LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN:1581-5374 E-ISSN:1855-363X
VOL. 23, NO. 10(2025)

RESEARCH ON INNOVATIVE STRATEGIES FOR EDUCATION MANAGEMENT OF TRANSNATIONAL BUSINESS TALENT IN CHINESE UNIVERSITIES AND LOCAL GOVERNMENT UNDER THE "BELT AND ROAD" INITIATIVE

Yunpeng Zhang[1,a], Yong Liu[2,b*]

[1]Boya College of Tiangong University , No.399 Bin Shui Xi Road, XiQing District, Tianjin,Tianjin,China
[2]University Administration Office of Tianjin Normal University, No.393 BinShuiXi Road,XiQing District,Tianjin,Tianjin,China

[a]zhangyunpeng@tiangong.edu.cn
[b]liuyong76393@163.com

All authors' bio:

Yunpeng Zhang was born in Weifang, Shandong Province, P.R. China, in 1984. He obtained a master's degree from Tianjin Normal University.He currently working at Boya College of Tiangong University.His main research direction is educational management.

Email:zhangyunpeng@tiangong.edu.cn

Yong Liu was born inTianjin, China, in 1976. He obtained a Bachelor's degree from Tianjin Normal University in China and Master's degree from Sehan University in Korea. Now he is working in University Administration Office, Tianjin Normal University.His main research direction is education administration.

Email:liuyong76393@163.com

Abstract: This study employs a combination of online and field of methods of investigation and research to analyze the current talent landscape along the "Belt and Road" regions. The findings reveal that, first, talent development across the "Belt and Road" regions is uneven between local region.Second, there is a pressing demand for both specialized and interdisciplinary talent in the local regions of "Belt and Road". Lastly, in response to the "Belt and Road" Initiative, China local universities and government face several challenges in managing the education of transnational business talent.

Keywords:"Belt and Road" Initiative; Talent Status; Talent Demand; Transnational Business Talent; China University Education Management

1. Introduction

Since China's reform and opening-up, the market economic system has steadily advanced andfollowing China's accession to the WTO, the economy grew rapidly, which lead to unprecedented expansion of Chinese enterprises and strengthening the international competitiveness of some sectors. In recent years, China government proposed the "Belt and Road" Initiative (Huang, 2016), creating further cross-border development opportunities for Chinese enterprises, particularly in the agribusiness sector. According to statistics from the Ministry of Commerce of the People's Republic of China (MOFCOM), by the end of 2022, 29,000 domestic investors from China had established a total of 46,600 overseas enterprises across 190 countries and regions, with total overseas assets reaching USD 8.4 trillion. Non-financial direct investment by China in "Belt and Road" countries reached USD 11.87 billion, a 5.1 percent year-on-year increase, accounting for 18.2 percent of total overseas investment during the same period[①]. China has established over 11,000 enterprises in Belt and Road countries, representing about a quarter of all Chinese enterprises abroad[②]. Additionally, according to Ministry of Agriculture and Rural Affairs of the People's Republic of China, China's agricultural investment and cooperation projects in "Belt and Road" countries have reached 657, with private enterprises comprising more than half, which is account for 89% of the total. These projects collectively represent an investment stock of USD 9.44 billion, employing over 100,000 people[③].

The "Belt and Road" Initiative has created more opportunities for numerous prominent Chinese enterprises to expand internationally and engage in economic and trade cooperation with countries along the route. However, according to a report by BCG, the success rate of Chinese companies in overseas transactions is only 67%, significantly lower than that of developed countries[④]. A major challenge lies in the

[①] Source: Official website of the Ministry of Commerce, Going Global Public Service Platform. http://fec.mofcom.gov.cn/article/tjsj/tjgb/. Date of access: 25. Aug. 2024
[②] Source: Beijing Business News: https://www.chinairn.com/news/20221107/163458975.shtml Date of visit: 26. Aug. 2024
[③] Source: observer.com https://baijiahao.baidu.com/s?id=1631964610775613539&wfr=spider&for=pc 26. Aug. 2024
[④] Data source: BCG, Embracing a New Era of Overseas M&A by Chinese Companies [R]. 2015.1

limited understanding of the specific talent needs for the "Belt and Road" Initiative (Yao & Li, 2018; Johnston, 2019; Rezaei & Mouritzen, 2021). Talent cultivation is crucial to the "Belt and Road" Initiative (Gu, 2015; Zhuang, 2017). China and local university education management, in particular, serves as a foundational and pioneering force in the success of this initiative (Guo & Zhang, 2020). Research on the talent demands of local enterprises and the talent cultivation strategies of education management of China and local universities within the "Belt and Road" context (Tekdal, 2017; Liu Jin *et al*., 2019) is essential to expanding local regional human capital spillovers (Bode, 2004) and promoting endogenous economic growth and sustainable local regional development along the “Belt and Road” (Griliches, 1979; Jaffe, 1989).

Since the inception of the "Belt and Road" initiative, Chinese and international researchers have a prominent focus on local university education management and talent cultivation (Summers, 2016; Zhao, 2017; Guo & Zhang, 2020; Li & Wang, 2021). Yao & Li (2018) analyzed the talent scale, structure, and competitiveness across 65 countries along the “Belt and Road”, revealing that talent quality in these regions falls below the global average and that disparities exist among different areas. Wu & Xue (2017) examined the talent demands of Chinese enterprises involved in the "Belt and Road" construction, identifying gaps in talent cultivation models, language education, and comprehensive skill development. Additionally, some Chinese researchers, collaborating with scholars from Belt and Road countries, analyzed the state of local higher education talent cultivation across 35 nations along the route, offering insights into future developmental trends (Liu, 2016).

To sum up, on one hand, from a methodological perspective, related research tends to prioritize conceptual and theoretical discussions, while quantitative and survey-based studies are relatively scarce, with even fewer studies focused on practical applications. This limits the applicability of the research outcomes. On the other hand, in terms of research type, micro-level studies, foundational research, critical analyses, and cross-disciplinary collaborations are less common, while emphasis is often placed on dialectical and comprehensive approaches.

This study employs survey research to identify existing issues, critiques these issues, and proposes solutions, thereby increasing the study’s practical relevance about local higher education and government management.This research is expected to address certain gaps in studies on "Belt and Road"which it seeks to provide sustainable talent and intellectual resources for Chinese local universities increasinginternationalization, enhance cooperative talent cultivation efforts among different local universities in “Belt and Road” countries and regions, promote economic growth (Romer, 1986; Lucas Jr, 1988), and foster local regional sustainable local development (Anselin, 2013; LeSage, 2021).

2. Research method

This study analyzes and synthesizes first-hand data collected from online

databases, publicly available resources, enterprise recruitment websites, and field visits to both enterprises and universities. The online research covers enterprises in Mongolia, Kazakhstan, Eastern Europe, Southeast Asia, Central Asia, West Asia, and other regions, while the field research primarily focuses on enterprises and universities in Beijing, Shandong, Shanxi, Henan, Hebei, Inner Mongolia, and other provinces.

3. Talent situation in the regions along the "Belt and Road"

The "Belt and Road" initiative encompasses a diverse range of countries with varying stages of development. This study, therefore, examines regional clusters to gain a macroscopic understanding of the talent dynamics in different regions along the "Belt and Road." It summarizes the talent characteristics of six major regional clusters (see Table 1), identifies cooperation potential among participating countries or local government, and offers a foundation for talent strategies for local governments and enterprises. By aligning the talent training programs in Chinese local universities with local government regional needs, this study seeks to enhance targeted local education management, promote collaboration between local governments, enterprises, and universities, and optimize talent contributions to the "Belt and Road" initiative more effectively.

Table 1 Regional distribution of countries along the "Belt and Road" route

Region	*Countries included*
12 countries in the Asia, Oceania region	*Singapore, New Zealand, Malaysia, Korea, China, Philippines, Thailand, Mongolia, Indonesia, Viet Nam, Laos, Cambodia*
2 countries in Central Asia	*Kazakhstan, Kyrgyzstan*
15 countries in the Western Asia region	*UAE, Qatar, Israel, Bahrain, Saudi Arabia, Jordan, Oman, Azerbaijan, Lebanon, Kuwait, Armenia Asia, Turkey, Georgia, Iran, Yemen*
6 countries in the South Asia region	*India, Sri Lanka, Bhutan, Pakistan, Bangladesh, Nepal*
20 countries in the Central and Eastern European region	*Austria, Estonia, Czech Republic, Slovenia, Lithuania, Latvia, Poland, Slovakia, Bulgaria, Croatia. Asia, Hungary, Russia, Montenegro, Macedonia, Ukraine, Romania, Serbia, Albania, Moldova, Bosnia and Herzegovina.*
8 countries in Africa and Latin America	*Panama, Trinidad and Tobago, South Africa, Morocco, Bolivia, Egypt, Ethiopia, Madagascar.*

Note: Based on information published on the China Belt and Road Network.

Drawing on data from INSEAD's 2023 Global Talent Competitiveness Index report, this paper compiles and assesses the talent competitiveness levels of six key regions along the "Belt and Road" (see Table 2). It further examines the current talent landscape in these regions through critical dimensions such as economic development

levels, higher education advancement, scientific and technological development quality, labor productivity, and the proportion of the workforce with tertiary education.

According to INSEAD's methodology for assessing talent competitiveness, the average global talent competitiveness score is 47.8, with countries along the "Belt and Road" falling below this global average. In most of the six regions, talent competitiveness scores remain low. However, an in-depth analysis reveals significant variation in talent competitiveness among individual countries within each region. The Asia-Oceania region demonstrates the most pronounced disparities: Singapore ranks 2nd globally, New Zealand 18th, South Korea 24th, China 40th, the Philippines 49th, Indonesia 58th, Vietnam 75th, and Thailand 83rd. Among the 63 countries in this region, rankings vary widely, with some countries positioned in the top tier of global talent competitiveness and others in the middle or lower tiers, reflecting substantial disparities and uneven development levels. To address this, countries along the "Belt and Road" should place greater emphasis on talent and education issues, leverage complementary strengths, enhance cooperation, and improve talent cultivation and higher education management to increase regional talent competitiveness.

From an economic development perspective, the per capita GDP of regions along the "Belt and Road" is generally higher than the global average. Specifically, except for Africa and Latin America, where economic levels remain below the global average, most regions along the "Belt and Road" demonstrate relatively strong economic development with minimal regional disparities, providing a foundation for enhancing human resource competitiveness. However, economic development within each region remains unbalanced, with substantial gaps in per capita GDP among countries. For instance, Kazakhstan in Central Asia region has a per capita GDP of $28,122, while Kyrgyzstan's is $5,338, underscoring significant economic disparities that merit attention.

In terms of higher education management development, the higher education enrollment rate in regions along the "Belt and Road" averages 43.36%, surpassing the global average of 39%. Except for South Asia, which has a lower enrollment rate, and Africa and Latin America, where the rate stands at 31%, other regions exceed 50%, indicating a strong emphasis on education. This prioritization creates a favorable social and cultural foundation for enhancing talent competitiveness and supporting university-level talent cultivation. Additionally, government investment in higher education including management as a percentage of GDP is notably higher in these regions compared to the global average. While South Asia's investment ratio is slightly below average, all other regions surpass global benchmarks, underscoring the strong governmental support for higher education management and talent development that bolsters regional talent competitiveness.

In terms of science and technology (S&T) R&D investment, the average ratio of S&T R&D expenditure to GDP in "Belt and Road" regions is significantly lower than the global average. Specifically, all six regions fall below this global average, with

overall investment levels remaining relatively low. Notably, Central Asia, South Asia, and Africa and Latin America allocate less than 1% of their GDP to S&T R&D. In Asia, only China approaches the global average of 2.4%, while Israel stands out with R&D investment at approximately 4.9% of GDP, the highest among all "Belt and Road" countries. This suggests low efficiency in scientific and technological outputs across the "Belt and Road" regions, highlighting an urgent need to enhance the introduction and education management of applied talent.

In terms of employee labor productivity, regions along the "Belt and Road" generally outperform the global average. Specifically, while Central Asia's labor productivity is slightly below the global average, it remains relatively close. Except for South Asia, Africa, and Latin America, where employee labor productivity is significantly below the global average, all other Belt and Road regions exhibit labor productivity above the global average. This indicates high labor productivity in most of these regions. However, the considerable disparities in labor productivity between countries should not be overlooked in regions. For example, while Singapore exhibits high labor productivity, Ethiopia in Africa faces much lower productivity levels. To sustain high labor productivity, future efforts should focus on enhancing talent education management and strengthening regional or inter-country cooperation mechanisms to support long-term leadership in global rankings.

In terms of the proportion of the labor force with tertiary education, regions along the "Belt and Road" exceed the global average by 14 percentage points. Specifically, Asia, Oceania, Central Asia, Central and Eastern Europe all have tertiary education labor force ratios above 50%. In contrast, South Asia's ratio stands at approximately 18%, slightly lower than the global average of 23.16%. Africa and Latin America, with a tertiary education labor force proportion of just 15.85%, fall significantly below the global average. These disparities indicate a wide gap in the proportion of the labor force with tertiary education across the "Belt and Road" regions, reflecting uneven development. To address this, regions should strengthen cooperation in higher education talent cultivation and management, while the lagging regions should prioritize attracting higher education talent from outside. This approach would help bridge the gap in tertiary education labor force proportions and promote more balanced development across regions.

Table 2 Analysis of selected indicators of the state of talent in the Belt and Road region in 2023

Region	Talent competitiveness score	Economic development (GDP per capita, USD)	Level of development of higher education		Percentage of GDP of S&T R&D investment (%)	Employee labor productivity ($ million/person)	Proportion of labor force with tertiary education (%)
			Enrolment in tertiary education (%)	Percentage of GDP of government investment in higher education management (%)			
Global average	47.8	13138	39.00	1.50	2.40	2.20	23.16
Average value for countries along the route	43.85	21209	43.36	3.04	0.85	3.07	37.50
Asia, Oceania region	45.20	17750	55.08	2.50	1.42	5.50	56.00
Central Asian region	44.37	22198	50.05	5.10	0.13	2.00	61.50
Western Asia	46.85	24000	52.50	3.75	1.30	7.00	35.76
South Asia	41.75	31455	16.67	0.90	0.24	0.75	18.25
Central and Eastern European region	48.90	25005	54.30	1.50	1.60	2.58	60.50
Africa and Latin America	40.50	6850	31.55	4.50	0.42	1.20	15.85

Note: The data comes from the Global Talent Competitiveness Index 2023 published by INSEAD, and is compiled and measured by the author.

From a broader perspective, global talent competitiveness reveals significant imbalances, a pattern also observed along the “Belt and Road”. Talent competitiveness tends to be stronger in developed countries and regions, while less-developed areas continue to face substantial challenges in talent development and education management. However, emerging economies, such as China and India, have made notable progress in narrowing the talent competitiveness gap with developed countries. In particular, India has achieved remarkable advances in tertiary education and technical talent development.

Looking ahead, science, technology, and innovation will remain central to the global talent competition. This is evident in the profound impact of technological advancements, especially the rise of artificial intelligence, which is expected to displace certain jobs, redefine future work patterns, and potentially exacerbate talent competitiveness gaps between regions.

It is increasingly clear that talent competitiveness will become a critical component of national and regional competitiveness, innovation, and soft power. The competition for talent will intensify, particularly amid international trade dynamics, rising policy uncertainties across national systems, and the challenges and opportunities posed by technological, geopolitical, environmental, and social factors (Gong, 2019).

The development of the “Belt and Road” should focus on strengthening the cooperative model of talent cultivation and education management between regions and countries, lowering the barriers to talent exchange in political, cultural and social spheres (Rezaei and Mouritzen, 2021), and systematically enhancing the competitiveness of talent in the local regions along the “Belt and Road”.

4. Analysis of the Demand for Transnational Business Talent under the “Belt and Road” Initiative

The construction of the "Belt and Road" initiative has further accelerated economic globalization (Huang, 2016), leading Chinese enterprises to expand internationally and engage in multinational operations. This expansion requires various types of talents to provide intellectual support for the enterprises. To better understand the types and requirements of multinational talent needed by Chinese enterprises for the "Belt and Road" initiative, the author conducted a survey using online recruitment platforms and visited Chinese multinational enterprises to gather firsthand information on talent demand. The research focused on enterprises in countries and local regions including Mongolia, Kazakhstan, Malaysia, Eastern Europe, Southeast Asia, Central Asia, and West Asia, with a total of 138 enterprises surveyed. The findings indicate that while there are some commonalities in the types of talent demanded by Chinese enterprises along the “Belt and Road”, these can be broadly categorized into two main types: professional talents and compound talents (Zhang, 2016; Wu & Xue, 2017; Li & Chen, 2020). The following section summarizes the key characteristics of these two categories.

4.1 Analysis of Demand for Specialized Personnel

The "Belt and Road" strategy, which focuses on "connecting infrastructure, trade, and capital" (Huang, 2016; Wu *et al.*, 2024), has created a pressing need for professionals across a variety of fields. These include business management, engineering and construction, specialized technology, trade, foreign languages, finance, law, and other disciplines (Zhou & Kan, 2015; Zhang & Huang, 2016; Zhang, 2016; Wu & Xue, 2017; Guo & Jin, 2019).

4.1.1 Management Personnel

The "Belt and Road" initiative spans numerous countries and regions, each with significant differences in economic, political, and cultural contexts. For Chinese enterprises to effectively carry out international operations, there is a critical need for management professionals who possess a global perspective, are familiar with international business practices and regulations, and have strategic thinking aligned with global trends. A strong management team with international expertise is essential for multinational enterprises to accurately capture market dynamics, develop strategies that align with global trends, and allocate both domestic and international resources effectively, in accordance with the company's specific context. This, in turn, enhances the overall competitiveness of the enterprise (Rolland, 2017).

4.1.2 Professional and Technical Personnel

The construction of the "Belt and Road" initiative primarily focuses on infrastructure development, project engineering, communications, materials and energy, agriculture, and other specialized fields, all of which require a substantial workforce of professional and technical talent. For instance, expertise is needed in engineering design, construction in the transport industry, including railways, power systems of highways, and pipelines. High-end technical professionals are also essential in fields such as information and communication technology, including mobile communications, integrated circuits, and cloud computing (Zhang & Huang, 2016). In agriculture, specialized talents are required for crop cultivation and management, agricultural product processing, and sales. These professionals should possess knowledge in areas such as agronomy, cell biology, food science, ecology, and modern biotechnology (Li *et al.*, 2019). These technical talents will be key to the competitive success of the "Belt and Road" initiative.

4.1.3 Trade and Social Sciences

The "Belt and Road" initiative encompasses not only the area of "connecting infrastructure," but also "unimpeded trade and financial integration," which creates a growing demand for professionals in trade and social sciences. As trade continues to expand in countries and regions along the route, the need for experts in fields such as economic management, finance, and legal protection is also increasing (Cheng & Koh, 2022). International trade involves various stages, including quotation, ordering, warehousing, logistics, customs clearance, bill of lading, and foreign exchange settlement. Certain aspects, such as customs clearance, require specialized knowledge. Therefore, every enterprise engaged in international trade needs professionals who are

well-versed in international trade rules, processes, and business English. Moreover, as trade volume continues to grow (Wu *et al.*, 2024), there is an increasing demand for expertise in international law, futures finance, international accounting, and international tax law, particularly from large multinational enterprises.

4.1.4 Foreign Language Translators and Interpreters

In China, foreign languages are generally categorized into two groups: general-purpose languages, such as English, and non-general-purpose languages, often referred to as "minor languages," which include languages other than English. The "Belt and Road" initiative spans numerous countries and regions, encompassing over 40 official languages in addition to the widely spoken English. However, only about 20 languages are taught in universities across mainland China (Zhou & Kan, 2015). For Chinese enterprises engaged in international trade and business activities abroad, effective language communication—minimizing the risk of semantic misinterpretation—is essential. This necessitates the recruitment of professionals skilled in various "minor languages," particularly translators and interpreters who are proficient in the languages of countries along the "Belt and Road." Such expertise is crucial for supporting the smooth operation of overseas business activities and enhancing the competitiveness of Chinese enterprises in the international market.

4.2 Analysis of the Demand for Composite Talents

Composite talents generally refer to individuals with expertise across multiple professional fields and skill sets, also known as "multi-specialized and multi-talented professionals." These talents are characterized by a combination of knowledge, abilities, and personal qualities (Cheng & Koh, 2022). As Chinese enterprises expand internationally through trade, investment, and operations along the Belt and Road, they face unprecedented challenges and are increasingly inclined to recruit professionals with diverse backgrounds and skill sets. Based on the research and analysis, four main categories of composite talents are identified as being in demand by these enterprises:

4.2.1 Industrial, Economic, and Trade Complexes

Trade and cross-border investment in countries along the “Belt and Road” are key drivers of economic growth. According to World Bank data, the growth rates of trade and cross-border investment in these countries have surpassed the global average. A report by the Asian Development Bank indicates that more than 60% of infrastructure investment in Asian countries is allocated to new construction projects, while over 30% is directed toward renovation and maintenance projects. It is foreseeable that the successful execution of these projects will require a significant number of multidisciplinary talents with both technical expertise and economic and trade management knowledge (Wu *et al.*, 2024). These talents must possess a broad understanding of engineering, politics, economics, management, finance, and law, while also being deeply familiar with their specific area of professional expertise (Cheng & Koh, 2022).

4.2.2 Intercultural Composite Personnel

The "Belt and Road" strategy emphasizes the need for "policy communication" and "people-to-people communication" among the countries along the route, which serve as the institutional and socio-cultural foundation for its construction. The countries along the “Belt and Road” are diverse, with significant differences in geography, ethnicity, history, culture, religion, politics, and complex national conditions (Gong, 2019). This diversity requires individuals who not only have a deep understanding of Chinese culture but also possess a global perspective and are knowledgeable about the history, geography, language, culture, religion, and politics of the host countries and regions. Such cross-cultural composite talents are essential for ensuring smooth diplomatic activities, cultural exchanges, business communication, technical exchanges, and academic collaborations between China and the countries along the route (Rezaei & Mouritzen, 2021). These talents play a key role in realizing the two strategic objectives of “the Belt and Road” initiative and promoting cultural harmony and coordinated economic development across participating nations.

4.2.3 Science and Technology Transformation Complex

Investment in higher education in countries along the "Belt and Road" significantly exceeds the global average, which will inevitably lead to increased investment in scientific and technological research and development. In recent years, numerous scientific and technological achievements have emerged along the route (Li *et al.*, 2019). This trend will require a large number of science and technology transformation composite talents who can bridge the gap between university laboratories and market demands. These talents must possess a deep understanding of technology, as well as familiarity with the market and business dynamics, to enhance economic efficiency through scientific and technological innovation (Liu & Li, 2019). Furthermore, science and technology transformation professionals can promote entrepreneurship and employment in universities along the route, strengthening the international cultivation of innovative and entrepreneurial talents.

4.2.4 Overseas Chinese Talent

China, with its large population, also has a significant overseas Chinese diaspora distributed across various countries worldwide. Overseas Chinese nationals are an important intellectual resource for China's economic development (Tekdal, 2017). They possess a deep understanding of the society, laws, culture, and customs of their host countries, while also maintaining a strong interest in China's development. As a result, they play a crucial role in international trade, technical and economic cooperation, business activities, and charitable endeavors. This is particularly true in regions such as Southeast Asia, Central Asia, and South Asia, where they act as a natural "bridge" between China and the countries along the "Belt and Road." In the construction of the "Belt and Road," it is essential to fully leverage the roles of overseas Chinese, both old and new, as "lubricants,""buffers," and "catalysts." These roles are vital for reducing investment and operational risks while fostering economic

and technological cooperation between China and the countries along the route.

5. Major Issues in the Cultivation of Transnational Business Talents in Higher Education Management

Based on the research and analysis of the current status and talent demands in countries along the "Belt and Road," the authors visited several Chinese colleges and universities. They identified three major issues in the education management of transnational business talents within these institutions:

5.1 The Talent Training Model in Higher Education Management Requires Improvement

In response to the talent demands brought by the internationalization of the "Belt and Road" initiative, there exists a significant issue of "homogenization" in the professional curriculum and program design within Chinese higher education institutions. This has resulted in a partial mismatch between the academic programs offered and the requirements of the international community, multinational corporations, and other global employers, as well as a lack of innovation in the curriculum content (Rolland, 2017; Rezaei and Mouritzen, 2021). The research revealed that some institutions have implemented a "generalist" training approach for developing international talents. While this model broadens students' knowledge and perspectives, it often results in graduates with insufficient theoretical depth and a lack of specialization. Conversely, other institutions have adopted a "specialist" training model, which produces graduates with a narrow focus. These students often struggle with the comprehensive application of knowledge and skills, limiting their ability to collaborate across disciplines and adapt to diverse work environments. Consequently, both training models result in university graduates who lack the adaptability and innovative capacity needed to address specific challenges within multinational enterprises. This gap creates a shortage of adequately skilled professionals to navigate the complex economic and social landscape of the "Belt and Road" region.

5.2 Cultural Education in Less Commonly Taught Languages Needs Strengthening

For a long time, China's higher education management system has placed a strong emphasis on English, while also investing significantly in widely-used "minor languages" such as Russian, French, and Spanish. However, there has been a serious underinvestment in non-common languages, leading to slower development in China. The countries along the "Belt and Road" route are linguistically diverse, yet among the 20 minor language programs offered in China, 12 have fewer than 100 enrolled students, and in some specialized languages—such as Hebrew, Pashto, and four others—enrollments fall below 60 students (Wu & Xue, 2017). Additionally, language training in most institutions is often limited to basic communication skills, with insufficient emphasis on the cultural and conceptual understanding embedded within

these languages (Yang & Zhuo). In the context of the "Belt and Road" initiative, the shortage of skilled professionals in less common languages has become a significant barrier to trade and investment between Chinese enterprises and other countries along the route. Although advancements in artificial intelligence have somewhat eased communication difficulties in these languages, long-term solutions—such as developing AI capabilities for minor languages and fostering deeper cross-cultural exchanges—demand a stronger focus on cultivating talent in less commonly taught languages.

5.3 The Overall Quality of Human Resource Training Requires Significant Improvement

In the context of the "Belt and Road" initiative, multinational enterprises face a complex international environment, requiring talents with higher levels of comprehensive skills and qualities than those who primarily operate within China. However, Chinese colleges and universities often prioritize theoretical and specialized knowledge, while neglecting practical skills, problem-solving abilities, and innovation. Practical components within the curriculum are frequently treated as formalities, resulting in students facing longer and more challenging adaptation periods in real-world scenarios. Additionally, Chinese university students often lack sufficient internships and hands-on experience in multinational companies and international settings, leading to inadequate development of their competencies (Rezaei & Mouritzen, 2021).

The economic, political, cultural, and social contexts of countries along the "Belt and Road" vary significantly from those of China, and the differences among these countries along the route can be substantial (Winter, 2021). Consequently, multinational enterprises investing and operating abroad require well-rounded talents with an international perspective, a deep understanding of global standards, professional expertise, and cultural familiarity. There remains a notable gap between the current training provided by Chinese universities education management and the comprehensive skill set needed to meet the demands of the "Belt and Road" initiative.

6. The symbiotic effect of regional higher education and local government on talent cultivation in the "the Belt and Road" countries

According to the theory of human capital, economic development needs all kinds of talents trained by education at all levels, and education development needs the economy to provide material basis for it, so education and economy form a coupling system. The level of economic development along the" the Belt and Road "has a certain restrictive effect on the development of local regional higher education; At the same time, the development of local regional higher education affects the social and economic functions of the "the Belt and Road" development. There is a symbiotic relationship between regional higher education and local governments, which can promote local economic development and talent training, and further promote local

regional higher education and local governments to better integrate into the "the Belt and Road"initiative.

The exchange between China's neighboring countries and China's higher education is the closest. According to relevant reports in 2025, the three countries with the largest number of foreign students in China among the "the Belt and Road" countries are: 62442 South Korean students, 17961 Japanese students and 141.45 million Thai students. In addition, the countries with the highest number of international students studying in China are Vietnam, Indonesia, Pakistan, and Kazakhstan. From this, it can be seen that there are natural advantages between local regional higher education and governments in terms of location, which is very conducive to the symbiotic effect of local talent cultivation and economic development.

7. Innovative Strategies for Education and Management of Multinational Business Talent inUniversities

In the context of the "Belt and Road" initiative, university education management should adopt three innovative strategies: optimizing the management model of higher education, strengthening the training of interdisciplinary talents, and emphasizing the development of practical skills. These strategies aim to meet the demand for multinational management talents in Chinese enterprises, enhance their competitiveness, and promote the coordinated and sustainable development of the regional economy along the "Belt and Road."

7.1 Strengthening Joint Training and Optimizing the Operational Model of Transnational Local Higher Education Management

The construction of the "Belt and Road" initiative requires talents with an international perspective, making the cultivation of internationalized talent a critical step (Tekdal, 2017; Rezaei & Mouritzen, 2021). China should actively build platforms or alliances for the coordinated training of international talents, jointly establish regional and national research centers with countries along the route, and collaborate in the development of high-level professionals. Countries along the route should be encouraged to send exchange students and visiting scholars to each other and develop specialized training programs. The sharing of high-quality curriculum resources, leveraging modern communication technology, should be promoted, and joint distance education initiatives should be realized.

Chinese universities should integrate their resources, strengthen academic discipline development, and focus on the construction needs of countries along the “Belt and Road”. They should expand and enhance disciplines and specializations in areas such as engineering, infrastructure, trade, finance, tourism, and manufacturing. Efforts should be made to encourage Chinese students to study in “Belt and Road” countries, while also increasing the number of international students coming to China (Wu *et al*., 2024). Additionally, universities should optimize talent development

categories, adjust the structure of student populations, and explore the creation of a system to evaluate the benefits of studying abroad in China. This system should be guided by the educational outcomes of international students from “Belt and Road” countries and strengthen their spatial spillover effects (Zhu & Liu., 2018).

While expanding the enrollment of international students from “Belt and Road” countries, China should also actively explore overseas education initiatives. This could include collaborating with institutions in “Belt and Road” countries to establish joint universities or branch campuses and offering dual-degree programs (Wu *et al*., 2024). Such efforts would not only promote the development of international students in China but also enhance China's cultural and technological exchanges, while fostering the development of international talent to support Chinese enterprises in their global expansion and multinational operations.

7.2 Strengthening Academic and Cultural Exchanges to Enhance the Education and Management of High-Quality, Multifaceted Talents

Promoting educational exchanges, resource flows, and cultural integration among regions, countries, and ethnic groups along the "Belt and Road" is crucial for enhancing the global orientation of talent cultivation (Yang & Zhuo; Tekdal, 2017). This can be accomplished through academic exchange conferences, doctoral and master’s forums, educational cooperation forums, and facilitating academic interactions between experts and scholars both domestically and internationally. High-quality academic teams from countries along the "Belt and Road" should be encouraged to pool their collective expertise and promote collaborative, innovative research in areas such as politics, law, social issues, economics, and culture (Winter, 2021). Universities, research institutes, and libraries from “Belt and Road” countries should strengthen their cooperation (Wu et al., 2024), leveraging the role of think tanks to provide decision-making support in various fields. Additionally, they should take on the responsibility of educating international students and cultivating well-rounded talents, inviting both domestic and international experts to jointly explore new models of transnational talent development.

Furthermore, universities along the "Belt and Road" should collaborate to cultivate interdisciplinary talents who possess a combination of "foreign languages, professional expertise, and practical skills" (Guo & Jin, 2019). Efforts should focus on integrating international understanding across disciplines such as social sciences, geography, history, and foreign languages, as well as through extracurricular activities. Countries along the route should encourage international students to gain practical experience in relevant enterprises and organizations, helping them understand local customs, learn how to interact with people from different cultural backgrounds, and ultimately develop high-quality, multifaceted talents capable of excelling in the global arena.

7.3 Strengthening the Integration of Industry, Academia, and Research while Emphasizing the Education and Management of Practical Talents

The three strategic priorities of the "Belt and Road" initiative—namely infrastructure, trade and finance—are closely tied to the cultivation of talent in these professional and technical fields, which requires strong cooperation among universities, enterprises, and associations, with government support (Xu *et al*., 2020). The integration of industry, academia, and research is an inevitable trend for cultivating practical talents. Industry, positioned at the forefront of the international market, is best placed to identify the economic trends and real employment needs of enterprises and should communicate these talent demands to universities. In turn, universities play a crucial role in school-enterprise cooperation, providing technical support and consulting services to enterprises, while also leveraging their own strengths to develop student training programs that align with market and industry demands. Research institutes and their associated service organizations should focus on R&D and the transformation of emerging technologies, as well as the training of applied talents.

Countries along the "Belt and Road" have implemented industry-university-research collaborations, including order-based training, joint projects, and targeted training programs, which can create international practice platforms for students with the help of enterprises. These collaborations provide students with internships and employment opportunities, while also identifying areas for improvement (Rezaei & Mouritzen, 2021). This process helps refine student training programs and improves their adaptability and work effectiveness, forming a virtuous cycle that ultimately provides practical talent support for the countries along the "Belt and Road," promoting the synergistic development of both the economy and technology.

7.4 Strengthening cooperation between local governments and universities to promote talent is a two-way empowerment

Increase local government support for local universities. It is suggested that the local government support local universities to carry out the talent training required by the "the Belt and Road" initiative, and provide the required economic conditions, policy support and environmental conditions for talent training, as well as students' practical enterprises and other support; Provide tax relief, entrepreneurial support and job recommendation for graduates who need jobs along the Belt and Road.

It is recommended that universities increase their connections with local governments and provide support for the talents needed for economic and social development within their jurisdiction. Universities should provide local governments with the support of talents needed for economic and social development, especially the "the Belt and Road" initiative; At the same time, colleges and universities should build a platform for local governments to conduct economic, social and cultural exchanges with the countries along "the Belt and Road"; In addition, universities take talents and academic research as the link to support the talent support of the "the Belt and Road"

local government investment and construction projects, and attract talents back to support the development of local governments.

Reference

[1] Anselin, L. (2013). Spatial econometrics: Methods and models. Springer Science & Business Media.
[2] Bode, E. (2004). The spatial pattern of localised R & D spillovers: An empirical investigation for Germany. Journal of Economic Geography, 4(1), 43-64.
[3] Cheng, Y., & Koh, S. Y. (2022). The “Soft Infrastructure” of the Belt and Road Initiative: Imaginaries, affinities, and subjectivities in Chinese transnational education. Singapore Journal of Tropical Geography, 43(3), 250-269.
[4] Gong, X. (2019). The Belt & Road Initiative and China’s influence in Southeast Asia. The Belt & Road Initiative and China’s Influence, 32(4), 635-665.
[5] Griliches, Z. (1979). Issues in assessing the contribution of research and development to productivity growth. The Bell Journal of Economics, 92-116.
[6] Gu, M. (2015). "Belt and Road" and the mission of comparative education. Comparative Education Research, 37(06), 1-3.
[7] Guo, G., & Jin, H. (2019). Exploring business English talent training model under the background of the Belt and Road Initiative. Higher Education Studies, 9(2), 124-130.
[8] Guo, X., & Zhang, X. (2020). Hot topics and future prospects of education in the "Belt and Road" research: Based on CSSCI literature from 2013-2019. Journal of Xi'an University of Finance and Economics, 33(04), 98-104.
[9] Huang, Y. (2016). Understanding China's Belt & Road Initiative: Motivation, framework and assessment. China Economic Review, 40, 314-321.
[10] Jaffe, A. B. (1989). Real effects of academic research. The American Economic Review, 957-970.
[11] Johnston, L. A. (2019). The Belt and Road Initiative: What is in it for China? Asia & the Pacific Policy Studies, 6(1), 40-58.
[12] LeSage, J. P. A. P. (2021). Interpreting spatial econometric models. In M. M. Fischer (Ed.), Spatial econometrics: Methods and models (pp. 2201-2218). Springer Berlin Heidelberg.
[13] Li, D., & Chen, X. (2020). Research on the cultivation of international talents in colleges and universities in the context of the Belt and Road Initiative. 2020 International Conference on Big Data and Informatization Education (ICBDIE). Zhejiang.
[14] Li, M., Wang, J., & Chen, Y. (2019). Evaluation and influencing factors of sustainable development capability of agriculture in countries along the Belt and Road route. Sustainability, 11(7), 2004.
[15] Li, Z., & Wang, H. (2021). Spatial agglomeration and spillover effects of higher education on regional economic growth in China: Empirical evidence from provinces delineated in "One Belt and One Road". Research in Higher Education

of Engineering, 2021(05), 121-127.
[16] Liu, Y. (2016). University international exchange and cooperation in the context of the Belt and Road Initiative. Heilongjiang Researches on Higher Education, 2016(03), 10-14.
[17] Liu, Z., & Li, X. (2019). Has China's Belt and Road Initiative promoted its green total factor productivity? Evidence from primary provinces along the route. Energy Policy, 129, 360-369.
[18] Lucas Jr, R. E. (1988). On the mechanics of economic development. Journal of Monetary Economics, 22(1), 3-42.
[19] Rezaei, S., & Mouritzen, M. R. (2021). Talent flowscapes and circular mobility in a Belt and Road (BRI) perspective: Global talent flows revisited. Asian Journal of Social Science, 49(4), 188-197.
[20] Rolland, N. (2017). China's "Belt and Road Initiative": Underwhelming or game-changer? The Washington Quarterly, 40(1), 127-142.
[21] Romer, P. M. (1986). Increasing returns and long-run growth. Journal of Political Economy, 94(5), 1002-1037.
[22] Summers, T. (2016). China's 'New Silk Roads': Sub-national regions and networks of global political economy. Third World Quarterly, 37(9), 1628-1643.
[23] Tekdal, V. (2017). China's Belt and Road Initiative: At the crossroads of challenges and ambitions. The Pacific Review, 31(3), 373-390.
[24] Winter, T. (2021). Geocultural power: China's Belt and Road Initiative. Geopolitics, 26(5), 1376-1399.
[25] Wu, Q., Chen, Y., Huang, Y., Wang, A., & Wang, C. (2024). How does international education exchange affect China's exports? Evidence from 54 countries along the "Belt and Road" in 2007-2018. The Chinese Economy, 57(1).
[26] Wu, W., & Xue, H. (2017). "Belt and Road" construction and agricultural transnational business talent cultivation. China University Teaching, 2017(09), 34-38.
[27] Xu, J., Chen, J., Liu, Y., & Fan, F. (2020). Identification of the geographical factors influencing the relationships between ecosystem services in the Belt and Road region from 2010 to 2030. Journal of Cleaner Production, 275, 124153.
[28] Yang, B., & Zhuo, Z. (n.d.). Cultural ties of the 21st century Maritime Silk Road: Cultural and creative industries of Southern Fujian. International Communication of Chinese Culture, 6(4), 311-322.
[29] Yao, W., & Li, H. (2018). The talent distribution and exploration strategies in "The Belt and Road" countries: Based on the analysis of talent quality and investment stock. Tsinghua Journal of Education, 39(04), 64-72.
[30] Zhang, D. (2016). Reflections on talent demand and higher education support path in the context of "Belt and Road". China Adult Education, 2016(21), 35-37.
[31] Zhang, Y., & Huang, W. (2016). Novel inter-disciplinary talent cultivation model for information and communication technologies under the One Belt and One Road background: Proceedings of the 6th International Conference on Electronic,

Mechanical, Information and Management Society.
[32] Zhao, H. (2017). Academic research on One Belt and One Road: Current situation, problems and prospects. Russian, East European & Central Asian Studies, 2017(02), 74-82.
[33] Zhou, G., & Kan, Y. (2015). Talent support and education solutions to the "Belt and Road" initiative. Education Research, 36(10), 4-9.
[34] Zhu, Y., & Liu, Z. (2018). The connection of talents of higher education under the "Belt and Road" initiative: Essentials, roles and paths. Journal of Higher Education Management, 12(05), 8-14.
[35] Zhuang, X. (2017). Human resource development of "Belt and Road" relating countries: Current situation and problems. Research in Education Development, 37(17), 54-61.