

Research on the Influencing Factors and Countermeasures of Students from the Countries Along the Belt and Road Studying in Jiangsu Higher Vocational Colleges in the Post-Epidemic Era

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Abstract: This study examines the evolving internationalization of higher education in the post-pandemic era, focusing on China's role as a key driver of the Belt and Road Initiative (BRI). By analyzing questionnaire data and national policies, it investigates motivations and challenges for BRI countries' students pursuing higher vocational education in Jiangsu. Four primary motivators were identified: educational quality, economic incentives, policy support, and cross-cultural adaptability. Recurrent epidemics, language barriers, and cultural differences emerged as major challenges. The research proposes three strategic recommendations: optimizing enrollment policies, strengthening teaching management systems, and enhancing cross-cultural support mechanisms. These findings aim to provide actionable insights for advancing the internationalization of China's higher vocational education sector, particularly in BRI contexts.

Keywords: Post-epidemic era; Belt and Road; Jiangsu higher vocational colleges (HVCs); International student education; Influencing factors

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1. Introduction

The COVID-19 pandemic has significantly reshaped global student mobility, driving the international education market toward regionalization and networked collaboration^[1]. This structural shift has prompted adaptive adjustments in spatial and educational supply models. As a key participant in global educational exchanges, China has advanced vocational education cooperation under the Belt and Road Initiative (BRI), addressing pandemic-induced challenges by fostering regionalized educational communities.

Jiangsu Province, with its strategic investments in higher vocational education and geographic advantages, has become a central hub meeting the BRI countries' demand for technical professionals. By 2020, its higher

vocational colleges hosted 49% of China's international students (Annual Report on China's Higher Vocational Education Quality). This study examines Jiangsu's case to analyze post-pandemic international student mobility mechanisms through empirical research and policy analysis. It aims to propose actionable strategies for building a resilient vocational education cooperation network, offering insights into balancing regionalization with global connectivity in vocational education systems.

2. Literature review

2.1. Impact of the epidemic on international student mobility

The impact of global public health crises on international student mobility features spatial heterogeneity and temporal continuity. Epidemic-induced border control and health risk perceptions reconfigure students' spatial preferences, causing a shift from global networks to regional clusters. A study by Gu and Teng shows families' concerns about economic costs and public health safety rose by 37% and 54% respectively, during the epidemic, while the influence of institutional rankings declined by 19% ^[2]. 66% of Chinese study-abroad programs are changing. Han Xianyang's research indicates a 3.2% increase in potential student inflow with a one-standard-deviation rise in epidemic prevention effectiveness, reshaping the international education landscape ^[3].

2.2. Influencing factors for studying in China

Research on factors influencing international education in China has shifted from one-dimensional static analysis to multilevel dynamic modeling. Early studies under neoclassical economics emphasized economic disparities, educational quality gradients, and cultural identity. Post-pandemic analysis by Zuo et al. revealed that health policies and visa stability accounted for 58% of willingness-to-study changes, with engineering students showing 22% lower policy sensitivity than humanities majors ^[4]. Notably, existing frameworks overlook vocational education elements such as industry-education integration and skill certification interoperability, critical for higher vocational colleges' international student decision-making.

2.3. The role of internationalization in higher education institutions

The internationalization of vocational education in the Belt and Road Initiative has shifted from a peripheral to a central field. Li Mei shows HVCs play dual roles in overseas Chinese-funded enterprises' localization via "School-Enterprise Synergistic Globalization", and the "education-economy" symbiosis is key to Chinese enterprises' globalization ^[5]. Yet, research is imbalanced, with more macro-level discussions and less micro-practice research, making it hard to support post-epidemic policy innovation.

3. Research methodology

3.1. Data sources

This study employs a mixed methods research (MMR) approach, which combines a quantitative questionnaire survey and qualitative theoretical analysis, in order to enhance the research reliability and validity through Triangulation. The data sources cover the following three parts.

3.1.1. Questionnaire survey

Two questionnaires have been developed to address two distinct yet interconnected research questions. The first

questionnaire focuses on the decision-making process of international students, while the second focuses on the status of their cross-cultural adaptation.

Questionnaire 1: Survey on Motivation and Demand for Students from Countries Along the Belt and Road (N=300)

The sample covers higher vocational colleges in 13 cities in Jiangsu, and is stratified according to the six economic corridors of the “Belt and Road” (42% in Southeast Asia, 23% in Central Asia, 19% in Eastern Europe, and 16% in Africa), so as to ensure regional representativeness. The demographic composition of the student body is as follows: 57% of students are specialized college students, 33% are matriculated students, and 10% are enrolled in short-term advanced training programs. This distribution aligns with the predominant international student population in Jiangsu higher vocational colleges. It was distributed by combining online (Questionnaire Star platform) and offline (campus interviews). A total of 287 valid questionnaires were recovered, with an effective response rate of 95.7%.

Questionnaire 2: Quantitative assessment of intercultural competence (N=150)

This questionnaire is based on the localization of the Ward and Kennedy Cultural Adaptation Scale, which covers two dimensions: Sociocultural adaptation (15 questions) and academic adaptation (10 questions). The sociocultural indicators include “understanding Chinese social etiquette” (mean value 3.2) and “participating in community activities” (mean value 2.8). Academic adaptation indicators are identified, such as “participation in class discussions” (mean value 3.5) and “proficiency in operating practical training equipment” (mean value 4.1).

3.1.2. Database of policy texts

In order to analyze the influence mechanism of policy support on study abroad decision-making, a database of study abroad policies in Jiangsu Province from 2015–2024 (N=32) is constructed, including provincial policies (18 copies), such as the Action Plan for Studying in Jiangsu (2021–2025), and the Implementing Rules for Facilitating the Residence of Foreign Talents in Jiangsu Province. A total of fourteen local and municipal specialties have been identified, including Suzhou’s Measures for the Administration of Overseas Educated Personnel Pioneering Park and Nanjing’s Measures for the Administration of International Student Scholarships.

3.2. Methods of analysis

SPSS 26.0 was used to exclude invalid samples (13 samples were excluded from Questionnaire 1 and 5 from Questionnaire 2), deal with missing values (mean interpolation), and calculate the selection rate of each motivational factor (e.g., 58% for “policy support”); cross-tabulation analyses were conducted to compare the degree of dependence on scholarships of international students from Southeast Asia and Africa (76% vs. 82%, $\chi^2=4.32$, $P<0.05$).

The KMO test (0.813) with Bartlett’s spherical test ($P=0.000$) was performed on the 12 motivational indicators of Questionnaire 1, and four main factors were extracted, including the economic driver factor (28.7% of variance explained) with variables such as scholarships, cost of living. Education quality factor (23.1%) with institution reputation, practical training resources, etc. Policy facilitation factor (18.4%), visa timeliness, and residence policy. Cultural attraction factor (15.2%) encompasses factors such as language interest and cultural identity.

4. Empirical analysis

4.1. Study abroad motivation and influencing factors

According to a survey, various factors attract international students to Jiangsu's higher vocational colleges (HVCs). 72% consider "quality of education" crucial, related to the internationalization of Jiangsu HVCs. For instance, Nanjing Vocational Institute of Railway Technology trained Egyptian students for a railroad project, and Nanjing Vocational College of Information Technology developed English-language online courses, attracting African students.

About 65% are influenced by "economic factors." Scholarship policies like the Jasmine Scholarship and university-enterprise collaborations, such as Yangzhou Vocational University's cooperation with Jiangsu Lianfa Group, offer financial support and job security. 58% are drawn by policy accessibility. Visa and residence facilitation, including new port-visa rules and permanent-residence policies for foreign talents, have increased the proportion of high school graduates covered. The mutual-recognition mechanism of academic qualifications also plays a role. 53% choose Jiangsu for cultural identity. The Belt and Road cooperation promotes cultural integration. Institutes like Nanjing Polytechnic Institute set up cultural exchange centers, and Jiangsu Food & Pharmaceutical Science College offers cultural courses with an 89% participation rate ^[6].

4.2. Significant challenges

The COVID-19 pandemic has normalized online education, with 68% of international students endorsing this shift. While Jiangsu's vocational colleges upgraded digital tools like the "Study in Jiangsu" app (43,000 users), prolonged online learning has eroded practical training. For instance, Yangzhou Institute of Technology's BIM program, restricted to offline labs during the pandemic, saw only 71% of African trainees meet practical skill standards.

62% of students below HSK Level 4 struggle with classroom content. Despite Nanjing Vocational College of Information Technology's "Chinese + vocational skills" materials, only 41% of African learners improved Chinese proficiency, and specialized terminology reached fewer than 60% of trainees, underscoring weak bilingual education systems.

Cultural adaptation challenges further complicate outcomes. Cross-cultural surveys reveal low scores in "Understanding Chinese Humor" (4.2/10) and "Adapting to Food" (3.8/10). In Changzhou Vocational Institute of Mechatronic Technology in the Ethiopian Industrial Park program, while technical training achieved an 85% pass rate, only 52% of trainees adapted to Chinese management practices, leading to high graduate turnover. These gaps highlight the need for integrated solutions addressing digital practicality, language support, and cultural competency in vocational education.

5. Discussion and recommendations for response

5.1. Optimizing recruitment and promotion strategies

In the context of the Belt and Road Initiative, there is a necessity to deepen the enrollment layout for key regions such as Southeast Asia and Africa. Furthermore, the precision of student sources must be enhanced by collaborating with Chinese-funded enterprises to carry out orientation training programs. The development of "Orientation Training Classes" and "Talent Special Programs" in conjunction with Chinese-funded industrial parks in Southeast Asia and Chinese-funded enterprises in Africa's infrastructure and energy sectors is imperative. The curriculum must be customized to align with the specific needs of the enterprises' positions, ensuring that it meets

the demands of the respective roles.

Furthermore, making full use of TikTok, short videos of technical training scenarios are produced, focusing on the practical operation of intelligent equipment operation and precision machining to showcase the school's strength in technical and skill training. Meanwhile, campus life vlogs are launched to present classroom interactions, cultural experiences, and other content, conveying a diverse campus atmosphere.

5.2. Improving the quality of education and management

Against the backdrop of globalized vocational education, the school has built a bilingual teaching system with the deep integration of “Chinese language + skills” as a breakthrough to accurately solve the dual challenges of professional learning and language barriers for international students.

For pivotal disciplines such as machinery manufacturing, information technology, and new energy, the school develops modularized bilingual courses, integrates professional core courses with Chinese language courses in a graded manner. Moreover, the school employs a dual-teacher classroom model, entailing the collaboration of a professional teacher and a language assistant. The professional teacher is responsible for the teaching of technical principles and practical exercises, while the language assistant simultaneously translates terms, converts contexts, and makes cultural adaptations to ensure that international students can gradually improve their Chinese communication skills while mastering their professional skills. For example, in the new energy vehicle technology course, a bilingual workshop on “Power Battery Management System” is set up to enable students to master 200+ professional vocabulary words while completing the high-voltage safety inspection training.

5.3. Strengthening cross-cultural support

Recognizing the cognitive dissonance and psychological challenges international students face in cross-cultural adaptation, the institute has set up a two-dimensional support system with “cultural immersion” and “psychological empowerment.” By offering scenario-based experiences and professional services, it helps students quickly adapt to campus life.

The institute also launched a “Step-by-Step Cultural Integration Program.” It starts with a two-week Introduction to Chinese Culture Workshop at the semester's beginning and includes other workshops on language communication, traditional customs, and Chinese culture. These aim to help students adjust to campus life and feel a sense of belonging. For example, combined with a traditional festival, a series of “Cultural Symbiosis” activities are organized. During the Spring Festival, there are dumpling-making contests and spring festival couplet creation; during the Dragon Boat Festival, dragon boat races and sachet handicrafts are held. These activities enable international students to experience the essence of Chinese culture in daily life.

A professional cross-cultural psychological counseling center is set up. It provides “Group Counseling for Cross-cultural Adaptation”, helping students develop emotion management strategies. Notably, a “Cloud-based Mental Support Platform” is developed, offering 24-hour online counseling appointments, multilingual psychological assessments, and mental health videos to break time and space constraints.

5.4. Policy synergies and long-term mechanisms

To tackle international education mobility challenges in the post-pandemic era, an innovative “dynamically adaptable” flexible academic system is built with a “segmented cultivation + cross-border connection” mechanism. International students can study based on a visa and health conditions. The three-year vocational program is split

into three stages (“on-campus in China, online overseas research, on-campus practical training”) with flexible time windows and up to five years of credit validity.

A “cross-border hybrid teaching platform” is developed, integrating virtual simulation, real-time live classes, and asynchronous learning. It enables students to study via “online project-based learning + regular video conferences with tutors” overseas. For Southeast Asian students’ visa fluctuations, a “concentrated teaching week in winter and summer vacations” is designed to complete practical courses during holidays, reducing the impact of mobility restrictions on studies.

6. Conclusion

This study demonstrates that vocational education internationalization should align with Belt and Road production capacity cooperation by integrating professional development with Chinese enterprises’ overseas expansion. Following the industry-education integration model of “curriculum-industry standard alignment, training platform-project linkage, and employment-market connectivity”, it establishes distinctive features for vocational education targeting international students, differentiating from general higher education.

In the future, the authors explore the mutual recognition mechanism of education standards with regional organizations like ASEAN and AU. Integrate the “Study in Jiangsu” brand into the international production-capacity cooperation network, offer more practical cases for the global expansion of Chinese vocational education standards, and contribute to the new era of opening-up of vocational education in a new development pattern.

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Disclosure statement

The authors declare no conflict of interest.

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