

Study of the Resource Integration and Performance Improvement Strategies of Vocational Colleges in the Background of the Double High Plan in Xuzhou

Zhongxu Li ¹, Jacky Mong Kwan Watt ^{2*}

¹ North Bangkok University, Thailand, Email: 363244805@qq.com

² North Bangkok University, Thailand, Email: drwattnbu@gmail.com

* Corresponding Author : Zhongxu Li

Abstract: Under the Double High Plan, the management of vocational colleges in Xuzhou should focus on a few essential strategies to improve performance and use resources effectively. First, college leaders need to align their programs with local industry needs. By partnering with businesses and industry groups, colleges can adjust their curricula to keep them relevant, helping students find jobs and be satisfied with their education. Next, effective resource use is crucial. Managers should wisely allocate financial, human, and technological resources to create better learning environments. This may include training teachers to use new technologies and teaching methods, which can improve teaching quality and lead to better student outcomes. In addition, colleges should consistently apply strategies to improve performance. This includes ongoing professional development for teachers to help them deliver engaging and practical instruction. School managers should also regularly review and adapt these strategies based on student feedback and performance data to ensure they are effective. In summary, vocational colleges under the Double High Plan must use resources effectively and apply performance improvement strategies based on the research results of 375 Xuzhou vocational school employees. By being proactive and flexible, college managers can enhance educational quality and support student success in Xuzhou

Keywords: Resource Integration and Performance Improvement Strategies, Vocational School, Double High Plan

Received: April 13, 2025

Revised: April 27, 2025

Accepted: May 12, 2025

Published: May 15, 2025

Curr. Ver.: May 15, 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the Crea-

tive Commons Attribution (CC

BY SA) license

(<https://creativecommons.org/licenses/by-sa/4.0/>)

1. Introduction

New scientific and technological developments are promoting the digitalization of global industries and digital industrialization, and there is an urgent need to train many specialized talents with digital literacy and skills. Vocational education is closely related to industry and responds to real-world needs.[1] As China's economy develops rapidly, its industries face considerable structural optimization, transformation, and upgrading challenges. Although China has the world's largest population and labor force, and has entered the stage of universalizing higher education, there is still a severe shortage of skilled workers. Data show that by 2017, the total number of skilled workers in China was 165 million, among which 47.91 million were highly professional, accounting for 29.03%, which is far behind countries such as Germany and the United States (more than 40%). In 2019, China released the National Plan for the Implementation of

Vocational Education Reform, putting vocational education on an equal footing with general education [2] Subsequently, policies were introduced to build high-level vocational colleges and majors with Chinese characteristics to improve the quality and usefulness of vocational education. In 2020 and 2021, China overfulfilled its goal of expanding the number of higher vocational students by 2 million. China's vocational education reform is unprecedented, and the scale of higher vocational students is enormous [3] Improving the quality of vocational education by developing entrepreneurship education to promote graduates' employment and meet economic and social development needs is of great significance to the international community, especially developing countries [4]

2. Research Objectives

This study explores the resource integration and performance improvement strategies of vocational colleges in the background of the Double High Plan in Xuzhou with the following objectives: (1) To examine vocational colleges' resource integration and performance improvement strategies in the Double High Plan in Xuzhou, based on curriculum adjustment, policy support, and technology integration. (2) To offer suggestions for the vocational colleges in Xuzhou on improving educational performance under the Double High Plan's background by enhancing resource integration.

a. Theoretical Foundation

Definition of Resource-Based Theory

The Resource-Based Theory (RBT) by [5] served as an informative framework for analyzing educational performance in vocational schools in China, particularly regarding resource integration and strategies for performance enhancement. This theory asserts that an organization's unique resources and capabilities are vital for achieving competitive advantage and superior performance. In vocational education, schools can optimize resources such as faculty expertise, partnerships with industry, and technological infrastructure to improve educational outcomes. A key aspect of resource integration within vocational schools in China involves collaboration with local industries to ensure that curricula align with market demands. Such partnerships provide institutions with access to valuable insights from the workforce enabling the development of practical training opportunities essential for equipping students with the skills they need for employment. By effectively integrating resources from various stakeholders, including businesses and community organizations, vocational schools can offer their students a more relevant and practical educational experience [6].

b. Definition of Innovation Diffusion Theory

Innovation Diffusion Theory (IDT) helps us understand how new educational ideas and practices are adopted in vocational schools in China. [7] created this theory and explained how new ideas and technologies spread in organizations. It highlights important factors

that affect the adoption of innovations. New teaching methods, courses, and technologies can significantly improve learning outcomes in vocational education. To make this happen, schools must integrate resources like business partnerships, access to modern technology, and cooperation with other educational institutions. These resources help create an environment that makes it easier to use new ideas effectively. IDT also outlines the steps in adopting innovations: knowledge, persuasion, decision, implementation, and confirmation. In vocational

c. Definition of Terms

- 1) The educational performance in vocational colleges, particularly within the "double high plan," aims to enhance the quality of education and students' practical skills. This initiative emphasizes the importance of aligning educational outcomes with the needs of the industry, ensuring that graduates are equipped with the competencies demanded in the workforce. To improve performance, vocational colleges can implement several effective strategies. One approach is to integrate partnerships with industry, which can provide students with valuable real-world experience and relevant training. Collaborating with businesses allows for updates to the curriculum, ensuring it reflects the most current industry standards and practices [8].
- 2) Curriculum adjustment in vocational colleges, especially within the "double high plan," focuses on refining educational programs to meet industry needs better and improve student outcomes. This process is vital for maintaining curriculum relevance and effectively preparing students for their careers. Vocational colleges must engage with industry stakeholders to facilitate this alignment. Colleges can pinpoint the specific skills and competencies in demand by collaborating with employers. This partnership enables educational institutions to modify curricula to equip students with the practical skills necessary for higher employability [9].
- 3) The policy support for vocational colleges under the "double high plan" encompasses a structured framework of regulations, funding, and strategic initiatives designed by governmental and educational authorities. This framework aims to enhance resource integration and elevate the overall performance of vocational education institutions. A critical component of this policy support is allocating financial resources, which is vital for upgrading facilities, investing in modern equipment, and fostering the development of innovative educational programs. Such funding is instrumental in enabling vocational colleges to offer high-quality training that aligns with industry standards. Policies encouraging collaboration between academic institutions and businesses also significantly facilitate internships and cooperative education programs, thus providing students with essential practical experience. [10]
- 4) Integrating technology in vocational colleges is essential for improving education and helping students succeed. Using digital tools and resources, these schools can better prepare students for

today's fast-changing job market. One key part of this integration is using online learning platforms and digital resources. These give students easy access to a variety of educational materials. These platforms encourage active participation, allowing students to join virtual simulations and work on projects together in real time, which enhances their learning experience. Additionally, advanced technologies like virtual and augmented reality provide hands-on learning opportunities that mimic real-world situations. This method helps students gain practical skills and knowledge they will need in their future careers [11]

d. Conceptual Framework

The High Plan aims to improve vocational colleges by focusing on three main areas: adjusting the curriculum, providing policy support, and integrating technology. This approach helps create a learning environment that meets the job market's needs. Adjusting the curriculum is essential. It ensures that educational programs match the skills employers are looking for. Vocational colleges work with industry partners to understand these needs. By doing this, they can create courses that include hands-on experiences, like internships and project-based learning, which are essential for students to gain relevant skills. Modern teaching methods and assessment practices keep the curriculum updated with technology and industry changes [12]. Policy support is crucial for these adjustments. Good government and institutional policies help with funding, resources, and strategies that improve vocational education.

These policies encourage cooperation between schools and businesses, leading to programs that give students real-world experiences. Additionally, policies that support professional development for educators ensure that teachers are prepared to provide high-quality education (Sheridan et al., 2014). Technology integration is another vital part of this approach. Using digital tools and resources enhances learning and prepares students for technology-driven jobs. Online learning platforms, virtual simulations, and interactive content make learning more engaging and personalized. Moreover, technology helps educators make informed decisions to support individual students' needs [13]

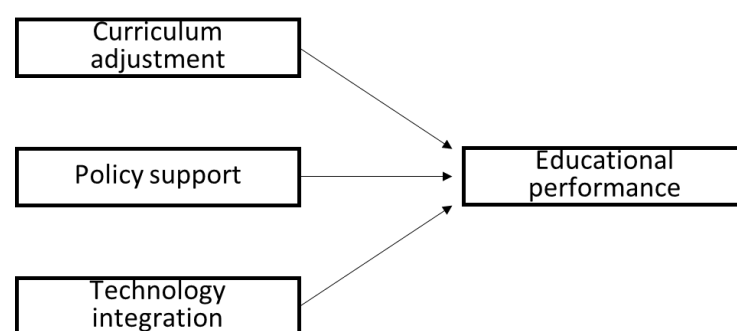


Figure 1. The Conceptual Framework

3. Research Restriction

Many vocational institutions may lack comprehensive metrics to assess student outcomes, which impedes the ability to evaluate the effectiveness of educational programs and interventions. Additionally, there is often a gap between academic institutions and industry stakeholders, making it challenging to align curricula with current labor market needs. This disconnect can result in graduates lacking the necessary skills and competencies employers require, ultimately affecting their employability. Financial constraints also significantly limit research efforts. Insufficient funding can hinder the ability to invest in critical resources, technology, and training, which are essential for implementing effective educational strategies. Furthermore, bureaucratic hurdles within institutions may slow the process of adopting innovative practices or responding to emerging trends in vocational training.

4. Research Hypothesis

The Correlation between Curriculum Adjustment and Educational Performance

The hypothesis for the correlation between curriculum adjustment and educational performance in vocational schools, particularly in resource integration and performance improvement, posits that effective curriculum adjustments positively influence educational outcomes.

This hypothesis is grounded in the idea that aligning educational programs with industry needs enhances student skill development and employability. By engaging with industry stakeholders to update curricula, vocational schools can ensure that students acquire relevant skills that match labor market demands. This alignment will improve student engagement, retention rates, and job placement outcomes [14].

H1 There is no positive correlation between curriculum adjustment and educational performance in Xuzhou Vocational Schools under the Double High Plan.

The Correlation between Policy Support and Educational Performance

The link between government support and student success in vocational schools is essential. Strong policy support is believed to lead to better educational outcomes. This idea is based on the fact that good policies help secure enough funding, resources, and plans needed to improve vocational education. When government and school policies focus on vocational training, they help match educational programs with what industries need. This connection is expected to increase student interest and skill-building, leading to better job prospects and overall performance in the job market. Moreover, policies encouraging partnerships between schools and businesses can

create opportunities for internships and practical experiences, enhancing students' education [15].

H2 There is no positive correlation between policy support and educational performance in Xuzhou Vocational Schools under the Double High Plan.

The Correlation between Technology Integration and Educational Performance.

The correlation between technology integration and educational performance in vocational schools focuses on how the effective use of technology can lead to improved academic outcomes, particularly regarding resource integration and performance enhancement. This idea is based on the premise that incorporating digital tools and resources into the educational framework strengthens teaching and learning processes, fostering greater student engagement and skill development. When vocational schools successfully implement technology within their curricula, students are more likely to benefit from interactive and personalized learning experiences. This heightened engagement can improve knowledge retention and increase competency levels, ultimately enhancing students' employability in the job market. Additionally, technology provides access to a diverse array of learning materials and resources, enabling tailored educational experiences that address the unique needs of individual students [16].

H3 There is no positive correlation between technology integration and educational performance in Xuzhou Vocational Schools under the Double High Plan.

5. Research Methods

Population and Sample

This research population of vocational college teachers was selected from Xuzhou, China. They participate in developing the local vocational colleges through resource integration and improvement strategies for the Double High Plan era. A sample of 375 was collected for this study's analysis in April 2025 through the WeChat Survey Platform.

This study's minimum research sample size is based on the study of [17]

- a. Standard deviation 0.5
- b. 95% - Z Score = 1.96
- c. Sample size formula = $(Z\text{-score})^2 * Std\ Dev * (1 - StdDev) / (\text{margin of error})^2$
- d. $(1.96)^2 * 0.5(0.5) / (0.05)^2$
- e. $(3.8416 * 0.25) / 0.0025$
- f. $0.9604 / 0.0025 = 384$

- g. 384 respondents would be needed for this study based on a confidence level of 95%

6. Research Model

Correlation Analysis

Correlation analysis is widely used to measure the degree of association between different variables. The Pearson correlation coefficient is commonly used to test the correlation. The value of the correlation coefficient (r) indicates the strength of the correlation between variables, while the significance level of the correlation is shown in the P-value.

Table 1. Correlation Coefficient Classification

Correlation coefficient r	Degree of relevance
$ r = 1$ Totally correlated	Totally correlated
$0.70 \leq r < 0.99$ Highly correlated	Highly correlated
$0.40 \leq r < 0.69$ Moderately correlated	Moderately correlated
$0.10 \leq r < 0.39$ Low correlation	Low correlation
$ r < 0.10$ Weak or unrelated	Weak or unrelated

Correlation Analysis of Curriculum Adjustment and Educational Performance

The correlation coefficient r between curriculum adjustment and educational performance is 0.829, and $P = 0.000$ is less than 0.01. Thus, curriculum adjustment significantly correlates with educational performance.

Table 2. Correlation Analysis of Curriculum Adjustment and Educational Performance

Educational Performance	Curriculum Adjustment
Sig. (1-tailed)	1
Curriculum Adjustment Sig. (2-tailed)	.829** (.000)

Correlation Analysis of Policy Support and Educational Performance

The correlation coefficient r between policy support and educational performance is 0.803, and $P=0.000$ is less than 0.01. Thus, policy support significantly correlates with educational performance.

Table 3. Correlation analysis results between policy support and educational performance

Educational Performance	Policy Support
Sig. (1-tailed)	1
Policy Support	.803**
Sig. (2-tailed)	(.000)

Correlation Analysis of Technology Integration and Educational Performance

The correlation coefficient r between technology integration and educational performance is 0.816, and $P=0.000$ is less than 0.01. Thus, technology integration and educational performance.

Table 4. Correlation analysis results between technology integration and educational performance

Educational Performance	Technology Integration
Sig. (1-tailed)	1
Technology Integration	.816**
Sig. (2-tailed)	(.000)

7. Conclusions

Research Results

Research shows that changes to the curriculum, support from policies, and the use of technology in Xuzhou vocational colleges have led to significant improvements, especially under the Double High Plan. This plan aims to improve the quality and relevance of vocational education in China, making it fit better with job market needs. Updating the curriculum has been crucial for improving education. By revising courses to match current industry standards and new technologies, vocational colleges in Xuzhou help students gain relevant skills that enhance their chances of getting hired. As students see their education as beneficial for their careers, they become more engaged and satisfied with their learning. Support from the government is also essential for these improvements [18]. The Chinese government has introduced policies that promote vocational education, providing funding and strategies that help colleges improve their programs. This support has encouraged collaboration between schools and local businesses, leading to programs that offer students practical experiences through internships and apprenticeships. These initiatives have significantly boosted student success and job placement rates [19]. Technology also plays a key role in enhancing

educational performance. Using digital tools and resources has changed how teachers deliver lessons, making learning more interactive and personalized. In Xuzhou vocational colleges, technology creates engaging learning environments that help students understand complex ideas better. It also caters to different learning styles and prepares students for the technology-driven workforce [20]. Combined with sound resource management and strategies to improve performance, these factors make the vocational education system more effective under the Double High Plan.

H1 There is no positive correlation between curriculum adjustment and educational performance in Xuzhou Vocational Schools under the Double High Plan.

H2 There is no positive correlation between policy support and educational performance in Xuzhou Vocational Schools under the Double High Plan.

H3 There is no positive correlation between technology integration and educational performance in Xuzhou Vocational Schools under the Double High Plan.

Managerial Implications:

Under the Double High Plan, the management of vocational colleges in Xuzhou should focus on a few essential strategies to improve performance and use resources effectively. First, college leaders need to align their programs with local industry needs. By partnering with businesses and industry groups, colleges can adjust their curricula to keep them relevant, helping students find jobs and be satisfied with their education. Next, effective resource use is crucial. Managers should wisely allocate financial, human, and technological resources to create better learning environments. This may include training teachers to use new technologies and teaching methods, which can improve teaching quality and lead to better student outcomes. In addition, colleges should consistently apply strategies to improve performance. This includes ongoing professional development for teachers to help them deliver engaging and practical instruction. Managers should also regularly review and adapt these strategies based on student feedback and performance data to ensure they are effective. Under the Double High Plan, vocational colleges must use resources effectively and apply performance improvement strategies. By being proactive and flexible, college managers can enhance educational quality and support student success in Xuzhou.

References

- [1] Guo, H. and Luo, D., "A research on the satisfaction level and promotion strategy of entrepreneurship education," *Research in Higher Education of Engineering*, vol. 05, pp. 165–171+200, 2020.
- [2] Ho, M.-H. R., Uy, M. A., Kang, B. N. Y., and Chan, K.-Y., "Impact of entrepreneurship training on entrepreneurial efficacy and alertness among adolescent youth," *Frontiers in Education*, vol. 3, pp. 13–32, 2018.
- [3] Huang, Y., An, L., Wang, J., Chen, Y., Wang, S., and Wang, P., "The role of entrepreneurship policy in college students' entrepreneurial intention: the intermediary role of entrepreneurial practice and entrepreneurial spirit," *Frontiers in Psychology*, vol. 12, pp. 585–598, 2021.
- [4] Jena, R. K., "Measuring the impact of business management students' attitude towards entrepreneurship education on entrepreneurial intention: a case study," *Computers in Human Behavior*, vol. 107, pp. 106–127, 2020.
- [5] Barney, J., "Firm Resources and Sustained Competitive Advantage," *Journal of Management*, vol. 17, pp. 99–120, 1991.
- [6] Zeng, T., "Solidly promoting high-quality development of vocational education," *Red Flag Manuscript*, vol. 17, pp. 41–44, 2022.
- [7] Rogers, E., *Diffusion of Innovation*, New York: Free Press of Glencoe, 2003, pp. 2–9.
- [8] Uemura, M. R. B. and Comini, G. M., "Determining factors in the performance of integrated vocational education schools," *Revista de Gestão*, vol. 29, no. 2, pp. 102–116, 2022.
- [9] Ismara, K., Khurniawan, A., and Prianto, E., "Improving the Vocational School Performance Through Good School Governance," *International Education Studies*, vol. 13, pp. 57–71, 2020.
- [10] Barabasch, A., Bohlinger, S., and Wolf, S., "Policy transfer in vocational education and training and adult education," *Research in Comparative and International Education*, vol. 16, no. 4, pp. 223–241, 2021.
- [11] Ghosh, L. and Ravichandran, R., "Emerging Technologies in Vocational Education and Training," *Journal of Digital Learning and Education*, vol. 4, no. 1, pp. 41–49, 2024.
- [12] Suters, L., Suters, H., and Anderson, A., "Coding connections at the interface of algebra and physical world concepts," *Contemporary Issues in Technology and Teacher Education*, vol. 21, no. 2, pp. 441–490, 2021.
- [13] Mouza, C., Nandakumar, R., Yilmaz Ozden, S., and Karchmer-Klein, R., "A longitudinal examination of preservice teachers' technological pedagogical content knowledge in the context of undergraduate teacher education," *Action in Teacher Education*, vol. 39, no. 2, pp. 153–171, 2017.
- [14] Alamri, H. A., Watson, S., and Watson, W., "Learning technology models that support personalization within blended learning environments in higher education," *TechTrends*, vol. 65, pp. 62–78, 2021.
- [15] Sheridan, K., Halverson, E. R., Litts, B., Brahms, L., Jacobs-Priebe, L., and Owens, T., "Learning in the making: A comparative case study of three makerspaces," *Harvard Educational Review*, vol. 84, no. 4, pp. 505–531, 2014.
- [16] Osadcha, K., Osadchy, V., Kruglyk, V., and Spirin, O., "Modeling the adaptive system of individualization and personalization of future specialists' professional training in blended learning conditions," *Educational Dimension*, vol. 5, pp. 109–125, 2021.
- [17] Das, S. et al., "Sample Size Calculation: Basic Principles," *Indian Journal of Anaesthesia*, vol. 60, no. 9, pp. 652–656, 2016.
- [18] Chen, P., Schmidtke, C., and Jin, X., "Chinese technical and vocational education and training, skill formation, and national development: A systematic review of educational policies," *Vocation, Technology & Education*, vol. 1, no. 3, pp. 29–43, 2024.
- [19] Aljawarneh, S. A., "Reviewing and exploring innovative ubiquitous learning tools in higher education," *Journal of Computing in Higher Education*, vol. 32, no. 1, pp. 57–73, 2020.
- [20] Martin, F., Chen, Y., Moore, R. L., and Westine, C. D., "Systematic review of adaptive learning research designs, context, strategies, and technologies from 2009 to 2018," *Educational Technology Research and Development*, vol. 68, pp. 1903–1929, 2020.