

A Research on The Internationalised Development Methods of Higher Vocational Learning and Industry-Education Integration in the Context of China's Belt and Road Strategy

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ABSTRACT

The objective of this effort, which is a component of one aspect of China's Belt and Road initiative is studying how universities and colleges may better connect their curricula with those of other countries. The Belt and Road Initiative (BRI), a worldwide plan for the development of economic and infrastructure, has had both beneficial and bad effects on Beijing's vocational education system. The purpose of this study is to improve the global match between educational attainment and economic needs by conducting an evaluation of a number of different development models around the globe. It is possible to evaluate China's higher vocational institutions via the use of a survey methodology. In particular, it investigates the ways in which the BRI framework influences aspects such as foreign engagement, the integration of curricula, and industrial links. Students' employability, industry satisfaction, and international connections are some of the essential performance measures that are used in the evaluation of the models' effectiveness. 75% of the educational institutions that participated in the study reported higher employment rates for graduates. According to the findings, there is a favourable correlation between the integration of industry and education and improved job insertions. A score of eighty percent is sufficient to impress the majority of business partners. If vocational education systems wish to continue expanding throughout the BRI Phase, the research revealed that they will need to modify the courses they provide in order to cater to the requirements of companies, collaborate more closely with one another across international boundaries, and stay abreast of current trends. It is possible that the results of this research will be valuable to educators and policymakers who are concerned with enhancing the efficiency of vocational education within the framework of global integration.

Keywords: Vocational Education and Training, Industry-Education Integration, Diplomacy in Education, Advanced Vocational Education, Workforce Internationalisation.

INTRODUCTION

Education and industry are being more integrated into the curriculum of a growing number of higher vocational education institutions throughout the globe. In response to China's Asian, European, and African countries have collaborated on a comprehensive global plan under the 2013-launched Belt and Road Initiative, which aims to promote global development and collaboration. The implementation of this strategy fosters the growth of the region's cultural, economic, and physical infrastructure (Abulela & Harwell, 2020). In order for higher vocational education to maintain its competitiveness in the modern global economy, it is necessary to adopt an internationalised strategy that fosters links between educational institutions and various industrial sectors. According to the findings of the study that Luo and his colleagues conducted in 2024, this transcontinental attempt will have an impact on the region. This literature review investigates the internationalisation of techniques in higher vocational education as well as the incorporation of vocational education with industry within under the framework of the Belt and Road Initiative by China. The goal of this study is to identify possible pros and cons of reorganising vocational education in host countries and to provide solutions to these problems. This research aims to examine internationalisation, the merging of education and business, and the strengths and weaknesses of higher vocational schools via the use of real-world data. Academics and businesspeople often have divergent views on the topic of vocational education. Throughout the course of history, the term "vocational education" has been used to refer to certification in certain professions. There is an emphasis

placed on workplace skills. This concept was broadened to encompass educational institutions that not only conserve information but also assist the growth of workforces in order to meet the requirements of commercial organisations. Both the state of the global economy and the need for a workforce that is more productive are the driving forces behind this movement. Companies require employees that are capable of critical thinking, competent at handling complex problems, and capable of living in a variety of cultures and contexts in order to successfully compete in today's globalised and technologically sophisticated market. Recent collaborations between educational institutions and industries have resulted in the promotion of internships, apprenticeships, and other forms of experiential learning. One way to do this is by improving the alignment of academic courses with activities that are conducted by corporations. In recent years, China's academic institutions and business institutions have seen a noteworthy integration of their respective functions. Through the use of this information, the Chinese government is working to improve vocational education and to drive economic development (Acharya, 2023).

BACKGROUND OF THE STUDY

Initiated in 2013 by China, the BRI seeks to promote cross-continental cultural exchange, infrastructural development, and bilateral economic cooperation. As a result of the extensive amount of labour that has been invested in the establishment of trade channels, there is a significant need for technical personnel to provide assistance to international corporations and projects. Due to the fact that these fields are essential to the success of the BRI, the BRI cannot go forward without HVE. Instead than concentrating on academic knowledge, HVE is designed to meet the requirements of the industry by instructing students in the development of practical abilities (Aftab et al., 2021). As a result, graduates are prepared to join the workforce, which is beneficial for overall economic growth. An increase in the internationalisation of higher vocational education is being brought about by international cooperation and globalisation. This objective can only be accomplished via the implementation of a unified curriculum, the engagement of both students and teachers in exchanges, and educational frameworks that are in accordance with global standards. Moreover, it is necessary for international firms to collaborate with one another. Through the Belt and Road Initiative, China is enabling international growth, mutual progress, and the sharing of experiences with other countries. This shift is being driven by the recently formed concept of incorporation of business and education partnerships (Agneessens & Labianca, 2022).

PURPOSE OF THE RESEARCH

Higher vocational education (HVE) is the focus of this project, which will also investigate internationalised approaches to bridging the gap between academia and business. Because of China's BRI, the examination will be conducted within a more thorough framework. Due to the unprecedented level of economic and infrastructure cooperation taking place across several nations as a result of the Belt and Road Initiative, technically competent workers are in high demand. In this global alliance, several countries will take part. This research seeks to further the knowledge of how corporations and vocational schools collaborate across borders to create and implement educational programs that are relevant and useful on a global scale. By looking at current models of industry-education integration, this effort hopes to find innovative ways to make vocational training meet the needs of industry personnel.

LITERATURE REVIEW

The program has resulted in significant improvements to the social and economic situations of the countries that are members of the BRI. Although the majority of study has been on infrastructure, trade, and economics, recent studies have shown that education, and more especially High Value Education, is an essential component to the success of the project (Ahmed et al., 2020). It is essential to develop a competent labour force in order to accomplish the objectives of the BRI, which include increasing capacity and improving connectivity, as well as meeting the complex technical and industrial requirements of industries such as

construction, and manufacturing. Educational cooperation within the framework of the BRI is consequently considered as having the potential to significantly increase both sustainable development and the international exchange of talents with other countries. Many nations are attempting to maintain their competitive edge in the global labour market by spreading their higher vocational education programs to other countries in an effort to remain ahead of the competition. The process of infusing global, multicultural, or international components into educational goals, methods, or delivery in order to make them more effective is referred to as "internationalisation." the term "internationalisation" due of the expanded range of training methods, courses provided, and certification standards, graduates of vocational schools may have an edge in the labour market when countries collaborate. This is due of the increasing number of options available to them. This is due to the fact that they have access to an increasing number of options from which to choose. The sharing of information and the development of innovative instructional strategies are two additional benefits that come with international cooperation at the educational level (Ali, 2021).

RESEARCH QUESTION

- What is the effect of Internationalised Higher Vocational Education Industry on China's Belt and Road Strategy?

RESEARCH METHODOLOGY

Research design:

Quantitative data analysis was done using SPSS version 25. The researchers used the odds ratio and the 95% confidence interval to assess the magnitude and direction of the statistical link. The researchers determined a statistically significant criterion at $p < 0.05$. An analytical assessment elucidated fundamental characteristics of the data. Data obtained via surveys, polls, and questionnaires, together with data analysed using computational tools for statistical evaluation, are often assessed using quantitative approaches.

Sampling:

A total of 1,600 questionnaires were disseminated, 1,563 were returned, and 63 were removed due to incompleteness. The sample size of 1,347 was calculated via Rao-soft program. A poll was conducted involving 1,500 Chinese adults. A total of 1,500 surveys were completed by 645 males and 855 females.

Data and Measurement:

The study mostly used data acquired from a questionnaire survey. The participant's essential demographic information was requested first. Subsequently, participants were given a 5-point Likert scale to evaluate the online and offline channels. The researchers rigorously analysed several resources, especially internet databases, for this secondary data gathering.

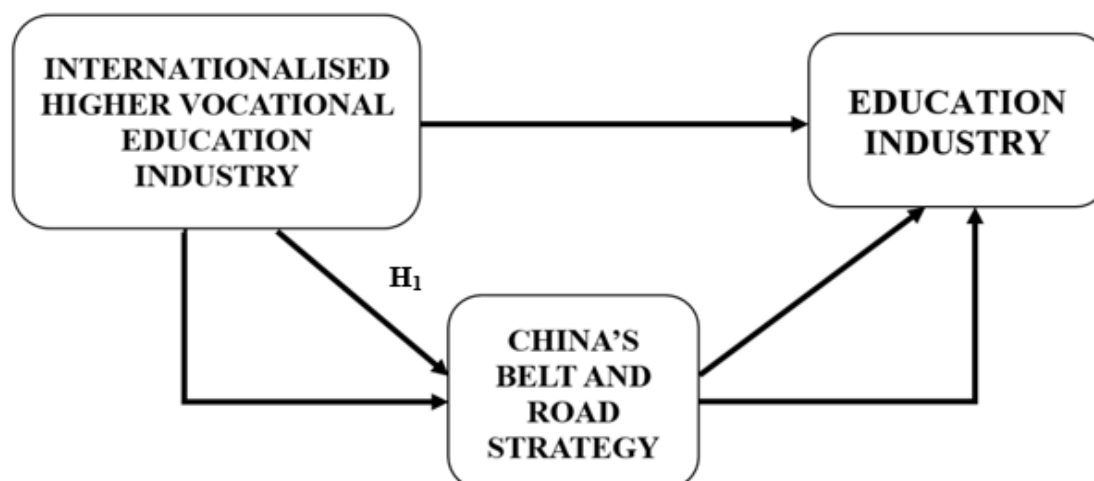
Statistical Software

The statistical analysis was conducted using SPSS 25 and Microsoft Excel.

Statistical Tools

Descriptive analysis was used to comprehend the essential nature of the data. The researcher must analyse the data with ANOVA.

CONCEPTUAL FRAMEWORK



RESULTS

• Factor Analysis

One typical use of Factor Analysis (FA) is to verify the existence of latent components in observable data. When there are not easily observable visual or diagnostic markers, it is common practice to utilise regression coefficients to produce ratings. In FA, models are essential for success. Finding mistakes, intrusions, and obvious connections are the aims of modelling. One way to assess datasets produced by multiple regression studies is with the use of the Kaiser-Meyer-Olkin (KMO) Test. They verify that the model and sample variables are representative. According to the numbers, there is data duplication. When the proportions are less, the data is easier to understand. For KMO, the output is a number between zero and one. If the KMO value is between 0.8 and 1, then the sample size should be enough. These are the permissible boundaries, according to Kaiser: The following are the acceptance criteria set by Kaiser:

A pitiful 0.050 to 0.059, below average 0.60 to 0.69

Middle grades often fall within the range of 0.70-0.79.

With a quality point score ranging from 0.80 to 0.89.

They marvel at the range of 0.90 to 1.00.

Table1: KMO and Bartlett's Test

Testing for KMO and Bartlett's

Sampling Adequacy Measured by Kaiser-Meyer-Olkin .974

The results of Bartlett's test of sphericity are as follows: approx. chi-square

df=190

sig.=.000

This establishes the validity of assertions made only for the purpose of sampling. To ensure the relevance of the correlation matrices, researchers used Bartlett's Test of Sphericity. Kaiser-Meyer-Olkin states that a result of 0.974 indicates that the sample is adequate. The p-value is 0.00, as per Bartlett's sphericity test. A favourable result from Bartlett's sphericity test indicates that the correlation matrix is not an identity matrix.

Table: KMO and Bartlett's Test

KMO and Bartlett's Test^a		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.974
Bartlett's Test of Sphericity	Approx. Chi-Square	6850.175
	df	190
	Sig.	.000
a. Based on correlations		

The overall importance of the correlation matrices was also validated by Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin metric of sample adequacy is 0.974. The researchers obtained a p-value of 0.00 via Bartlett's sphericity test. The findings of Bartlett's sphericity test were significant enough to invalidate the correlation matrix.

❖ **INDEPENDENT VARIABLE**

• **Internationalised Higher Vocational Education Industry:**

A component of China's educational system known as "internationalised higher vocational education" (HJET) is responsible for facilitating the inclusion of international standards, cooperation, and globalisation into vocational training. The purpose of this part is to get students ready for the employment market, both in the United States and in other countries. Education in technology, job growth, and hands-on experience are all being more recognised as having a worldwide reach, according to a growing agreement (Altbach & Knight, 2020). A number of typical strategies for achieving this objective include establishing global alliances, including a curriculum that is reflective of the global community, and providing students with opportunities to learn about a diverse variety of languages and cultures. Among the various factors contributing to China's growing prominence, two of the most important are the efforts made by the government to educate its workforce so that it can compete on a worldwide basis and the growing economic globalisation of the nation. Vocational schools in China have typically catered to students who are interested in pursuing jobs in technical sectors such as engineering, medicine, information technology, hospitality, manufacturing, and tourism. The students at these institutions are not only taught facts and statistics, but they are also taught how to apply what they have learnt in the classroom to real-world situations (Amini et al., 2023).

❖ **MEDIATING VARIABLE**

• **China's Belt and Road Strategy:**

In 2013, the Chinese government initiated the BRI, which is a global plan for collaborating in the areas of economic development and commercial relations. With the goal of fostering economic integration, Europe, Africa, and Asia are intending to establish a network of infrastructure projects, trade agreements, and investments all working together. The enhancement of economic cooperation and the establishment of linkages in the area that are more dependable are two of the objectives. The present BRI seeks to build upon previous partnerships in order to achieve its goals of achieving sustainable economic growth, the development of infrastructure, and cultural interaction. This initiative comes to mind the ancient Silk Road, which was a maritime and land route that linked China to a great number of other countries (Asonitou & Kordoutis, 2019). A projected trade corridor that would connect China and Europe by way of Central Asia is referred to as the Silk Road. The process of conceptualisation is still ongoing at this point. It is the purpose of this project to establish a

commercial corridor and land-based infrastructure that will facilitate the free movement of money, products, and services; this will be accomplished (Bacon & Williams, 2021).

❖ **DEPENDENT VARIABLE**

• **Education Industry:**

The huge and diverse education business in China provides a wide range of educational services, beginning with educational programs for pupils in pre-kindergarten and continuing all the way through education at the university level. A wide variety of educational services are available. This includes a wide range of occupational training and professional development programs in addition to the more conventional classroom education that is often offered inside the institution (Bai & Li, 2020). China's fast economic growth and modernisation may be credited, in large part, to the efforts that have been made by both the Chinese government and private firms to adapt to a market that is becoming more globalised and competitive. These efforts have brought about the rapid development and modernisation of China's economy. Because of the considerable contribution that it gave, this project would not have been able to be completed. Several distinct levels of education are arranged in a hierarchical structure within China's comprehensive educational system. The preschool, elementary, middle, and high school levels of education, as well as further levels of education such as college and adult education, are all included in these levels of education. The fact that this organisation has a significant degree of influence on educational institutions that are dispersed throughout the country is the key reason for the significance that is associated with this business sphere (Bashir et al., 2021).

➤ **Relationship Between Internationalised Higher Vocational Education Industry and China's Belt and Road Strategy**

2013 marked the beginning of China's Belt and Road Initiative, as part of the country's efforts to achieve its goal of global expansion. Increasing the amount of trade and investment that takes place between China and Europe, Africa, and Asia is the goal of this initiative. The advancement of economics, culture, and infrastructure are the primary emphases of this endeavour. The importance of educational human capital is highlighted, particularly in the context of international partnerships for higher vocational education. Increased internationalisation of Belt and Road Initiative links higher vocational education and Road Initiative. In order to improve its human resources, BRI projects need vocational education. The advantages of IHVE's BRI are discussed in this article. All of the states that are participating in the BRI have boosted their investments in infrastructure, commerce, and industry (Ali, 2021). Due to the fact that these nations are still in the process of growing, their educational institutions are inadequate. A significant number of these nations are in need of competent labour, particularly in the fields of engineering, construction, and information technology. Higher vocational education in China has been internationalised in keeping with the goals of the Belt and Road Program in order to better train local workers for large-scale projects. Community-specific vocational training programs were developed by educational institutions and colleges in China as part of the BRI. The economy benefits from the workforce that is produced as a result of this. Internationalisation of China's higher vocational education has occurred ever since the country became a member of the BRI. There are opportunities for educational exchanges, training, and scholarships available to countries along the Belt and Road. The Belt and Road initiative is helping China improve its educational system by fostering partnerships between its universities, vocational schools, and institutions located in other countries. China hopes to enhance cultural and economic ties with Belt and Road Initiative countries and alleviate talent shortages via these educational initiatives (Aftab et al., 2021).

Consequent on the above discussion, the researcher proposed the following hypothesis for analysis the relationship between Internationalised Higher Vocational Education Industry and China's Belt and Road Strategy.

“H₀₁: There is no significant relationship between Internationalised Higher Vocational Education Industry and China’s Belt and Road Strategy.”

“H₁: There is a significant relationship between Internationalised Higher Vocational Education Industry and China’s Belt and Road Strategy.”

Table 2: H₁ ANOVA Test

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	65131.762	369	9304.537	1173.851	.000
Within Groups	729.238	1130	7.927		
Total	65861.000	1499			

This study produces significant findings. The F value is 1173.851, achieving significance with a p-value of .000, which is below the .05 alpha level. This denotes the, ***“H₁: There is a significant relationship between Internationalised Higher Vocational Education Industry and China’s Belt and Road Strategy”*** is accepted and the null hypothesis is rejected.

DISCUSSION

In order to meet the dynamic and interdependent needs of a globalised student population, educational reforms throughout the world are increasingly prioritising the internationalisation of higher vocational education. Since China's Belt and Road Initiative seeks to expand its wings in Asia, Africa, and many regions throughout Europe, it has taken on a greater role in internationalising its system. BRI is an acronym for the Belt and Road Initiative, a long-term strategy for international development that plans to upgrade infrastructure, foster economic cooperation, and increase cultural interchange via a system of trade routes and other initiatives. Countries participating in the BRI must prioritise vocational education and training if they want to meet the need for skilled labour, develop their regions, and boost their economies. As China's Belt and Road initiative takes shape, the higher vocational education sector will pay closer attention to analyses and discussions of internationalised development models as they pertain to the interplay of vocational training, economic growth, and educational reform. Globalisation, the rapid evolution of technology, and the changing nature of the labour market all contribute to the urgency of internationalisation. The goal of higher vocational education is to provide students with the professional, practical, and industry-specific abilities necessary for immediate employment upon graduation. Vocational training is essential for long-term economic growth, and the BRI is making it hard to deny this. Countries along the Belt and Road have it the worst when it comes to training and retaining workers with the right skills to complete massive infrastructure projects, thrive in tech-driven businesses, and modernise their economies. As a major player in the BRI, China understands the value of a holistic strategy that combines academics and business. Since vocational education can provide the workforce with the skills to participate in and profit from the initiative, HVE plays an essential role in BRI by bridging the gap between theory and practice.

CONCLUSION

Globalised models of higher vocational education may provide insight on how the dynamics of school-business collaborations have changed as a consequence of globalisation. In the context of China's Belt and Road Initiative, the study focusses on the integration of business and academia. The importance of integration in higher vocational education has grown significantly as China's global influence expands via the Belt and Road Initiative (BRI). Producing a workforce capable of meeting the needs of contemporary industries is of utmost

importance, not just in China but internationally. As a result of the BRI's advocacy for international cooperation in infrastructure and HRD, both fields have recently attracted a lot of attention. The convergence of educational practice, labour market demand, and industrial expansion will be much more beneficial for countries along the Belt and Road Initiative's vocational education models. A direct result of the pressure China has been putting on the Belt and Road Initiative nations to strengthen connections with them is the rising need for vocational training on a global and local scale. The Belt and Road Initiative relies on environmentally friendly energy, manufacturing, and digital technology; these educational initiatives should address the skills deficit in these sectors.

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