

# Research on the Digital-Intelligent Integration Path for Cultivating Intercultural Pragmatic Competence

Zhe ZHANG

*School of Foreign Languages, Guangzhou College of Commerce, E-mail: 253254546@qq.com*

**Abstract:** In an era of deep intertwining between globalization and digitalisation, intercultural pragmatic competence has become a key indicator of the core competitiveness of talent oriented towards the global market. However, the current curriculum design, technology integration and assessment mechanisms in foreign-language instruction at higher education level still lag behind, failing to meet the urgent demand for interdisciplinary and innovative professionals in the age of digital intelligence. Focusing on 'intercultural pragmatic competence' and driven by digital intelligence technologies such as artificial intelligence (AI) and big data, this paper puts forward a new 'one-body-two-wings' model for integrated development. After tracing the theoretical genealogy of intercultural pragmatics and reviewing domestic and international research developments, the study examines the practical challenges facing foreign-language teaching at university level. Building on this, the study redefines the meaning and components of intercultural pragmatic competence in the AI era, constructing a three-dimensional fusion framework of 'linguistic foundations—cultural understanding—digital intelligence technologies'. A “full-data + intelligent technology” dual-wheel-driven curriculum cluster scheme is then proposed, accompanied by a practice-oriented teaching model that is “virtually and realistically integrated and intelligently synergised”. Finally, the effectiveness of the proposed pathway is validated through action research on an online course, and dissemination strategies are offered from the perspectives of policy, ecosystem and resources. This study aims to provide a reference point for the digital transformation of foreign language education, to foster high-calibre international talent with global competence and to enhance the nation's cultural soft power.

**Keywords:** intercultural pragmatic competence; artificial intelligence; big data; foreign-language education; digital transformation; international talent

## 1. Introduction

Intercultural pragmatic competence is essential for promoting glocalization and encouraging mutual understanding and collaboration between countries. In an era of global interconnections, it has become essential for countries to develop their capacity to engage in global educational governance. Frameworks such as the Common European Framework of Reference for Languages (CEFR) and the Canadian Language Benchmarks (CLB) now include descriptors of pragmatic ability, using 'can-do' statements to detail communicative language competence across proficiency levels and dimensions. Chinese policy documents, including Education Modernization 2035, likewise emphasize the importance of nurturing talent with an international outlook and robust intercultural communication abilities. Consequently, many universities have incorporated the development of intercultural pragmatic competence into their foreign language curricula, and the demand for graduates who excel in intercultural communication continues to grow.

Nevertheless, the current system of foreign-language instruction at university level faces numerous challenges in promoting students' intercultural pragmatic competence. The 2023 reform plan, issued jointly by the Ministry of Education and four other ministries, encourages universities to cultivate interdisciplinary talent with advanced foreign-language skills to meet society's diverse needs. This plan, titled 'Guidelines for Adjusting and Optimizing the Structure of Undergraduate Disciplines and Programs', was published by the Ministry of Education and four other ministries. However, many English programmes remain rooted in traditional language-skill instruction (listening, speaking, reading, writing and translation) and have not developed pathways that align with contemporary demands for intercultural pragmatic competence. Course design and pedagogical practice have yet to be fully transformed by modern educational technologies and teaching philosophies.

As a driving force behind today's technological advancements, artificial intelligence is opening up new opportunities to cultivate intercultural pragmatic competence among university students in foreign language education. The Opinions on Accelerating the Digitalization of Education issued jointly by the Ministry of Education and eight other ministries in 2025 calls for the thorough implementation of the national digital education strategy, the expansion of high-quality educational resources, and the promotion of AI-driven educational transformation. 'AI + Education' is thus an inevitable trend of the times. Creating a data-intelligence-integrated pathway for intercultural pragmatic competence, with intercultural pragmatic competence at its core and supported by 'all-data' and AI technologies, will generate a 'Foreign Languages + Digital

Intelligence' model. This model is essential for accelerating the intelligent transformation of foreign language education, enhancing the quality of university language instruction, cultivating internationally oriented talent suited to the demands of our era and ultimately strengthening the nation's cultural soft power.

## **2. Current Research on Intercultural Pragmatic Competence**

Emerging in the 1980s, intercultural pragmatics is a relatively new discipline that builds upon contrastive linguistics, pragmatics and intercultural communication research. Intercultural pragmatics examines how language is employed in communication contexts influenced by diverse cultural backgrounds. To date, scholars at home and abroad have achieved notable results in exploring pragmatic competence from sociocultural and intercultural perspectives. Studies on Chinese intercultural communication have focused on the nature and components of pragmatic competence, as well as on pragmatic failure in the context of English as a lingua franca (ELF).

### *2.1 Research on the intercultural communication view of pragmatic competence*

Intercultural pragmatics examines language use in situations where participants come from different cultural backgrounds. Scholars have approached pragmatic competence from sociocultural and intercultural angles with fruitful outcomes. Drawing on multidimensional perspectives such as pragmatics and cognition, Ran and Liu, (2018) argue that 'interactants in intercultural contexts are "complex composites of multiple backgrounds"', whose pragmatic competence emerges bottom-up as a hybrid, dynamic system during interaction (Kecskes, 2013). In ELF settings, pragmatic competence comprises three components: co-construction of meaning, relationship management and awareness of multicultural pragmatic norms (Ran & Yang, 2016; Zeng, 2022; Wang & Li, 2024). Reconceptualising this view of competence requires reflection on how learners can be helped to develop multifaceted pragmatic abilities for intercultural communication in multicultural contexts. Cheng (2017) proposes that metapragmatic awareness constitutes the sociocognitive foundation for developing such multifaceted competence, requiring the joint operation of pragmatic and metapragmatic awareness.

### *2.2 Research on pragmatic failure in English as a Lingua Franca (ELF) contexts*

He (1997) defines socio-pragmatic failure as linguistic errors resulting from a lack of awareness of, or disregard for, the sociocultural differences between interlocutors. Knapp (2011) observes that success in ELF communication is hindered more by pragmatic factors than by phonology, lexis or syntax. Wen (2012) identifies three capacities for dealing with cultural differences in ELF: sensitivity to differences, tolerance of differences, and flexibility in dealing with differences. Cao (2025) emphasizes the importance of enhancing intercultural awareness and skills to effectively improve pragmatic competence.

However, current research remains theoretically anchored to static cultural comparisons and has yet to shed light on how learners dynamically mobilize pragmatic strategies in digital environments. In practice, stand-alone modules such as 'culture-oriented courses' or 'intercultural communication courses' are not sufficiently integrated with big data analytics or AI tools, resulting in a mismatch between course design and technological advancement. Furthermore, assessment predominantly relies on paper-and-pencil tests, which are unable to capture and evaluate learners' real-time pragmatic decision-making in complex, authentic contexts. This limits the precision and timeliness of instructional feedback.

## **3. Constructing a Digitally Intelligent Integration Pathway and Assessment System for Intercultural Pragmatic Competence**

The study is grounded in the six-dimensional model of Chinese university students' intercultural competence proposed by Wu et al. (2013) — namely knowledge of home and foreign cultures, attitudes, intercultural cognitive and communication skills, and awareness — and Chen (2009) model of pragmatic competence comprising pragmatolinguistic, sociopragmatic, pragmatic cognitive, and discourse-organisational competence, this study uses large-scale AI models to create a digitally intelligent theoretical framework and corresponding developmental pathway for intercultural pragmatic competence.

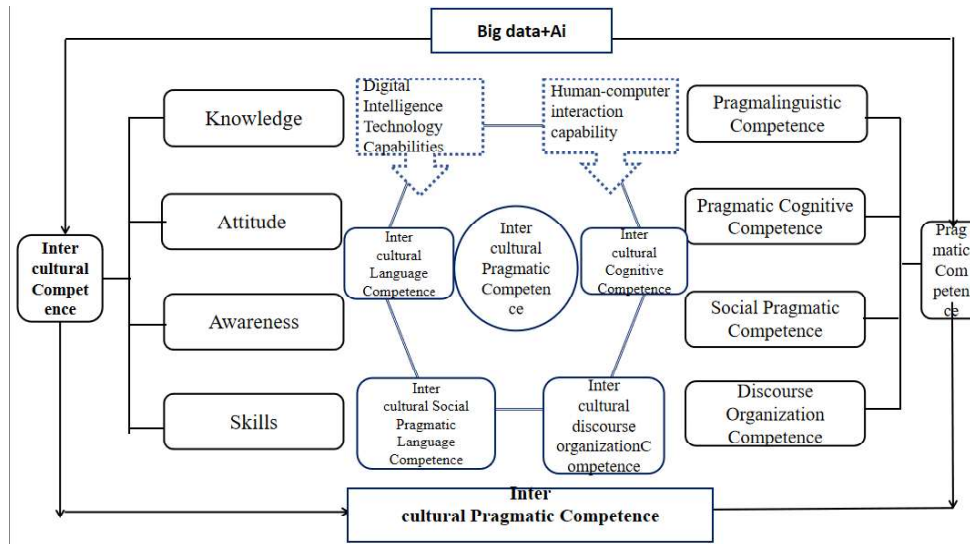


Figure 1. Digitally intelligent integration framework for intercultural pragmatic competence

In line with China’s strategic blueprint for digitalization and intelligentisation, this project proposes a 'core-plus-two-wings' approach to advance the cultivation of intercultural pragmatic competence in foreign-language education. This approach places intercultural pragmatic competence at the centre and supports it with data and AI technologies.

3.1 Focusing on intercultural pragmatic competence to develop a comprehensive cultivation system

In the age of digital intelligence, the cultivation of intercultural pragmatic competence must shift away from the traditional paradigm of discrete language-skill training towards a new, integrative model that combines linguistic knowledge, cultural understanding and digital technologies. To this end, universities should systematically and innovatively restructure and upgrade their intercultural pragmatics curriculum, creating a three-dimensional, spiral framework comprising “language fundamentals, cultural understanding and digital intelligence”. At the level of language fundamentals, students consolidate their competencies in phonetics, vocabulary, grammar and discourse organisation. At the cultural understanding level, they expand their grasp of underlying value systems, modes of thinking and communicative conventions. At the level of digital intelligence, they are introduced to tools such as corpus mining, AI-driven assessment and immersive virtual reality. This creates a closed loop of learning, diagnosis, feedback and relearning. Ultimately, this yields a transdisciplinary, cross-context, cross-media ecosystem of composite pragmatic competence.

3.2 Leveraging all data to foster data-driven pragmatic competence

In the age of digital intelligence, the development of intercultural pragmatic competence should not be confined to traditional paradigms such as close textual reading and contextual drills. Instead, it should treat 'all-data' as an indispensable foundation and engine, systematically and profoundly strengthening learners' all-data literacy. To this end, the curriculum should proactively design a comprehensive, project-based 'data technology course cluster' that progresses from the introductory to the advanced and field application levels, and which is fully embedded in the degree plan. These courses should cover data ethics and security, as well as the full life-cycle management of data. Students will learn how to collect, clean, annotate, integrate and visualise multimodal data in a scientific and regulation-compliant manner within intercultural pragmatic contexts. Through authentic, task-driven projects, students will master core skills such as corpus construction, sentiment analysis and semantic network modelling, while simultaneously honing their ability to critically identify data provenance, quality and bias. On the other hand, the cluster must focus on optimising data-driven pragmatic strategies dynamically. By delving deeply into big data association rule mining, machine learning algorithms, A/B testing and causal inference frameworks, the courses will guide students in transforming cold numbers into vivid cultural insights and communication strategies. Consequently, learners will acquire the professional capacity to make real-time pragmatic decisions, foresee risks and evaluate outcomes in diverse cultural settings, ultimately establishing a new “data–culture–strategy” paradigm for intelligent pragmatics.

3.3 Using AI technologies to improve pragmatic competence.

In the digital intelligence era, the application of AI technologies must be at the forefront of cultivating intercultural pragmatic competence. A systematic course cluster focusing on AI technologies should be created. Students will systematically master

core skills such as using intelligent intercultural communication tools, speech recognition and synthesis, and natural language processing. They will learn how to deploy these technologies in intercultural pragmatic contexts. On the other hand, the cluster will focus on the enhancement of pragmatic competence with the help of AI: by dissecting the principles of AI algorithms, methods for analysing pragmatic data and optimisation strategies, learners will gain the professional ability to use intelligent tools for pragmatic analysis and expression.

### *3.4 Prioritizing applied competence through an innovative 'virtual–real integration, AI-enabled collaboration' practice model*

In the digital-intelligence era, intercultural-pragmatic competence requires a practice-oriented system that couples virtual and real environments and leverages AI collaboration. In the virtual dimension, frontier technologies such as VR and AR will be used to create immersive, pragmatic scenarios that simulate international business negotiations, intercultural networking events, multilingual press conferences and other typical settings. This will enable students to repeatedly refine their intercultural-pragmatic techniques and hone their on-the-spot adaptability and strategic deployment skills.

### *3.5 Taking intercultural empathy as the core, the aim is to deepen cultural understanding and communicative ability*

Cultivating intercultural pragmatic competence in the digital intelligence era requires the cultivation of intercultural empathy. The curriculum should place greater emphasis on courses in intercultural psychology and emotional communication, exploring affective expression, psychological needs and value systems across cultures. This enables students to understand how cultural differences influence pragmatic emotions and master the principles and methods of intercultural emotional dialogue. Complementary experiential activities, such as intercultural role-plays and emotional story-sharing sessions, will foster students' intercultural empathy and sensitivity.

### *3.6 Empirical study and iterative refinement of the digitally-intelligent integration pathway for intercultural pragmatic competence*

A representative online intercultural pragmatics course is selected as the action-research platform, and a three-stage strategy will be implemented: 'Cultural Perception → Technology Empowerment → Competence Transfer'. Through systematic field trials, the study validates and continuously refine the effectiveness of the digitally intelligent integration pathway in fostering intercultural pragmatic competence.

### *3.7 Policy Recommendations and Ecosystem Construction for Digitally-Intelligent Intercultural-Pragmatics Education*

Firstly, based on empirical findings, we will iteratively improve the cultivation pathway and issue concrete recommendations on tool selection, teacher professional development, and collaborative resource creation. Secondly, we will explore a synergistic "government–university–industry" innovation mechanism to advance the development and adoption of generative-AI courseware and immersive virtual-practice platforms. A comprehensive ecosystem for intercultural-pragmatics education will be established; through policy guidance and targeted funding, the model will be scaled nationwide to cultivate globally competent talent.

## **4. Conclusion**

Driven by the global trend of educational digitalization and China's national strategy for cultural soft power, the development of intercultural pragmatic competence has evolved from an optional extra to a compulsory core element of talent development. This paper is grounded in artificial intelligence and big data technologies and proposes and validates a digitally intelligent integration model featuring 'one core and two wings': intercultural pragmatic competence at the centre, propelled by data literacy and intelligent technology application. Through a 'three-dimensional' curriculum cluster, a 'virtual-real hybrid' practice arena and an 'evidence-oriented' dynamic assessment system, the model significantly improves learners' pragmatic decision-making quality, intercultural sensitivity and digital ethical awareness. Empirical evidence shows that the model effectively overcomes the traditional structural issues of foreign language instruction, such as 'form over context' and 'knowledge over competence', and offers a scalable and replicable operational model for the digital transformation of foreign language education in China.

However, technological advances are constant, and the complexity of intercultural communication scenarios continues to increase. Looking to the future, we argue that sustained efforts must be made in three key areas.

In terms of ethical governance, an ethical review and risk alert mechanism for AI applications in intercultural pragmatics must be established as a matter of urgency to prevent algorithmic bias from exacerbating cultural stereotypes. As for assessment technology, the introduction of multimodal affective computing and digital twin technologies can enable fine-grained analyses of learners' micro-expressions and prosodic features in virtual scenarios, providing a holistic "cognition–emotion–behaviour" profile. Moreover, deep synergy should be promoted among 'government, industry, academia, research institutes and end

users'. Initiatives such as a national-level 'Open Laboratory for Intercultural Digital Humans' and industry standards for 'Digital-Intelligent Foreign Languages' should be launched to accelerate the nationwide diffusion of high-quality resources, especially to universities and vocational colleges in central and western China, thereby advancing educational equity and balanced regional development.

**Acknowledgement:** This project is funded by 2022 Humanities and Social Sciences Research Program of the Ministry of Education of China (Youth Fund Project): Research on International Image Construction and Intercultural Communication Strategies of Guangdong, Hong Kong and Macao Greater Bay Area (22YJCZH250); 2025 Guangdong Province Philosophy and Social Science Foundation Project “Research on Digital-Intelligent Integration Strategies for the International Communication of Lingnan Traditional Chinese Medicine Culture (GD25LN07)””; 2024 Guangdong Province Philosophy and Social Science Foundation Project “The Evolution of Translation, Publication, and International Communication Models of Chinese Political Discourse”(GD24CWY10); 2024 China Foreign Language Education Fund (12th Batch): Research on Pathways to Cultivating Intercultural Critical Thinking Skills in Tertiary Foreign Language Education under the Context of New Liberal Arts (Project No. ZGWYJYJJ12A056); and Guangzhou College of Commerce 2024 University-level Teaching Quality and Teaching Reform Project: Inquiry and Practice of a “5E” Innovative Teaching Model Integrating Four Dimensions for the Course “Introduction to Intercultural Business Communication” under the New Liberal Arts Initiative (Project No. 2024JXGG18).

### References

- Cao, X. Y. (2025). A Study on Pragmatic Failures in Intercultural Communicative Language Behavior: Taking China-Spain Communication as an Example. *Western Journal*, (08), 66-69. [In Chinese: 曹欣颖. (2025). 跨文化交际语言行为中的语用失误研究——以中国—西班牙交际为例. *西部学刊*, (08), 66-69.]
- Chen, X. R. (2009). The Socio-Psychological Dimension of Pragmatics Research. *Foreign Languages in China*, 6(05), 46-52. [In Chinese: 陈新仁. (2009). 语用学研究的社会心理维度. *中国外语*, 6(05), 46-52.]
- Cheng, J. (2017). On the Metapragmatic Dimension of Developing Multilingual Pragmatic Competence. *Journal of Zhejiang International Studies University*, (04), 23-28. [In Chinese: 程杰. (2017). 试论多元语用能力培养的元语用意识维度. *浙江外国语学院学报*, (04), 23-28.]
- He, Z. R. (1997). Issues in Societal Pragmatics. *Academic Research*, (06), 6. [In Chinese: 何自然. (1997). 社会语用问题. *学术研究*, (06), 6.]
- Kecskes, I. (2013). *Intercultural Pragmatics*. Oxford: Oxford University Press.
- Knapp, A. (2011). Using English as a lingua franca for (mis-)managing conflict in an international university context: An example from a course in engineering. *Journal of Pragmatics*, 43(4), 978-990.
- Ran, Y. P., & Liu, P. (2018). Intercultural Pragmatics in Multicultural Contexts. *Foreign Languages in China*, (04), 27-33. [In Chinese: 冉永平, 刘平. (2018). 多元文化背景下的交互文化语用学. *中国外语*, (04), 27-33.]
- Ran, Y. P., & Yang, Q. (2016). Pragmatic Competence and Its Reconstruction under the Background of English as a Lingua Franca. *Foreign Language Teaching and Research*, 48(02), 287-299. [In Chinese: 冉永平, 杨青. (2016). 英语国际通用语背景下的语用能力及其重构. *外语教学与研究*, 48(02), 287-299.]
- Wang, J., Li, M. (2024). Brand transcreation as multimodal configuration: The (re)making of text, context, and meaning in brand semiotics. *Babel*, 70(1): 89-110.
- Wen, Q. F. (2012). A Pedagogical Framework for English as an International Language. *Curriculum, Teaching Material and Method*, 32(01), 77-81. [In Chinese: 文秋芳. (2012). 英语国际语的教学框架. *课程·教材·教法*, 32(01), 77-81.]
- Wu, W. P. (2013). A Comprehensive Assessment of Intercultural Competence among Chinese University Students. *Huazhong University of Science and Technology*. [In Chinese: 吴卫平. (2013). 中国大学生跨文化能力综合评价研究. 华中科技大学.]
- Zeng, L. (2022). Research on the Cognitive Process of Translation: The Embodiment and Construction of Meaning-Sense in a New Paradigm. Beijing: Science Press. [In Chinese: 翻译认知过程研究——“义一意”体认与建构新范式. (2022). 科学出版社.]