

Digital and Intelligent Transformation of Intercultural Communication Teaching from the Perspective of Area Studies: Logic, Mechanisms, and Practical Pathways

Chengchieh Su^{1,a,*}

¹School of Foreign Studies, Zhaoqing University, Zhaoqing, China

^a2226767165@qq.com

*Corresponding author

Abstract: The development of Area Studies has driven a fundamental shift in Chinese foreign language education, moving from a model centered on language skills and general cultural knowledge toward one oriented toward regional knowledge, contextual understanding, and problem-solving. As a critical link connecting language competence, regional knowledge, and international engagement, intercultural communication teaching must similarly evolve from the static transmission of cultural traits to dynamic interpretation within regional contexts. Meanwhile, generative artificial intelligence, large language models, multimodal technologies, and intelligent agents create new technological conditions for organizing regional knowledge, generating communicative scenarios, and analyzing learning processes. On the basis of examining the knowledge turn in intercultural communication teaching from the perspective of Area Studies, this paper proposes a conceptual framework comprising regionally contextualized knowledge, digitally generated situations, human-machine collaborative practice, and data-driven assessment. It further constructs a practical framework centered on a regional cultural cognitive map, human-machine collaborative scenario simulation, and intercultural competence profiling. The paper also emphasizes that digitalization should not replace authentic cultural encounters. Instead, it should serve as a knowledge scaffold, situational expander, and process feedback mechanism under the guidance of teachers. To address challenges such as algorithmic bias, distorted cultural representation, ethical concerns regarding data, and teachers' insufficient competence in regional knowledge and digital literacy, this paper proposes strategies including knowledge validation, human-machine collaboration, ethical governance, and interdisciplinary teacher development. These proposals aim to provide theoretical references and practical pathways for reforming intercultural communication teaching within the framework of Area Studies.

Keywords: Area studies; Intercultural communication teaching; Digital and intelligent transformation; Generative artificial intelligence; Intercultural competence

1. Problem Statement: The Development of Area Studies and the Knowledge Turn in Intercultural Communication Teaching

The official inclusion of Area Studies as a first-level discipline under the interdisciplinary category in China's degree system in 2022 marks a new phase in talent cultivation and knowledge production in Chinese higher education. Compared with traditional foreign language education, which focuses primarily on language proficiency and general knowledge of target countries, Area Studies places greater emphasis on comprehensive investigation of the language, history, politics, economy, society, and culture of specific countries and regions. It seeks to form a holistic understanding of a region through the integration of multidisciplinary knowledge. Zhao's (2021) emphasis on "complete world knowledge" captures this epistemological orientation: understanding a country or region cannot be confined to isolated cultural facts or conventional knowledge, but must instead be interpreted against the backdrop of its specific historical, social, and international contexts ^[1].

This shift has direct implications for intercultural communication teaching. For a long time, intercultural communication courses have organized knowledge around cultural dimensions, cultural traits, and communicative norms, translating cultural differences into teachable knowledge units. This approach helps learners develop basic cultural sensitivity. However, without historical and social

contextualization, it tends to treat culture as relatively fixed group attributes and neglects differences among social groups, generational cohorts, and institutional environments within the same region. Intercultural communication teaching must therefore move from asking “what cultural traits are” to examining “why cultural phenomena take shape, how they function in specific contexts, and how they change over time.”

At the same time, generative artificial intelligence (AI) is transforming knowledge acquisition, content organization, and interactive learning. Large language models can rapidly reorganize multilingual materials. Multimodal technologies can expand the presentation forms of cultural materials. Intelligent agents can provide repeatable interactive scenarios. Learning analytics can record and provide feedback on learning processes. These technologies create new conditions for intercultural communication teaching to move from static knowledge transmission to dynamic contextual learning. However, technological capability does not equate to cultural understanding, and AI-generated cultural content is also shaped by training data, model mechanisms, and prompting strategies. The real question is not whether AI can enter the intercultural communication classroom, but how the knowledge orientation advocated by Area Studies can be integrated with digital and intelligent technologies, and what humanistic and ethical constraints should govern this integration.

2. Three Turns in Intercultural Communication Teaching from the Perspective of Area Studies

2.1. From Cultural Type Knowledge to Regionally Contextualized Knowledge

Cultural knowledge in traditional intercultural communication teaching is often presented in typified ways, such as summarizing cultural differences through dimensions like individualism versus collectivism or high-context versus low-context communication. This type of knowledge is highly teachable, but its limitations are also clear: it tends to treat culture as stable, homogeneous, and clearly bounded, thereby downplaying internal cultural differences and historical change. The Area Studies perspective emphasizes understanding cultural phenomena from the concrete social realities of specific countries and regions. It requires connecting cultural norms with historical trajectories, institutional environments, social structures, media ecologies, and global interactions.

On this basis, this paper characterizes cultural knowledge from the perspective of Area Studies as “regionally contextualized knowledge.” “Contextualization” here does not deny the existence of cultural norms. Instead, it emphasizes that the meaning of cultural norms must be interpreted in conjunction with specific social contexts. This paper also draws on genealogical perspectives on historical formation and power relations, though it does not equate Foucault’s genealogy with the methodology of Area Studies. The intention is to remind educators that cultural phenomena are not pre-existing fixed facts but meaning systems that take shape under specific historical and social conditions and continue to be influenced by social change and cross-regional interactions. Cultural knowledge thus ceases to be information that can be directly “told” and becomes a knowledge network that learners must analyze, interpret, and construct by engaging with materials, contexts, and problems.

For example, rather than simply telling students that a given region values collectivism, emphasizes family, or has a strong hierarchical consciousness, it is more productive to analyze how these value orientations manifest differently across specific issues, social groups, organizational settings, and historical periods. Such an approach to knowledge organization reduces cultural essentialism and provides learners with a more reliable knowledge basis for contextual judgment in real communicative encounters.

2.2. From Intercultural Skills to Contextualized Intercultural Competence

Changes in knowledge structure inevitably lead to changes in ability goals. Byram (2021), in his revised framework, further elaborates the components of intercultural communicative competence, emphasizing the synergy among attitudes, knowledge, skills of interpretation and relating, and skills of discovery and interaction ^[2]. From this perspective, intercultural competence is not merely knowing how different cultures interact. It is the ability to interpret cultural phenomena, adjust communicative behavior, and reflect on one’s own and others’ cultural assumptions in specific situations.

Integrating the Area Studies perspective, this paper understands intercultural competence as comprising three interconnected levels. The first is regional cultural cognition, which involves mastery of the basic social norms, historical background, values, communicative conventions, and verbal and

non-verbal communication patterns of a given region. The second is contextual strategic adaptability, namely the ability to identify cultural cues based on specific interlocutors, task goals, power relations, and interaction dynamics, and to select appropriate verbal and non-verbal strategies.

These two levels do not develop spontaneously. Learners may possess extensive cultural knowledge yet fail to transfer it to complex communicative situations. They may use communicative strategies flexibly yet lack reflection on their own cultural presuppositions. Intercultural communication teaching should therefore integrate knowledge acquisition, contextual practice, process feedback, and reflective activities, rather than relying primarily on knowledge tests or self-report scales as assessment tools.

2.3. From Classroom Simulation to Problem-Oriented Learning Ecology

Role-playing and case discussions in traditional classroom settings provide necessary practice opportunities, but their scenarios are usually predetermined and controllable. Real intercultural encounters often involve information asymmetry, identity differences, conflicting interests, and emotional dynamics. The Area Studies perspective emphasizes holistic understanding of target societies. Intercultural communication teaching should therefore connect classroom tasks with real regional issues, making language learning, cultural understanding, and problem-solving a unified process.

Digital and intelligent technologies can extend this learning ecology. Digital resources based on regional research materials constitute the knowledge layer. Multimodal materials and virtual scenarios form the interaction layer. AI agents and peer collaboration form the practice layer. Real regional issues form the problem layer. Learners can develop competence through a cycle of “knowledge preparation, contextual action, feedback adjustment, and reflective transfer.” The discussions by X. Wang et al. (2025) on digital teaching materials for foreign languages in higher education and smart education ecosystems^[3], as well as Shu’s (2025) research on international talent cultivation and the “Four New” curriculum and textbook systems, provide important insights for this resource integration^[4].

3. Mechanisms of Digital and Intelligent Technologies in Intercultural Communication Teaching

3.1. Generative AI: A Cognitive Scaffold for Regional Cultural Knowledge

The primary value of generative AI in intercultural communication teaching is to help learners quickly access and organize multi-source regional knowledge. However, its function should be positioned as a “cognitive scaffold” rather than an authoritative cultural knowledge base. A framework for developing digital and intelligent teaching materials for college English in the generative AI era demonstrates that AI can evolve from a content presentation tool to a comprehensive instrument supporting learning activities, interactive experiences, and evaluative feedback (H. Wang, 2025)^[5]. For intercultural communication teaching, teachers can use AI to conduct preliminary organization of multilingual and multimodal materials, then guide students through question chains to compare different sources, identify divergent perspectives, and verify key facts.

For example, teachers can design a task around “conceptions of time in business negotiations” and ask AI to provide regional research literature, news reports, business cases, and personal narratives respectively. Students then determine the commonalities and differences across materials. Here AI assumes the functions of material organization and cognitive scaffolding, while judgments about cultural meaning remain the responsibility of learners working from evidence. Content that is contested or factually risky should be verified by teachers against reliable sources.

In addition, generative AI can present cultural phenomena through multimodal means, combining news texts, interview excerpts, images, audio, and communicative dialogues to help learners move from single-text comprehension to multi-source material analysis. Zhou and Xue’s (2026) research shows that generative AI micro-scenarios can be used for intercultural communication training and positively influence the development of learners’ intercultural sensitivity. This provides a direct empirical reference for AI-supported micro-contextual teaching^[6].

3.2. AI Agents and Virtual Scenarios: Dynamic Simulation of Intercultural Communication

The advantage of AI agents lies in their ability to adjust responses continuously based on learner input, transforming intercultural communication training from fixed scripts to dynamic interaction. McCallum’s (2024) research on AI tools supporting remote collaborative task design and completion

indicates that AI can participate in designing and implementing intercultural tasks, providing new interactive conditions for learners [7]. Zhang and Zhou's (2023) meta-analysis also shows that computer-assisted interventions generally have positive effects, with computer simulations demonstrating particularly large effect sizes [8].

In Area Studies teaching, AI-based scenarios grounded in authentic regional issues can be constructed around real issues. For instance, learners can simulate negotiations between a Chinese enterprise and Brazilian partners over environmental disputes in a new energy project. AI agents can respond to learners based on preset role backgrounds, negotiation objectives, and interaction parameters. However, their "cultural behaviors" must be understood as simulations within a pedagogical context rather than complete representations of the actual culture of any country or group. By adjusting the degree of interest conflict, identity relations, and information transparency, tasks can be created at varying difficulty levels to allow learners repeated practice in strategy selection.

The combination of VR, multimodal technologies, and agents can enhance the sense of presence in scenarios, but technological fidelity should not become a teaching objective. Its value lies in increasing interactive opportunities, allowing safe trial and error, and supporting repeated practice. For complex issues involving real value conflicts, teachers still need to guide learners back to authentic materials and real social contexts for discussion.

3.3. Learning Analytics: From Outcome Assessment to Process-Oriented Intercultural Competence Profiling

Traditional intercultural communication assessment relies heavily on knowledge tests, self-report questionnaires, and summative course evaluations. These instruments can capture some learning outcomes but cannot fully represent learners' strategic choices in complex communicative processes. Digital learning environments can record dialogue texts, task completion paths, feedback responses, and revision processes, thus providing a data basis for process-oriented assessment.

Under appropriate authorization and ethical guidelines, learning analytics indicators can be established around "cultural identification, strategy selection, interactive response, and reflective revision." For example, systems can record whether learners actively seek background information when encountering cultural conflicts, whether they ask clarifying questions, whether they adjust their expressions, and whether they can explain their strategic choices. The final output is not a simple "cultural competence score" but an intercultural competence profile reflecting learners' strengths, difficulties, and developmental trajectories.

This assessment model can form a closed loop with teaching. Data help teachers identify common difficulties. Learners recognize their own developmental paths through reflective records. Teachers then adjust subsequent tasks accordingly. It must be emphasized that data analysis can only provide auxiliary evidence for pedagogical judgment. Complex cultural understanding should not be reduced to a set of algorithmic indicators.

4. A Digital and Intelligent Practical Framework for Intercultural Communication Teaching from the Perspective of Area Studies

Based on the above analysis, this paper proposes a practical framework comprising "regional cultural cognitive mapping, human-machine collaborative scenario simulation, and intercultural competence profiling." This framework does not position AI as an independent teaching agent. Rather, it takes regional knowledge as the content foundation, teachers as the subjects of instructional design and value guidance, and digital technologies as means for knowledge organization, contextual expansion, and process feedback.

4.1. Constructing a Multimodal and Auditable Regional Cultural Cognitive Map

The regional cultural cognitive map is an important foundation connecting Area Studies knowledge with AI teaching applications. This paper proposes a multi-level, multi-dimensional organizational structure that covers macro-level backgrounds (history, politics, economy, society, culture), meso-level institutions and social groups, and micro-level interaction scripts, along with factual information, contextual interpretation, behavioral norms, and discourse expression. The key to this map is not the quantity of information but the traceability of knowledge sources and the plurality of perspectives. For

important knowledge nodes, sources, time references, and applicable contexts should be annotated, and the map should be reviewed by Area Studies researchers or relevant subject specialists. The map can serve as a learning resource for students and provide factual and contextual constraints for AI-generated content, thereby mitigating to some extent the risks of unfounded generation and cultural stereotyping.

4.2. Designing “Problem-Oriented, Contextual Action, and Reflective Transfer” Digital Tasks

Intercultural communication tasks should shift from general cultural themes to real-world regional issues. Tasks should provide necessary regional background materials, stakeholder information, and communicative objectives, requiring learners to draw on linguistic, cultural, economic, legal, and social knowledge to solve problems. A complete task can be divided into three phases. The first phase is “pre-task cognition,” in which students read regional materials, compare different sources, and formulate lists of questions. The second phase is “contextual action,” in which students complete communicative tasks through AI agents, peer collaboration, or virtual scenarios. The third phase is “reflective transfer,” in which students analyze their strategic choices, AI responses, and task outcomes, and further discuss which judgments have cultural grounding and which may derive from stereotypes. Through this cycle, AI evolves from a content generation tool to a pedagogical medium supporting action and reflection.

4.3. Implementing “Teacher-Led, AI-Empowered” Human-Machine Collaborative Teaching

The digital and intelligent transformation does not imply a weakening of the teacher’s role (He et al., 2025; Sun & Tang, 2022) ^[9, 10]. Instead, it shifts the focus of teachers’ work. In intercultural communication courses, teachers assume core responsibilities in topic selection, knowledge validation, value guidance, and learning diagnosis, while AI primarily undertakes material generation, scenario simulation, real-time feedback, and learning logs recording. This forms a collaborative relationship of “teacher design, AI support, student action, teacher interpretation, and student reflection.”

4.4. Establishing Development-Oriented Electronic Learning Portfolios

Electronic learning portfolios should record students’ performance, reflective texts, interaction records, and stage-based outputs across different tasks, presenting ability changes on a timeline. Assessment indicators can be organized around core dimensions such as regional knowledge comprehension, cultural interpretation, contextual adaptation, and interaction strategies. Multiple sources of evidence can be formed by combining teacher assessment, peer assessment, self-assessment, and learning data. The emphasis of this assessment model is not to achieve full quantification of intercultural competence through algorithms but to use data to identify learning trajectories and typical difficulties. In this way, assessment truly becomes a tool for promoting learning rather than a final statistical score after course completion.

5. Boundaries and Risks of the Digital and Intelligent Transformation

5.1. Algorithmic Bias and Distorted Cultural Representation

Generative AI is not a culturally neutral knowledge tool. Model training data, language distribution, platform rules, and prompting strategies all shape its output. When handling regions with relatively limited data coverage or strong pre-existing stereotypes, the model may reduce complex social phenomena to fixed cultural traits. Therefore, AI-generated statements such as “how people from country X communicate” or “the leadership style of people from region Y” cannot be treated directly as teaching facts without critical review.

Existing systematic studies on digital technologies and intercultural competence education show that digital technologies have potential to facilitate intercultural learning, but their application does not automatically guarantee accuracy in cultural understanding (Basantes-Andrade et al., 2025) ^[11]. To reduce bias, mechanisms should be established including regional expert review, source annotation, cross-source verification, and student counter-checking. In addition, analyzing cultural bias in AI-generated content can itself be designed as a learning task, incorporating algorithmic literacy into intercultural competence.

5.2. Data Ethics and Learner Subjectivity

Intercultural communication tasks may involve identity, values, emotional expression, and sensitive topics. Dialogue data, voice data, and behavioral data generated in the learning process therefore require rigorous protection. Course platforms should clearly specify the scope of data collection, purpose of use, retention period, and access permissions, and should follow the principle of data minimization wherever possible. Data not essential for teaching should not be collected excessively for the sake of technological convenience. Moreover, digital and intelligent teaching should serve as a supplement to, rather than a replacement for, authentic intercultural contact. Courses should integrate AI simulation with authentic texts, overseas peer exchanges, interviews, or project collaborations wherever possible.

5.3. Dual Gaps in Teacher Regional Knowledge and Digital Literacy

Teacher competence is the key to whether the digital and intelligent transformation can be effectively implemented (Cui et al., 2024) ^[12]. Foreign language teachers lacking Area Studies knowledge cannot judge the accuracy of AI-generated content. Those lacking basic data and AI literacy cannot design effective tasks or interpret learning analytics results. As Shen and Li (2025) argue, the era of new quality productive forces has posed entirely new demands on foreign language talents, and the traditional training system faces structural contradictions, necessitating a reshaping of the disciplinary cultivation logic from three dimensions: views on language, knowledge, and teaching ^[13]. This perspective is consistent with the epistemic turn championed by Area Studies. Universities should therefore establish interdisciplinary teacher development mechanisms that bring together foreign language teachers, Area Studies researchers, and educational technology specialists in collaborative curriculum development. This collaboration should not be limited to one-off training. It should be embedded in joint lesson planning, case development, knowledge base construction, AI task testing, and teaching reflection. Through “learning by doing,” a composite teaching force combining language education, regional research, and digital teaching capabilities can gradually take shape.

6. Conclusion

The development of Area Studies imposes new knowledge and competence requirements on intercultural communication teaching. The core change is not simply adding cultural knowledge about target countries. Rather, it is moving teaching from static description of cultural traits to dynamic interpretation within regional contexts, and from general communicative skills to intercultural competence characterized by contextual judgment. Generative AI, large language models, intelligent agents, and learning analytics technologies provide new technological conditions for this transformation.

In this framework, the regional cultural cognitive map determines what should be taught and on what basis. Human-machine collaborative scenario simulation addresses how to practice complex communication. Data-driven assessment addresses how to observe competence development. It should be emphasized that the value of AI lies neither in replacing cultural subjects nor in fully algorithmizing cultural understanding. Rather, it lies in expanding access to regional knowledge, increasing opportunities for communicative practice, and supporting reflection on learning processes.

Future intercultural communication teaching should establish more rigorous mechanisms for knowledge validation, data ethics, and human-machine collaboration under teacher leadership, enabling digital technologies to serve as a bridge connecting regional knowledge and authentic interaction. Ultimately, foreign language education can advance from skill-based instruction to the cultivation of global problem-solvers only when intelligent technologies are deeply anchored in Area Studies and humanistic education.

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