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**Language Services and Regional Development:
Assessing Hebei Province's Role in Supporting the
China-Pakistan Economic Corridor**

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Abstract

The China-Pakistan Economic Corridor (CPEC) has opened new avenues for economic and cultural exchanges between China and Pakistan. With Hebei Province actively participating in this initiative, the demand for language services has surged to enable effective communication across various sectors. This study examines the current status and future requirements of language services in Hebei Province within the context of the CPEC. Using fieldwork and survey methods, we have gathered data from Hebei-based enterprises involved in CPEC projects to assess their language service needs and evaluate the quality and scope of existing provisions. The findings reveal that Hebei enterprises engaged in CPEC-related projects predominantly require language services in infrastructure, energy, and agriculture. Additionally, the study highlights that language services offered by Hebei organizations are generally of high quality, particularly in addressing technical and specialized translation tasks. To further enhance Hebei's language service capabilities, the study recommends establishing specialized language service centers, advancing service specialization, training bilingual and trilingual professionals, fostering the development of translation and interpretation technologies, and creating collaborative networks among language service providers. By addressing these recommendations, Hebei's language services can play a pivotal role in supporting the success of the CPEC, contributing to deeper economic and cultural integration between China and Pakistan.

Keywords: Language services, Hebei, CPEC, Infrastructure, Energy, Specialized translation

Introduction

The China-Pakistan Economic Corridor (CPEC), a flagship project under China's Belt and Road Initiative (BRI), involves cooperation between China and Pakistan in various fields including economy, political relations, culture, education etc. Working as a complex infrastructure network, CPEC spans various sectors, such as transportation, energy, and industrial development. However, beyond these tangible projects, language plays a pivotal role in ensuring smooth communication, negotiation and mutual understanding between stakeholders. This brings the role of language services into sharper focus.

Language service in the CPEC context refers to a range of activities that facilitate effective communication between Chinese and Pakistani parties. These services include, but are not limited to, translation, interpreting, translation technology, localization, language data and training. As the scope of CPEC continues to expand, so does the need for comprehensive language services that can bridge linguistic and cultural gaps.

Numerous scholars have explored the role of language services in the context of CPEC. Communication within CPEC settings can be categorized into three distinct linguistic scenarios:

- (i) Chinese officials and stakeholders interact with Chinese workers using Mandarin or other Chinese languages.
- (ii) Communication between Chinese officials, stakeholders, and workers and their Pakistani counterparts occurs via English, Urdu, or interpreters.
- (iii) Pakistani officials, stakeholders, and workers communicate among themselves using English, Urdu, or various local languages..

While Mandarin is the primary language for Chinese participants and Urdu or local languages are used by Pakistanis, English emerges as the dominant medium for the development and implementation of policies related to the CPEC, with Mandarin playing a secondary role. This is evident from the widespread use of English, alongside some Mandarin, in creating and disseminating CPEC-related information. For instance, the Long Term Plan for CPEC 2017–2030 specifies that the agreement is documented in both Chinese and English, with both versions being equally authoritative and holding identical meaning.

For a better communication in the long run, both China and Pakistan are promoting each other's languages. Language exchange initiatives were funded by governments. Chinese authorities promote Urdu at multiple levels in China. Peking University and Beijing Foreign Studies University (BFSU) have provided Urdu language courses for years. Recently Xi'an International Studies University and Guangdong University of Foreign Studies established Urdu Departments. As Chinese are learning Urdu, increasingly more Pakistanis are learning Mandarin Chinese. Both governments endeavor to promote Mandarin. The Chinese Embassy in Pakistan and Confucius Institutes also provide Mandarin linguistic training. Moreover, initiatives such as Pakistan Television's collaboration with Chinese counterparts, the Sindh government's memorandum of understanding with the Chinese Education Department, the Pakistan Senate's resolution supporting the teaching of Mandarin in Pakistan, and scholarships for Pakistani students and teachers to enhance Mandarin learning and teaching skills demonstrate a growing commitment to fostering linguistic and cultural ties.

The use of Chinese language in CPEC projects is received willingly by the consumers and stakeholders who, in turn, learn and promote Chinese as a skill and resource for

employability and exertion of power.¹ Studies indicate that CPEC is promoting Chinese language learning in Pakistan, with increasing opportunities for learners in education and employment.²

However, challenges exist, including resistance to foreign language influence in some regions.³ Language management in CPEC projects reveals a multilingual environment, with Urdu, English, and local languages still prevalent, while Mandarin is gaining ground shown in the fact that Chinese employees are even trying to learn Urdu and the use of translators and applications is increasing.⁴ Similarly, Talat et al. noted that code-switching and multilingualism has expanded hugely when Pakistani authors and scholars have made research and recommendations to access these linguistic aspects in various contexts.⁵

CPEC has significant implications for cultural exchange between the two countries.

¹ Iqbal, J., and Masroor, F. "Projecting the Chinese Language as a Power Tool in the Discourse on the China-Pakistan Economic Corridor (CPEC)." *International Journal of Strategic Communication* 17, no. 4 (2023): 363–380. <https://doi.org/10.1080/1553118X.2023.2204295>.

² Asif, M., Zhiyong, D., Ullah, I., Nisar, M., and Hussain, M. A. *The Study on China-Pakistan Economic Corridor (CPEC) as a Language and Culture Changer in Pakistan*. 2019.

³ Iftikhar, A., Li, C., Li, J., Xi, C., Tao, W., and Haider, A. A. "Perceptions, Challenges, and Opportunities of Chinese Language Learning in Punjab and Sindh, Pakistan: Exploring the Role of CPEC." *New Directions for Child and Adolescent Development*, 2024.

⁴ Shahid, Maiyadah, Zoya Nasir, and Sabiha Mansoor. "Language Management & Development in CPEC: A Case Study of Special Economic Zone of Punjab." *Psychology Research* 12, no. 8 (2022): 575–582. <https://doi.org/10.17265/2159-5542/2022.08.002>.

⁵ Talat, Ammara, Gulraiz Qadir Gulfam, and Azhar Munir Bhatti. "Impact of CPEC on the Language Dynamics of Pakistan and China: A Systematic Literature Review (2019–2023)." *Harf-o-Sukhan* 7, no. 4 (2023): 196–204.

The corridor is facilitating cultural diffusion, particularly in northern Pakistan.⁶ Despite potential benefits, concerns about local impacts and environmental issues persist.⁷ To strengthen cultural ties, efforts are being made to translate Chinese literature into Urdu, fostering mutual understanding and friendship between the two nations.⁸ Top management from both sides has adopted a positive stance and is willingly accepting a different culture.⁹

Despite these insights, much of the existing research on language services in the CPEC context has been limited to either general discussions or case studies focused on specific regions. However, the potential contribution of Hebei Province to CPEC's language services remains largely unexplored.

Hebei is a province known for its educational institutions, which include several universities with strong language programs, particularly in English and area studies.

⁶ Ali, T., Sultan, H., and Alam, A. "Cultural Diffusion from China to Pakistan via the China-Pakistan Economic Corridor: A Study of Mandarin Learning in Gilgit-Baltistan of Pakistan." *Pakistan Journal of Humanities and Social Sciences*, 2023.

⁷ Saad, A., Xin-ping, G., and Ijaz, M. "China-Pakistan Economic Corridor and Its Influence on Perceived Economic and Social Goals: Implications for Social Policy Makers." *Sustainability*, 2019: Ullah, S., Khan, U., Rahman, K. U., and Ullah, A. "Problems and Benefits of the China-Pakistan Economic Corridor (CPEC) for Local People in Pakistan: A Critical Review." *Asian Perspective*, 2021.

⁸ Yang, L., Asif, M., and Usman, M. "Strengthening Bonds of Friendship between Sino-Pakistan through Chinese Author's Translated Work Published in Pakistan's National Language (Urdu)." *International Journal of Advanced Humanities Research*, 2022.

⁹ Shahid, Maiyadah, Zoya Nasir, and Sabiha Mansoor. "Language Management & Development in CPEC: A Case Study of Special Economic Zone of Punjab." *Psychology Research* 12, no. 8 (2022): 575–582.
<https://doi.org/10.17265/2159-5542/2022.08.002>.

Additionally, Hebei's proximity to Beijing and its involvement in several BRI projects make it a strategically important region for understanding China's linguistic and cultural engagement with Pakistan. Yet, there is a noticeable absence of scholarly work focusing specifically on the language services emanating from Hebei in the context of CPEC.

Two factors contribute to this research gap. First, Hebei's role in language services may be overshadowed by larger cities such as Beijing and Shanghai, which are traditionally seen as the epicenters of language service provision in China. However, this perspective overlooks the fact that many of China's language professionals are trained in universities in Hebei, and several language service providers are based in the province. As CPEC continues to expand, the need for skilled language professionals will only increase, and Hebei is well-positioned to meet this demand.

Second, the research gap can also be attributed to the broader focus on economic and infrastructural aspects of CPEC, with less attention paid to the softer elements of cooperation, such as language and culture. While economic and infrastructural development remains the primary focus of CPEC, the long-term success of the project depends on effective communication and cultural exchange. This necessitates a deeper understanding of the language services that facilitate these exchanges, particularly those provided by provinces like Hebei.

The Role of Hebei Province in Language Services for CPEC

Hebei Province, located in northern China, holds a unique position in the development of these language services, given its historical connections with Pakistan, its status as a hub for higher education and language learning, and its strategic location close to Beijing.

This study aims to explore the existing literature on language services in the CPEC framework and to identify the gap concerning Hebei's specific contribution to these services. By addressing this gap, this research not only adds to the existing body of knowledge but also highlights the significance of Hebei in fostering deeper China-Pakistan cooperation through language service. It fills a critical gap in the existing literature by focusing on a region that has not received sufficient scholarly attention in the context of CPEC. By examining Hebei's role in providing language services, this study highlights the province's strategic importance in fostering China-Pakistan cooperation, particularly in the linguistic and cultural domains.

Plus, the research provides practical insights for policymakers and language service providers. As CPEC continues to evolve, the demand for high-quality language services will increase, particularly in sectors such as law, engineering, and business. Understanding how Hebei's language service providers can contribute to this demand will be crucial for ensuring that communication between Chinese and Pakistani stakeholders remains smooth and efficient. The findings of this research can inform future language training programs, translation services, and cultural exchange initiatives that aim to support CPEC's continued development.

Hebei governs a total of 11 prefecture-level cities and 22 county-level cities, with Shijiazhuang as its capital. The language service industry in Hebei Province has development potential and forms a dual wing with Tianjin in the collaborative development of language services in the Beijing-Tianjin-Hebei region.

Hebei has demand for language services in CPEC for its growing trade volume in Pakistan. During the past 5 years, the total imports and exports of Hebei Province to Pakistan has amounted to 3.69 billion Yuan in 2022 from 2.7 billion Yuan in 2019 (Fig 1).

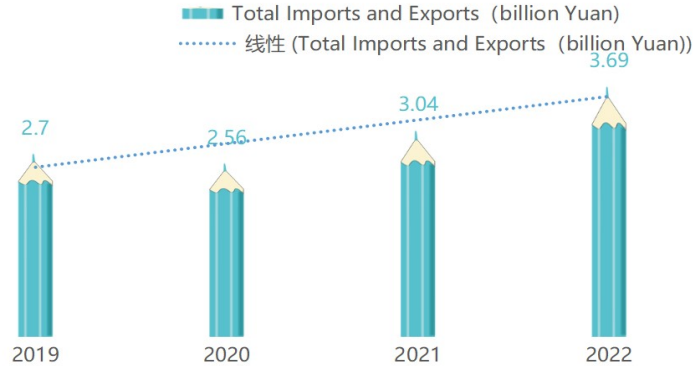


Figure 1: Total imports & exports of Hebei Province to Pakistan

Source: Developed by author

The trend line in the graph demonstrates a general upward trajectory, with a slight dip in 2020 likely linked to global economic disruptions caused by the COVID-19 pandemic. The consistent growth in Hebei's trade with Pakistan, as shown in the graph, underscores the strengthening economic ties between the two regions, particularly within the framework of CPEC. As trade volumes continue to rise, the demand for efficient communication across linguistic and cultural boundaries becomes increasingly vital, highlighting the essential role of language services in facilitating seamless trade operations.

Language services for CPEC have potential customers, of whom the enterprises operating in Pakistan from Hebei are most important.

Potential demand of language services from infrastructure

With the continued development of CPEC, cooperation between Hebei enterprises and Pakistan has deepened across various sectors, including energy, transportation, electricity, infrastructure, and agriculture.

Hebei Tangshan Iron and Steel Group Co., Ltd was one of the first 16 state-owned enterprises to enter Pakistan. In 2014, it exported 660 tons of medium and thick plates to Pakistan, marking its entry into the South Asian market. Power China Hebei Engineering Corporation Limited has undertaken several key projects in Pakistan, including the Tenaga wind farm, the Thar coal-fired power plant, and the Jhang 1263 MW combined-cycle power plant, reinforcing its strategy of international expansion.

From January to May 2018, Hebei's total import and export value with BRI countries reached ¥40.31 billion, with private enterprises accounting for ¥29.5 billion, a 5.7% increase. This represented 73.2% of the total, with trade with Pakistan alone totaling ¥1.17 billion. In 2018, Hebei Wen'an County New Steel Co., Ltd. established a 2 million-ton steel plant in Pakistan, marking a significant investment in the region. The following year, Xinfeng Cement Co., Ltd. undertook the construction of the Pioneer Cement Plant in Punjab Province, a major project under CPEC, with the largest overseas production capacity built by Sinoma Chengdu Building Materials Institute Co., Ltd.

In 2021, CRRC Tangshan Locomotive and Rolling Stock Co., Ltd. won a bid to supply 230 wide-gauge passenger coaches to Pakistan, marking China's first global transfer of 160 km/h passenger coach manufacturing technology. CRRC Tangshan's exports span more than 20 countries across five continents, with a cumulative export value of around \$1 billion. The company's cooperation with Pakistan, highlighted by the coach production project, involves technology transfer and production line upgrades. In 2023, the coaches were officially incorporated into Pakistan's Green Line Express, a move praised by Prime Minister Shehbaz Sharif for enhancing Pakistan Railways' capacity and improving passenger comfort.

Potential demand of language services from Energy Enterprises

Energy enterprises are the primary drivers of foreign trade in Hebei Province, benefiting from their flexible institutional structures. These enterprises play a crucial role in exploring international markets and have become key players in BRI. Hebei has implemented various measures to support these businesses, stimulating the vitality of foreign trade and boosting their competitiveness. As a result, energy enterprises have shown rapid growth, especially in trade with countries along the BRI.

In 1995, the Pakistan management department of Bureau of Geophysical Prospecting (BGP) Inc., a subsidiary of China National Petroleum Corporation, began operations in Pakistan. Initially focused on technical consulting, BGP evolved into a leading geophysical service company, conducting seismic operations in diverse environments, including mountains, deserts, farmland, and water networks. Over time, its project output grew from \$1 million to over \$100 million, earning a strong reputation in Pakistan.

BGP Inc., a global leader in geophysical services, operates in over 70 countries with a customer base exceeding 300 oil and gas companies. BGP has been active in Pakistan for over 20 years, starting with a 2D seismic project worth \$1 million. The Pakistan project management department has grown significantly, with annual project output exceeding \$100 million by 2012. Over the past three decades, BGP has cultivated a workforce of nearly 10,000 Pakistani employees, achieving a localization rate of over 97%. In 2023, BGP received the Best Partner Award from Pakistan's oil and gas industry. It has played a crucial role in major oil and gas discoveries, collaborating with companies such as OGDCL, PPL, MOL, and UEPL, contributing to Pakistan's energy sector development.

Potential demand of language services from agriculture

Agriculture enterprises in Hebei benefit from the collaboration between China and Pakistan. For instance, Hebei Yufeng Industry Group Co. exported corn starch to Pakistan in 2017, making its first foray into the Belt and Road international market. By 2018, more than 1,300 Hebei-based enterprises had established trade relationships with Pakistan. Between January and September of that year, Hebei's total trade with countries along the Belt and Road reached ¥77.43 billion, including ¥2.09 billion with Pakistan. By 2019, Hebei's total trade with Pakistan grew to ¥2.7 billion and continued to rise steadily, reaching ¥3.69 billion by 2022.

As CPEC advances into a new phase of high-quality development, Hebei's agricultural enterprises are increasingly participating in large-scale projects. This participation has not only strengthened ties between China and Pakistan but also diversified the modes of cooperation between the two countries. Leveraging the CPEC, Hebei's private enterprises are expanding global supply chains, contributing through agricultural products and technology.

Potential demand of language services in different forms

Enterprises from Hebei have played a pivotal role in advancing China-Pakistan economic cooperation under CPEC, particularly in energy, infrastructure, and industrial projects. These partnerships have expanded Hebei's market presence, offering more opportunities for language services.

Written translations are necessary for drafting, reviewing, and finalizing contracts, legal documents, and trade agreements. Accurate translation ensures that both parties understand the terms of agreements, reducing the risk of misunderstandings or disputes.

As trade involves the exchange of goods that often require technical documentation (such as machinery, equipment, or raw materials), the demand for precise technical translations and interpretations becomes essential. This ensures compliance with legal standards, safety regulations, and proper handling of goods across borders.

Interpreting services play a key role in face-to-face business negotiations, conferences, and site visits. These interactions foster trust and clear communication, which are pivotal for long-term partnerships in trade.

For businesses exporting goods, it is crucial that product descriptions, user manuals, and marketing materials are localized to meet the language and cultural expectations of the target market. This helps in improving market penetration and consumer satisfaction.

Types of Language Service Demands

The demands of language service clients show diversity. The five services with the highest demand, ranked from highest to lowest, are written translation (accounting for 100.0%), interpretation (accounting for 45.5%), translation tool/software development (accounting for 45.5%), language-related consulting services (accounting for 36.4%) and machine translation/post-editing (accounting for 36.4%)¹⁰ (Fig 2).

¹⁰ Cui, Qiliang. *Survey Report on Language Services for the Coordinated Development of Beijing, Tianjin, and Hebei*. Beijing: University of International Business and Economics Press, 2021.

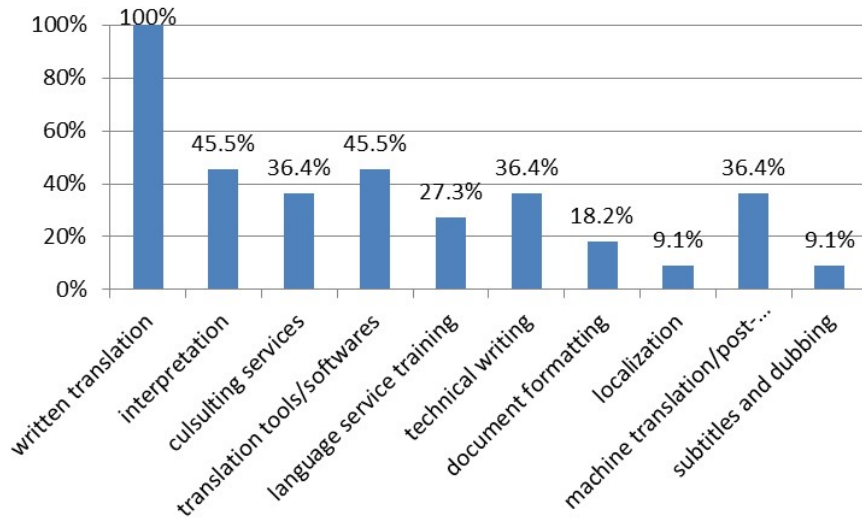


Figure 2: Target languages in demand

Source: Cui 2021

How do language service clients choose language service companies to meet their large-scale translation outsourcing needs? According to the survey data of Cui,¹¹ the most common methods used by clients when selecting language service companies are as follows:

- Recommendations from acquaintances (accounting for 66.7%)
- Search engines (accounting for 44.4%)
- Industry exhibitions and conferences (accounting for 33.3%)

¹¹ Ibid.

- Consulting the member list of the Translators Association of China (accounting for 22.2%)

As to the target language customers need, English ranked the first (accounting for 66.7%). Russian and French are in need by a large number of consumers (accounting for 41.7% respectively). German ranked the third (accounting for 33.3%). Urdu was not in the list of top 15 (Fig 3).

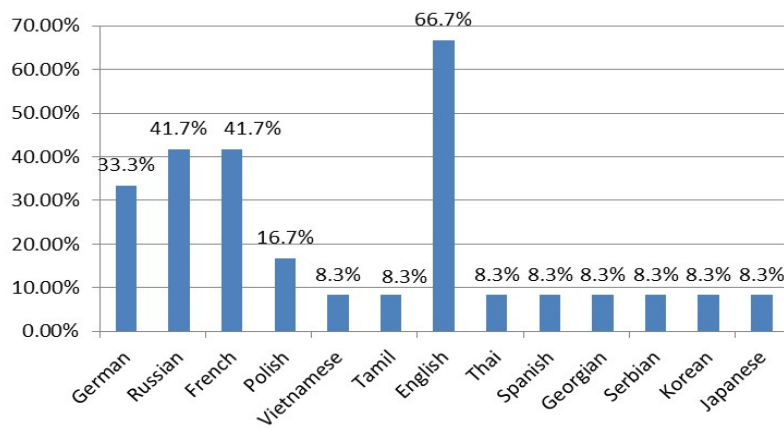


Figure 3: Languages in urgent demand for language services in Hebei

Source: Cui 2021

Language service providers

In Hebei Province, there are more than 160 language service companies. They are mostly located in the city of Shijiazhuang, Baoding, Langfang, Tangshan and Cangzhou.

The language service providers cater to a wide range of industries, indicating a diverse market demand for language services across various sectors. Technical fields

and international business need most language services. There is also a significant demand for language services in international construction and engineering projects. Language services encompass a wide range of industries, including information technology, government foreign publicity, overseas notarization, equipment manufacturing, intellectual property, education, and training.

In Hebei, there is a balanced demand across various technical, legal, governmental, and educational sectors in Hebei Province's language service industry. To be exact, industries in need of language services are mainly from official and legal documentation as well as knowledge-intensive fields.

Evaluation of Language Services

A market survey conducted by Cui revealed that language service clients have a relatively high level of satisfaction with the language services provided in the market. 90.9% of clients are "fairly satisfied", and 9.1% of clients are "very satisfied". There are no clients who are "not very satisfied" or "very dissatisfied."¹²

Language Services Oriented Towards CPEC

Based on the analysis of Hebei's enterprises and language services, the consumers and providers may meet in the context of CPEC. It is estimated that the CPEC would create up to 700,000 jobs from 2015- 2030,¹³ which means extensive demand for language services. Hebei province, in face of more operations in CPEC,

¹² Ibid.

¹³ Afzal, S., and A. Naseem. "China Pakistan Economic Corridor (CPEC): Challenges and Prospects." *Pakistan Administrative Review* 2, no. 1 (2018): 209–222.

needs to make a language service plan. Specifically, language service planning involves many industries, such as translation, language training, online language education, language technical support and language consulting.¹⁴

Establishment of Specialized Language Service Centers

Hebei can establish language service centers in key CPEC regions like Gwadar that focus exclusively on the translation and interpretation needs of CPEC projects. These centers would serve as key points for facilitating real-time communication in areas where linguistic barriers could slow down project development.

Language service centers may conduct cross-cultural communication training for Chinese and Pakistani professionals involved in CPEC projects. These centers would emphasize the importance of cultural norms, business etiquette, and effective communication strategies for overcoming language barriers. They can employ cultural advisors who can mediate between Chinese and Pakistani teams to ensure that communication is both linguistically accurate and culturally appropriate, avoiding misunderstandings that may arise from different cultural contexts.

Universities from Hebei may collaborate with those in other provinces and those in Pakistan in setting up language programs focused on Chinese, Urdu, and English proficiency, with a special emphasis on technical and business language related to CPEC industries.

Specialization of language services

¹⁴ Gao, Y. "How the Belt and Road Initiative Informs Language Planning Policies in China and among the Countries along the Road." *Sustainability* 12, no. 14 (2020): 5506. <https://doi.org/10.3390/su12145506>.

To promote its sustainable development, some language services may focus on one or two specific domains, such as specialized translation like financial translation, translation technology, and localization service.¹⁵

Hebei enterprises in Pakistan are operating mainly in the field of infrastructure like iron and steel, cement, locomotives, as well as energy including electricity and petroleum. Agricultural companies cooperating with Pakistan are emerging. Hebei language service corporations may target the fore-mentioned fields and provide specialized services. Governments at different levels are expected to support the development of specialized language services with favorable policies. Strengthened financial channels, such as standardized private lending, will provide effective financial support for the industry.

Training of Bilingual and Trilingual Professionals

Programs are expected to be created for training bilingual or trilingual professionals who can handle technical, legal, and business language translation. These professionals would be proficient in Chinese, Urdu, and English, focusing on the terminologies specific to sectors such as engineering, energy, transportation, and infrastructure.

It is suggested that Pakistanis should be trained in Mandarin, as CPEC continues to attract a significant number of Chinese businessmen and workers. This presents an opportunity for Pakistani students of Mandarin to secure jobs as bilingual translators,

¹⁵ Shi, Yuyu, Qiliang Cui, and Mei Yang. "China's Language Services Industry: Status Quo and Suggestions for Sustainable Development." *International Journal of Linguistics Studies*, 2022, 46–55.

interpreters, lawyers, and supervisors. Moreover, educational, political, and social factors encourage Pakistanis to master Mandarin as a foreign language. Universities in Hebei, such as Hebei Normal University, currently enroll hundreds of Pakistani students who, despite studying diverse disciplines, demonstrate proficiency in Mandarin.

Some academic institutions may provide Urdu lessons for Chinese. Since more Hebei companies are doing businesses with Pakistani counterparts, learning Urdu can provide job opportunities for many as translators, Urdu language teachers, bilingual contract writers, and managers. Similarly, knowing Urdu can also help run businesses like import/export, manufacturing, and educational institutions.

The provincial government and universities can introduce certification programs in partnership with language associations that qualify translators and interpreters specifically for CPEC-related services. This would ensure a standardized level of competency across projects.

Hebei government may provide more scholarships and training opportunities for students in both China and Pakistan who are interested in pursuing careers in translation and interpretation related to CPEC. Universities can set up internships for language students to gain practical experience by working with CPEC-related companies and government bodies. This initiative will contribute to developing a future generation of translators and interpreters equipped with a comprehensive understanding of the specialized requirements of CPEC projects.

Development of Translation and Interpretation Technologies

The growing demand for translation tools and software reflects a trend towards leveraging technology in language services. With the expansion and growing

technical complexity of CPEC projects, automated translation and post-editing have become essential for efficiently handling large volumes of text. To address the specific demands of CPEC, specialized machine translation tools need to be developed, prioritizing the accurate translation of critical technical and legal documents between Chinese, Urdu, and English. These tools should be tailored to the specific terminology used in CPEC-related industries, and they would help reduce translation time and improve accuracy.

With the rapid development of large language models, more Urdu language resources are needed to make generative artificial intelligence efficient. Urdu falls into the category of low-resource language in the age of AI, which hinders the progress of AI-based translation between Chinese and Urdu. The development of Urdu-Chinese parallel corpora serves as a foundational step in establishing AI-powered language services.

Emerging services such as localization are in high demand and even face shortages. As Hebei companies expand into international markets, they require localization services to successfully launch their products abroad. Technology has become a critical factor for the industry, both domestically in China and globally, particularly for services like localization. Language service providers must manage vast amounts of information within tight deadlines to help clients quickly penetrate target markets. Traditional translation services alone can no longer meet these specialized demands. However, language technologies like machine translation (MT), computer-assisted translation (CAT), post-editing, project management, and term-base creation and maintenance not only complement traditional services but also significantly enhance the efficiency and effectiveness of language solutions.

To keep pace with technological advancements and stay competitive, language service

professionals must provide ongoing technical training for their staff and actively engage in the development of new technologies, particularly within the context of artificial intelligence, Internet Plus, big data, cloud computing, and deep learning. Leading tech companies are anticipated to develop advanced language software, multilingual databases, and other language service tools by leveraging cutting-edge technologies and collaborating with relevant organizations. Furthermore, partnerships with universities and colleges can help train talent equipped to handle new technologies and emerging services.¹⁶

Investment in real-time automated interpretation technology is needed, such as AI-powered interpretation devices, to facilitate smooth communication during meetings, negotiations, and site visits between Chinese and Pakistani stakeholders.

Collaborative Networks of Language Service Providers

It is necessary to form a consortium of language service providers from China and Pakistan that can share resources and expertise in addressing the diverse language needs of CPEC. This would allow for the pooling of specialized translation resources, such as translators with expertise in technical fields, ensuring that CPEC projects receive consistent, high-quality language support. Authorities can encourage partnerships between language service companies in Hebei Province and their counterparts in Pakistan to strengthen cross-border collaboration and create a more seamless language service infrastructure for CPEC projects.

¹⁶ Man, David, Arthur Mo, Mandy H. Chau, James M. O'Toole, and Carmen Lee. "Translation Technology Adoption: Evidence from a Postgraduate Program for Student Translators in China." *Perspectives* 28, no. 2 (2019): 253–270.

Conclusion

Language services are a critical component of the success of CPEC. Hebei's language service providers, with their strong presence in international engineering and technical fields, are well-equipped to meet the diverse language needs of CPEC. Their ability to provide high-quality services, coupled with the positive client evaluations, underscores their pivotal role in supporting the continued development of CPEC and fostering stronger China-Pakistan cooperation.

As CPEC moves into its next phase of high-quality development, the growing participation of Hebei's language service providers will be essential in addressing the increasingly complex linguistic and cultural demands of this international initiative. By establishing specialized language service hubs, investing in bilingual training programs, leveraging technology, and fostering collaboration between language service providers in China and Pakistan, the diverse linguistic demands of CPEC can be effectively addressed. These measures will not only ensure smoother project implementation but also promote stronger bilateral cooperation between China and Pakistan.

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