribute to the overall goal of cultivating a skilled and globally competitive workforce.

## **2. Methodology**

### *2.1. Research Design*

This study will employ a quantitative comparative correlational design. This design is selected for its ability to quantify the relationships between variables and to compare different groups systematically. The primary goal is to assess the extent of implementation by school administrators on developments in higher vocational education at a selected vocational university and to evaluate the innovative talent cultivation practices from both teachers' and students' perspectives.

A quantitative approach is justified because it allows for the collection of numerical data that can be statistically analyzed to determine patterns, relationships, and differences. This method provides a structured way to measure variables, ensuring that the findings are objective and reliable. A comparative aspect is essential to discern any differences in perceptions between teachers and students, offering a comprehensive understanding of how various stakeholders view the effectiveness of educational practices. Additionally, a correlational component is crucial to explore potential relationships between the extent of implementation by administrators and the effectiveness of talent cultivation practices, providing insights into areas that may require strategic improvements.

Using this design will enable the researcher to draw meaningful conclusions about the effectiveness and impact of higher vocational education strategies, thereby informing future policies and practices at the selected vocational university.

The participants in this study will be selected using a random sampling method to ensure a representative sample of the population at Hainan Vocational University of Science and Technology. The study will include 303 teacher-respondents and 379 student-respondents to provide a comprehensive assessment of the extent of implementa-

tion of higher vocational education developments and innovative talent cultivation practices.

## 2.2. Sampling and Instruments

Random sampling will help to minimize bias and enhance the generalizability of the study's findings, providing a robust basis for drawing conclusions and making recommendations for future improvements in higher vocational education at the university. This method ensures that every member of the population has an equal chance of being selected, thereby increasing the reliability and validity of the results.

The instrument utilized in this study is a researcher-made survey questionnaire, meticulously designed to capture comprehensive data on the extent of implementation of higher vocational education developments by school administrators and the innovative talent cultivation practices at the selected vocational university. The questionnaire is divided into distinct parts, each targeting specific constructs essential to the research objectives.

The first part of the questionnaire focuses on the Profile of Respondents. This section gathers demographic information to provide a contextual understanding of the respondents' backgrounds. For teacher-respondents, this includes questions on sex, age, and highest educational attainment. For student-respondents, the questions cover sex and grade level. This demographic data is crucial for analyzing potential differences in perceptions and assessments based on respondent characteristics.

The second part of the questionnaire assesses the Extent of Implementation by School Administrators. This section is directed at teacher-respondents and evaluates several constructs related to educational developments in terms of:

- 1) Global Perspectives
- 2) Curriculum Development
- 3) Faculty Development
- 4) Infrastructure and Resources
- 5) Research and Innovation
- 6) Student Support Services

The third part of the questionnaire captures the Assessment of Innovative Talent Cultivation Practices from the perspective of student-respondents. This section focuses on:

- 1) Innovative Teaching Methods and Technology
- 2) Interdisciplinary and Applied Learning
- 3) Evaluation and Continuous Improvement
- 4) Cultural and Ethical Education
- 5) Collaboration and Practical Training

All items are measured using a 4-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree) to assess the respondents' level of agreement with various statements related to each construct.

To ensure the validity and reliability of the instrument, the survey questionnaire was subjected to a rigorous validation process. Content validity was established through expert reviews, ensuring that the items comprehensively cover the constructs being measured. Reliability was assessed using a pilot study with a subset of respondents, followed by statistical analysis (e.g., Cronbach's alpha) to determine the consistency and stability of the responses. The refined instrument thus provides a robust tool for collecting data and drawing meaningful conclusions about the current state and future directions of higher vocational education at the selected university.

### 3. Results

The findings reveal a mix of significant and non-significant relationships across the various dimensions, providing insights into how these two areas influence one another, as shown in Table 1.

**Table 1.** Correlation Between Assessment of the Respondents on the Extent of Implementation by School Administrators on Developments in Higher Vocational Education and Innovative Talent Cultivation Practices.

Developments in Higher Vocational Education	Innovative Talent Cultivation Practices	Computed $r$	Sig.	Decision	Interpretation
Global Perspectives	Innovative Teaching Methods and Technology	0.215**	0.000	Rejected	Significant
	Interdisciplinary and Applied Learning	-0.067	0.245	Accepted	Not Significant
	Evaluation and Continuous Improvement	0.193**	0.001	Rejected	Significant
	Cultural and Ethical Education	-0.017	0.772	Accepted	Not Significant
	Collaboration and Practical Training	0.102	0.076	Accepted	Not Significant
Curriculum Development	Innovative Teaching Methods and Technology	0.262**	0.000	Rejected	Significant
	Interdisciplinary and Applied Learning	0.084	0.143	Accepted	Not Significant
	Evaluation and Continuous Improvement	0.161**	0.005	Rejected	Significant
	Cultural and Ethical Education	0.163**	0.004	Rejected	Significant
	Collaboration and Practical Training	0.071	0.216	Accepted	Not Significant
Faculty Development	Innovative Teaching Methods and Technology	0.035	0.547	Accepted	Not Significant
	Interdisciplinary and Applied Learning	0.098	0.088	Accepted	Not Significant
	Evaluation and Continuous Improvement	0.131*	0.023	Rejected	Significant
	Cultural and Ethical Education	0.049	0.394	Accepted	Not Significant
	Collaboration and Practical Training	-0.035	0.545	Accepted	Not Significant
Infrastructure And Resources	Innovative Teaching Methods and Technology	0.044	0.441	Accepted	Not Significant
	Interdisciplinary and Applied Learning	0.016	0.785	Accepted	Not Significant
	Evaluation and Continuous Improvement	0.009	0.882	Accepted	Not Significant
	Cultural and Ethical Education	0.086	0.134	Accepted	Not Significant
	Collaboration and Practical Training	0.031	0.586	Accepted	Not Significant

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Research And Innovation	Innovative Teaching Methods and Technology	0.132*	0.022	Rejected	Significant
	Interdisciplinary and Applied Learning	0.036	0.530	Accepted	Not Significant
	Evaluation and Continuous Improvement	0.061	0.292	Accepted	Not Significant
	Cultural and Ethical Education	0.021	0.709	Accepted	Not Significant
	Collaboration and Practical Training	0.124*	0.031	Rejected	Significant
Student Support Services	Innovative Teaching Methods and Technology	0.014	0.808	Accepted	Not Significant
	Interdisciplinary and Applied Learning	0.083	0.149	Accepted	Not Significant
	Evaluation and Continuous Improvement	-0.070	0.224	Accepted	Not Significant
	Cultural and Ethical Education	-0.256**	0.000	Rejected	Significant
	Collaboration and Practical Training	-0.077	0.183	Accepted	Not Significant
Overall Developments in Higher Vocational Education	Overall Innovative Talent Cultivation Practices	0.220**	0.000	Rejected	Significant

The assessment of Global Perspectives shows significant positive correlations with Innovative Teaching Methods and Technology ( $r = 0.215$ ,  $p = 0.000$ ) and Evaluation and Continuous Improvement ( $r = 0.193$ ,  $p = 0.001$ ). These results suggest that global perspectives are associated with the use of innovative teaching strategies and systematic evaluation processes. However, non-significant correlations with Interdisciplinary and Applied Learning, Cultural and Ethical Education, and Collaboration and Practical Training indicate that global initiatives are less connected to these dimensions of talent cultivation.

The assessment of Curriculum Development demonstrates significant positive correlations with Innovative Teaching Methods and Technology ( $r = 0.262$ ,  $p = 0.000$ ), Evaluation and Continuous Improvement ( $r = 0.161$ ,  $p = 0.005$ ), and Cultural and Ethical Education ( $r = 0.163$ ,  $p = 0.004$ ). This highlights that effective curriculum development is closely tied to innovation in teaching, systematic evaluation, and the promotion of ethical practices. However, non-significant relationships with Interdisciplinary and Applied Learning and Collaboration and Practical Training suggest that curriculum development has a weaker influence on these aspects.

For Faculty Development, a significant positive correlation is found with Evaluation and Continuous Improvement ( $r = 0.131$ ,  $p = 0.023$ ). This indicates that faculty-related initiatives are associated with systematic feedback and improvement processes. However, no significant correlations are observed with other dimensions, suggesting that faculty development efforts have a limited direct impact on innovative teaching, interdisciplinary learning, or ethical and collaborative practices.

The assessment of Infrastructure and Resources does not exhibit significant correlations with any dimension of innovative talent cultivation practices. This indicates that perceptions of infrastructure and resources are largely independent of students' experiences of teaching innovation, applied learning, evaluation, or collaboration, suggesting a



possible disconnect between these foundational resources and their utilization for talent cultivation.

The assessment of Research and Innovation shows significant positive correlations with Innovative Teaching Methods and Technology ( $r = 0.132$ ,  $p = 0.022$ ) and Collaboration and Practical Training ( $r = 0.124$ ,  $p = 0.031$ ). These findings suggest that research and innovation initiatives contribute to teaching innovations and collaborative opportunities, highlighting their role in enhancing practical and research-oriented learning experiences.

The assessment of Student Support Services shows a significant negative correlation with Cultural and Ethical Education ( $r = -0.256$ ,  $p = 0.000$ ), suggesting that higher ratings of support services are associated with lower perceptions of cultural and ethical education. This inverse relationship may indicate competing priorities or a perceived lack of integration between these areas. No significant correlations are observed with other dimensions of innovative talent cultivation.

The overall assessment of Developments in Higher Vocational Education shows a significant positive correlation with Overall Innovative Talent Cultivation Practices ( $r = 0.220$ ,  $p = 0.000$ ). This indicates that, broadly, improvements in higher vocational education are associated with better implementation of talent cultivation practices, reinforcing the interconnectedness of institutional development and student-centered initiatives.

The analysis highlights the nuanced relationships between developments in higher vocational education and innovative talent cultivation practices. Positive correlations, such as those between Global Perspectives and Innovative Teaching Methods, and between Curriculum Development and Evaluation and Continuous Improvement, emphasize the importance of aligning institutional initiatives with innovative and systematic teaching practices.

However, the lack of significant correlations in some areas, such as Infrastructure and Resources, suggests opportunities for better integration of these foundational elements into talent cultivation efforts. The negative correlation between Student Support Services and Cultural and Ethical Education warrants further exploration to understand potential conflicts or misalignments.

Overall, the significant positive correlation between the overall assessments underscores the importance of a holistic approach to development in higher vocational education to enhance innovative talent cultivation practices. This requires a strategic focus on strengthening the interconnectedness between institutional initiatives and their practical application in cultivating students' skills and competencies.

#### 4. Discussion and Conclusion

The findings revealed that while institutional efforts were generally rated as "Implemented," areas such as faculty development and collaboration were perceived as strengths, whereas research, student support, and innovative teaching methods required further enhancement. Significant differences in perceptions were observed based on demographic factors such as age, educational attainment, sex, and grade level, emphasizing the need for inclusive and equitable strategies. Correlation analysis underscored the interconnectedness between higher vocational education developments and talent cultivation practices, with global perspectives and curriculum development strongly linked to teaching innovation and ethical education.

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