CSCanada
Studies in Literature and Language
Vol. 30, No. 1, 2025, pp. 9-13
DOI:10.3968/13743

ISSN 1923-1555[Print]
ISSN 1923-1563[Online]
www.cscanada.net
www.cscanada.org

Decoding the Gap: Language Service Proficiencies of Multilingual Translators and Market Requirements in the AIGC Epoch

WAN Yinjia[a],*; WANG Xiaoyun[b]; LI Yuxin[b]

[a] Professor of Translation Studies, Shandong Jiaotong University, Jinan, China.
[b] Shandong Jiaotong University, Jinan, China.
* Corresponding author.

Supported by the 2024 Shandong Jiaotong University Undergraduate Teaching Reform Project: "Research on AI-empowered Multilingual Translation Talent Cultivation Based on Market Demand under the Belt and Road Initiative" (Project No. 2024YB30).

Received 2 January 2025; accepted 19 February 2025
Published online 26 February 2025

Abstract

This paper explores the discrepancies between the language service capabilities of multilingual translation talents and the demands of the translation market in the context of Artificial Intelligence Generated Content (AIGC). Based on these discrepancies, it proposes the reconstruction of the cultivation path for multilingual translation talents. With the deepening of globalization and the increasing frequency of cross-cultural communication, the market demand for multilingual translation services is continuously growing. Moreover, the rapid development of AIGC technology has brought new challenges and opportunities to the translation industry, especially in areas such as post-editing of machine translation, multimodal translation, data analysis and management. However, traditional translation talents have shown insufficient capabilities in meeting these emerging demands.

Key words: AIGC; Multilingualism-based translation; Language service proficiencies; Market-oriented requirement

Wan, Y. J., Wang, X. Y., & Li, Y. X. (2025). Decoding the Gap: Language Service Proficiencies of Multilingual Translators and Market Requirements in the AIGC Epoch. *Studies in Literature and Language, 30*(1), 9-13. Available from: http://www.cscanada.net/index.php/sll/article/view/13743
DOI: http://dx.doi.org/10.3968/13743

1. RESEARCH BACKGROUND

At the 10th Ministerial Conference of the China-Arab States Cooperation Forum in 2024, President Xi Jinping emphasized: "China is willing to strengthen civilizational dialogue and cultural exchanges with Arab countries to promote mutual learning among diverse civilizations." This statement underscores the critical role of multilingual translation services in facilitating cross-cultural communication within international cooperation frameworks. With the deepening of globalization, cross-cultural exchanges and international collaboration have intensified, driving sustained growth in demand for multilingual translation services. However, traditional translation models face dual limitations in time efficiency and operational costs while struggling to meet increasingly diversified market requirements.

The emergence of Artificial Intelligence Generated Content (AIGC) technology presents both opportunities and challenges for the translation industry. Leveraging machine learning and natural language processing algorithms, AIGC enables automated multilingual text generation and translation, demonstrating significant advantages in efficiency enhancement and cost reduction. Nevertheless, AIGC cannot fully replace human translators, particularly in multilingual contexts where professional expertise remains irreplaceable. Maria Teresa Zanola, a translation expert from the United Nations Translation Service, asserted at the 2023 International Translation Conference: "While AI technologies bring convenience and innovation to translation, human translators' discernment, accountability, and domain-specific knowledge remain indispensable in politically sensitive, legal, and literary fields." Consequently, optimizing the language service competencies of multilingual translators in the AIGC era has become an urgent research imperative.

Current scholarship predominantly focuses on the technical dimensions and application scenarios of AIGC, with limited attention to analyzing the competency gaps between translators' language service capabilities and evolving market demands. This study addresses this research lacuna by investigating strategies to enhance translator training programs through competency framework reconstruction, thereby better aligning talent development with technological advancements and emerging market needs.

2. CORE COMPETENCIES OF MODERN MULTILINGUAL TRANSLATORS IN THE AIGC CONTEXT

2.1 Linguistic Competence

2.1.1 Integrated Language Skills

Elena Maceviciute (2022) observes that technological advancements have expanded translation beyond written texts, necessitating comprehensive listening, speaking, reading, and writing competencies.

Listening: Requires accurate comprehension of phonetic nuances and intonation in source languages, particularly for real-time interpretation.

Speaking: Demands natural delivery of original meanings across diverse communicative contexts.

Reading: Forms the foundation of written translation, requiring deep textual analysis of content and stylistic features.

Writing: Ensures grammatical compliance and idiomatic expression in target languages.

2.1.2 Lexical and Grammatical Mastery

Xu Jun and Huo Yuehong (2022) investigate strategies for translating culture-specific Chinese lexical items, emphasizing the critical role of terminological precision and grammatical expertise in translation quality assurance.

Lexicon: Mastery of high-frequency vocabulary, domain-specific terminology, and cross-linguistic equivalents.

Grammar: Proficiency in syntactic structures (e.g., word order, tense, voice, clauses) to prevent linguistic errors.

2.2 Translation Techniques

2.2.1 Textual Translation Expertise

Zhang Zheng (2023) identifies critical thinking as a core competency, stressing the importance of problem identification, analysis, and resolution during translation processes. Xu Mingwu (2022) highlights applied translation skills in internationalized contexts, covering literary, technical, and journalistic translation.

2.2.2 Interpreting Proficiency

Professor Xu Mingwu (2023) underscores the indispensability of text-based interpreting skills, advocating case-based simulations for competency enhancement. Key modalities include:

Consecutive Interpreting: Real-time translation in face-to-face meetings.

Simultaneous Interpreting: Synchronized translation for large-scale international events.

2.2.3 Terminology Management

Fang Qingkai and Feng Yang (2023) propose back-translation techniques to optimize speech translation models without transcripts. Chen Mingming (2021) emphasizes terminology consistency through:

Glossary Development: Curating multilingual terminology databases.

Cross-lingual Standardization: Ensuring conceptual equivalence.

2.2.4 Cultural-Contextual Adaptation

Zhang Wei (2023) advocates context-aware translation strategies involving:

Cultural Localization: Bridging source-target cultural disparities.

Pragmatic Adjustment: Aligning translations with situational contexts.

2.3 Intercultural Communication Competence

Elisabeth Sander (2022) in *Intercultural Communication and Translation* asserts that globalized business and political exchanges demand heightened cultural sensitivity. Jia Lidong (2023) further emphasizes translators' dual responsibility: linguistic precision and decoding culturally embedded subtexts. This competency encompasses:

Cultural schema recognition

Implicit meaning negotiation

2.4 Research Capability

Zhang Wenli (2023) explores innovative pedagogies for cultivating translators' research and analytical skills. Essential components include:

Multidisciplinary Knowledge Integration: Synthesizing linguistic, cultural, and domain-specific expertise.

Information Literacy: Rapid retrieval and critical evaluation of terminological resources.

Continuous Learning: Tracking advancements in translation studies and related fields.

2.5 Technological Proficiency

2.5.1 CAT Tool Expertise

Dorothy Kenny (2023) examines ethical implications of translation technologies, while Anthony Pym (2022) stresses the necessity of mastering: Translation Memory Systems (e.g., Trados, MemoQ) for text segmentation and consistency management. Terminology Management Platforms for workflow optimization.

2.5.2 Quality Assurance (QA) Tools

Automated QA tools detect: Linguistic errors (spelling, punctuation)

Formatting inconsistencies (numerical/date conventions)

Terminology deviations

3. EMERGING MARKET DEMANDS FOR MULTILINGUAL TRANSLATORS' COMPETENCIES IN THE AIGC ERA

3.1 Machine Translation Post-Editing (MTPE) Competence

In 2021, the Globalization and Localization Association (GALA) emphasized that translators must develop "machine translation post-editing competence" to refine AI-generated translations. This involves :Error Identification: Detecting and correcting mistranslations, ambiguities, and syntactic anomalies in raw MT outputs.

Stylistic Optimization: Enhancing fluency and naturalness while preserving source text intent.

Efficiency Balancing: Reducing editing time by 30-50% compared to full manual translation (GALA, 2021).

Despite advancements in neural machine translation (NMT), critical domains like legal contracts still exhibit 12-18% error rates requiring human intervention.

3.2 Multimodal Translation Competence

The European Society for Translation Studies (EST, 2022) defines this as the ability to process hybrid content formats, encompassing text requiring context-aware localization, visual content demanding image caption adaptation, audio necessitating real-time dubbing synchronization, and video requiring precise subtitle-audio alignment. Empirical studies demonstrate that integrated multimodal systems achieve 25% higher accuracy in preserving contextual coherence compared to unimodal approaches.

3.3 Data Analytics and Management Proficiency

The American Translators Association (ATA, 2022) delineates core competencies for translators, encompassing the construction of ISO 18587-compliant data pipelines for corpus collection and cleansing, domain-specific metadata tagging frameworks, quantitative analytical methods such as term frequency-inverse document frequency (TF-IDF) analysis, and visualization techniques for translation quality metrics (e.g., BLEU, TER, METEOR). Concurrently, it emphasizes the implementation of GDPR-compliant data governance protocols and the application of blockchain technology to safeguard translation memory repositories.

3.4 Technology Integration Capacity

The International Association for Translation and Intercultural Studies (IATIS) underscores the necessity for modern translators to master cross-platform tool ecosystems, including seamless interoperability between computer-assisted translation tools (e.g., Trados Studio) and terminology management platforms (e.g., MultiTerm), as well as deep integration with AI-augmented systems (e.g., DeepL Write). Furthermore, professionals must achieve end-to-end workflow automation through API-driven project management tools (e.g., Smartcat) and continuous localization pipelines (e.g., Crowdin).

4. DISCREPANCY ANALYSIS BETWEEN MULTILINGUAL TRANSLATORS' COMPETENCIES AND MARKET DEMANDS IN THE AIGC CONTEXT

The rapid advancement of Artificial Intelligence Generated Content (AIGC) technology has precipitated transformative shifts in global demands for multilingual translation services. However, a growing competency gap has emerged between translators' current language service capabilities and evolving market expectations.

4.1 Critical Shortfall in Post-Editing Competence

While traditional translators possess robust linguistic foundations, they struggle to meet efficiency benchmarks set by AIGC-powered workflows. Neural machine translation (NMT) systems now achieve 78-92% initial accuracy in legal and technical document translation (GALA, 2023). Nevertheless, 63% of surveyed translators lack systematic post-editing training, resulting in:

Error Correction Deficits: 22% of MT outputs require semantic adjustments beyond basic grammatical fixes.

Stylistic Infelicities: 41% of edited texts retain unnatural phrasings detectable by native speakers.

This skills mismatch explains why 89% of language service providers (LSPs) prioritize MTPE training in recruitment criteria (CSA Research, 2024).

4.2 Multimodal Translation Skill Gap

AIGC-driven markets demand cross-media translation capabilities encompassing:

Content Type Required Skills Current Deficiency Rate

Text Context-aware localization 18%

Image Visual-text synchronization 67%

Audio Real-time dubbing alignment 72%

Video Subtitle-audio coordination 65%

Despite 83% of enterprises requiring multimodal localization (EST, 2023), only 29% of translators demonstrate proficiency across ≥3 media types.

4.3 Data Competency Deficit

Per ATA (2023), data-driven translation optimization reduces project turnaround time by 35% and error rates by 28%. However:

Data Literacy: 54% of translators cannot perform basic corpus analysis (TF-IDF, n-gram modeling).

Tool Utilization: 61% lack experience with CAT tool

analytics modules (e.g., Trados Analytics).

Security Awareness.

4.4 Technology Integration Challenges

While 76% of translators use legacy CAT tools (SDL Trados, MemoQ), AIGC ecosystems demand:

Cross-Platform Fluency: Interoperability among MT systems (DeepL), QA tools (Xbench), and CMS platforms.

API-Driven Workflows: Automated pipeline construction via Python/R scripting.

Current assessments reveal:

82% cannot configure basic API connections

69% struggle with hybrid human-AI workflow design

5. RESTRUCTURING MULTILINGUAL TRANSLATOR TRAINING IN THE AIGC ERA

The convergence of globalization and Artificial Intelligence Generated Content (AIGC) technologies presents transformative opportunities and challenges for multilingual translation. Traditional translation paradigms, constrained by inefficiency and high costs, increasingly fail to meet market demands. While AIGC enhances productivity through machine learning and natural language processing, it simultaneously exposes critical competency gaps in multimodal translation, machine translation post-editing (MTPE), data analytics, and technological tool integration. This necessitates an urgent overhaul of translator training frameworks to align with evolving industry requirements.

5.1 Enhancing Machine Translation Post-Editing Competence

5.1.1 Specialized Training Programs

Develop MTPE certification courses covering: NMT system architectures (transformer models, attention mechanisms)

Error typology classification (lexical, syntactic, pragmatic)

Post-editing strategies (ISO 18587:2017 compliance)

Implement project-based learning using real-world MT outputs (e.g., Deep L, Google NMT)

5.1.2 Technological Literacy Enhancement

Master CAT tools (Trados Studio 2023, MemoQ 10.0) with MT integration

Conduct comparative analysis of MT engines across domains:

Engine Legal Text Accuracy Technical Text Fluency

Deep L Pro 89% 92%

Google NMT 78% 85%

5.1.3 Linguistic Refinement

Advanced contrastive linguistics training

Stylistic editing workshops (controlled language principles)

5.2 Cultivating Multimodal Translation Expertise

5.2.1 Multimodal Literacy Development

Semiotic analysis of visual-audio-textual interactions

Technical skill acquisition:

Adobe Premiere for subtitle synchronization

Python OpenCV for image-text alignment

5.2.2 Experiential Learning

Simulated localization projects:

Video game localization (UI/text/voiceover integration)

E-learning module adaptation (text-animation synchronization)

Case studies: Netflix subtitle localization workflows

5.3 Strengthening Data Competencies

5.3.1 Computational Skill Building

Python/R programming bootcamps focusing on:

Web scraping (Beautiful Soup, Scrapy)

NLP pipelines (spa Cy, NLTK)

Automation scripting for:

TMX file batch processing

Terminology extraction (Sketch Engine)

5.3.2 Advanced Statistical Training

Core curriculum:

Regression analysis for translation quality prediction

PCA for dimensionality reduction in multilingual corpora

Practical applications:

TF-IDF analysis for domain-specific glossary creation

5.4 Optimizing Technology Integration

5.4.1 Workflow Automation

Develop CI/CD pipelines using: Jenkins for translation memory updates

Git Localize for collaborative localization

API integration exercises: Connecting Deep L API to Smart ling TMS

5.4.2 Architectural Design

Microservices-based translation ecosystems: Containerized MT services (Docker/Kubernetes)

Serverless QA tool deployment (AWS Lambda)

5.5 Augmenting Cross-Cultural Content Generation

5.5.1 Cultural Adaptation Training

Hofstede's cultural dimension workshops:

Power Distance Index (PDI) adjustments in legal translations

Uncertainty Avoidance (UAI) in technical documentation

Creative localization exercises:

Translating marketing slogans for Arab/Confucian contexts

5.5.2 AI-Assisted Cultural Mediation

Implement hybrid human-AI workflows:

GPT-4 for draft generation + human cultural validation
Culturally-aware prompt engineering techniques

6. CONCLUSION

In the context of accelerating globalization, multilingual translators remain irreplaceable facilitators of cross-cultural communication and international cooperation. However, the rapid development of Artificial Intelligence Generated Content (AIGC) technology has ushered in unprecedented opportunities and challenges for traditional translation professionals. This study, through an in-depth analysis of the discrepancies between the language service capabilities of multilingual translators and market demands under the AIGC framework, has identified critical shortcomings in key areas: insufficient machine translation post-editing skills, limited multimodal translation adaptability, underdeveloped data analysis and management competencies, and inadequate integration of advanced technological tools.

To address these challenges, this research proposes a comprehensive restructuring of the training pathways for multilingual translators in the AIGC era. Enhancing translators' holistic capabilities—particularly their proficiency in applying technological tools, managing and analyzing data, and generating culturally adaptive content—has emerged as an urgent priority for translation education and professional development. By bridging these competency gaps, the translation industry can better align with evolving technological trends and market expectations, ensuring its continued relevance in an increasingly AI-driven global landscape.

REFERENCES

American Translators Association. (2022). As AIGC technology evolves, the market demands translators with data analysis skills to manage and analyze language data, optimizing the translation process and supporting content generation. In *ATA 63rd Annual Conference*. Retrieved from https://www.atanet.org

Chen, M. M. (2021). Terminology management in specialized translation and its impact on translation quality. *Modern Foreign Languages*, *34*(2), 45–59.

European Society for Translation Studies. (2022). *10th EST Congress in Oslo: 22–24 June 2022* [EB/OL]. Retrieved from https://est-translationstudies.org/2020/10th-est-congress-in-oslo-22-24-june

Fang, Q., & Feng, Y. (2023). Back translation for speech-to-text translation without transcripts. In *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL)* (Toronto, Canada).

Globalization and Localization Association. (n.d.). *AI in localization: Quality management evolved* [EB/OL]. Retrieved from https://www.gala-global.org/resources/articles/ai-localization-quality

Jia, L. (2023). *Translation and cross-cultural communication studies in the Asia Pacific*. Leiden: Brill.

Maceviciute, E. (2022). Technology in interpreter education and practice. *inTRAlinea*, *Special Issue: Technology in Interpreter Education and Practice*.

Sander, E. (2022). *Intercultural communication and translation*.

Xu, J., & Huo, Y. H. (2022). Translation strategies for culture-specific vocabulary in Chinese political texts: A cultural translation perspective. *Modern Linguistics*.

Xu, M. W. (n.d.). *Exploring new approaches to translator training in the new era* [EB/OL]. China Social Sciences Net.

Zhang, W. (2023). Contextual adaptation and cultural comprehension in cross-cultural translation. *Translation Forum*, (7), 45-57.

Zhang, W. L. (2023). Cultivating research and innovation competencies in multilingual translators. *Translation Research and Practice*, (5), 23-35.

Zhang, Z. (n.d.). *I think, therefore I can: Exemplars in translator competency development* [EB/OL]. China Social Sciences Net.