

Article

Study on Talent Cultivating for English Live Streaming in Cross-Border E-Commerce from the Perspective of Eco-Translatology: Implications from Translation of Public Signs in Jieyang City

Xiaojuan Zeng ¹ and Ligu Shi ^{2,*}
¹ School of International Business and Language Studies, Guangdong University of Science and Technology, Dongguan, China

² College of Advanced Manufacturing, Guangdong University of Technology, Jieyang, China

* Correspondence: Ligu Shi, College of Advanced Manufacturing, Guangdong University of Technology, Jieyang, China

Abstract: This study investigates the current status of Chinese-English translation of public signs in Jieyang City, Guangdong Province, from the perspective of Eco-Translatology, and draws implications for talent cultivation in cross-border e-commerce live streaming. Through field investigation and comprehensive corpus analysis of 487 public signs, this research identifies prevalent translation issues, including spelling errors, grammatical mistakes, improper word choice, cultural misinterpretations, and communicative failures. Adopting a three-dimensional analytical framework encompassing the linguistic, cultural, and communicative dimensions of Eco-Translatology, the study systematically examines how each dimension of translation failure corresponds to specific competency gaps in live streaming talent. The findings reveal that the majority of translation errors stem from inadequate translator competence, a lack of standardized guidelines, and insufficient consideration of the target cultural context—precisely the same challenges facing cross-border e-commerce live streaming practitioners today. Based on these empirical findings, the study proposes a robust three-dimensional talent cultivation framework for cross-border e-commerce live streaming, encompassing: (1) linguistic dimension training emphasizing professional terminology, pronunciation accuracy, and grammatical precision; (2) cultural dimension training focusing on cross-cultural awareness, local cultural knowledge, and culturally appropriate expression; and (3) communicative dimension training developing interactive engagement skills, persuasive strategies, and real-time adaptation abilities. Ultimately, this research contributes a novel theoretical perspective linking translation studies to emerging industry talent needs and provides practical guidance for educational institutions seeking to cultivate highly skilled cross-border e-commerce live streaming professionals.

Keywords: eco-translatology; e-commerce; live streaming; talent cultivation; translation studies; public signs

Received: 15 May 2026

Revised: 23 June 2026

Accepted: 05 July 2026

Published: 12 July 2026



Copyright: © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

1.1. Research Background

Cross-border e-commerce live streaming has emerged as a transformative force in global digital trade [1]. As a dynamic integration of e-commerce operations and real-time video broadcasting, live streaming enables brands to engage directly with international consumers, showcase products interactively, and drive purchasing decisions in real time. Industry data reveals that e-commerce operational, live streaming, and customer service positions have experienced rapid growth, signaling a rapidly expanding talent market with urgent demands for qualified professionals. However, the development of this

industry is significantly constrained by the shortage of talent possessing both language proficiency and live streaming competencies. Research indicates that practitioners exhibit notable deficiencies in listening and speaking abilities, while insufficient learning motivation and limited practical opportunities further exacerbate the gap between talent quality and industry requirements. Language-related roles—including real-time interpretation, subtitle localization, cultural adaptation of promotional content, and interactive communication with international audiences—require competencies that overlap substantially with those of professional translators.

Concurrently, the field of Translation Studies has witnessed paradigm shifts that offer valuable frameworks for understanding these emerging competency requirements. Eco-Translatology, first proposed by Hu Gengshen and further developed over the past two decades, conceptualizes translation as an adaptive and selective process occurring within a complex ecosystem comprising source text, target text, translator, and the linguistic and cultural environments [2]. The core principle of Eco-Translatology posits that successful translation requires adaptive selections across three interconnected dimensions: linguistic, cultural, and communicative. This multidimensional framework has proven particularly effective in analyzing public signs translation across various Chinese cities, revealing systematic patterns of translation failures that mirror the competency challenges facing e-commerce live streaming professionals.

1.2. Research Significance

This study addresses a significant gap at the intersection of translation studies and emerging industry talent development. While substantial research has examined public signs translation quality in Chinese cities, and separate studies have investigated talent cultivation models for e-commerce, few studies have systematically applied translation theories to inform talent cultivation for live streaming professionals. This study is the first to draw explicit connections between translation competence, as analyzed through the lens of Eco-Translatology, and the competency requirements for e-commerce live streaming talent.

The significance of this research is threefold. First, it provides empirical evidence from a comprehensive analysis of 487 public signs in Jieyang City, offering detailed categorization of translation failures across the three eco-translatological dimensions. Second, it demonstrates how the three-dimensional framework—originally developed for translation analysis—can serve as an analytical tool for diagnosing competency gaps in live streaming professionals, who effectively function as real-time translators and cultural mediators. Third, it proposes a theoretically grounded, practically applicable talent cultivation framework that educational institutions can implement to better prepare students for careers in e-commerce live streaming.

1.3. Research Objectives

This study aims to achieve the following objectives in a systematic and analytical manner:

1. To investigate and categorize translation errors in public signs in Jieyang City using the three-dimensional framework of Eco-Translatology;
2. To identify the causes of translation problems and analyze how each corresponds to specific competency gaps in e-commerce live streaming professionals;
3. To align the three-dimensional analytical framework with competency requirements for live streaming talent;
4. To propose a talent cultivation framework for e-commerce live streaming, incorporating curriculum design, pedagogical strategies, and assessment methods based on eco-translatological principles.

2. Literature Review

2.1. Theoretical Foundations: Eco-Translatology

Eco-Translatology represents an innovative approach to translation studies that applies ecological principles to the analysis of translation phenomena. Emerging from Hu Gengshen's foundational work on "Translation as Adaptation and Selection" and systematized in his monograph *Eco-Translatology: Construction and Interpretation*, the theory has established itself as a distinctive research paradigm within Chinese Translation Studies [3]. Underpinned by the isomorphic metaphor between translation ecology and natural ecology, Eco-Translatology focuses on the "three-life" theme—text life, translator survival, and translation ecology—and proposes core concepts including "translation as adaptation/selection," "translator-centeredness," and the "translator community."

The theory's most widely applied analytical tool is the three-dimensional transformation framework, which requires translators to make adaptive selections across:

- The Linguistic Dimension, concerning the formal aspects of language including vocabulary, grammar, syntax, and textual organization;
- The Cultural Dimension, addressing cultural connotations, values, and references embedded in the source text and their appropriate rendering in the target text;
- The Communicative Dimension, focusing on the pragmatic functions of translation and its effectiveness in achieving intended communicative goals within the target language community.

This three-dimensional framework has been extensively applied to public signs translation research. Studies of public signs in various Chinese cities have demonstrated the framework's utility in diagnosing translation failures and guiding improvement strategies. Importantly, the same three-dimensional framework corresponds directly to the core competencies required for successful cross-border e-commerce live streaming, where practitioners must simultaneously manage accurate product description, culturally sensitive presentation, and real-time audience engagement [4].

2.2. Cross-Border E-Commerce Live Streaming: Industry Development and Talent Demands

Cross-border e-commerce live streaming represents the convergence of two major trends in global digital commerce. The COVID-19 pandemic accelerated the shift toward remote and virtual commerce, making live streaming an indispensable tool for international marketing and sales [5]. Practitioners use platforms such as Alibaba International Station, TikTok Shop, Amazon Live, and various regional platforms to showcase product features, address real-time customer inquiries, and facilitate transactions instantaneously.

The talent demands of international e-commerce live streaming differ significantly from traditional e-commerce roles. Research reveals substantial competency gaps in the current talent pool. A survey-based study found that practitioners exhibit significant deficiencies in listening and speaking abilities, with discrepancies between learning motivation, practical opportunities, and professional requirements. These findings highlight the urgent need for systematic talent cultivation approaches that integrate language training with industry-specific competencies.

2.3. Eco-Translatological Applications in Translation Education and Related Fields

The application of Eco-Translatology extends beyond translation quality analysis to translation education and talent cultivation [6]. Research on legal translation talent cultivation has drawn on Eco-Translatology's core concepts including "translator-centeredness," "self-adaptation," and "post-event penalty" to develop training models for legal translators. Similarly, the "EPMI" (Ecosystem-based, Practice-oriented, Multidisciplinary, and Industry-integrated) cultivation model for English majors preparing for e-commerce language service roles reflects eco-translatological principles by emphasizing the dynamic adaptation between educational ecosystems and industry environments.

However, existing research on translation-oriented talent cultivation has not systematically addressed the specific requirements of e-commerce live streaming. Most studies focus on general translation competence or traditional interpreting skills, leaving a gap in understanding how foundational translation competencies transfer to the live

streaming context where practitioners must produce culturally appropriate, communicatively effective output in real time. This study aims to bridge that gap by explicitly linking the three-dimensional framework to live streaming competency requirements.

2.4. Public Signs Translation as an Analytical Lens

Public signs translation has been extensively studied across Chinese cities, providing a rich body of empirical data on translation failures and their underlying causes. Research in major metropolitan areas such as Beijing, Shanghai, and Guangzhou has identified systematic patterns of errors. Studies of regional cities including Shanghai and Nanning have revealed that while error manifestations vary, underlying causes—lack of standardization, insufficient translator training, inadequate quality control—remain consistent [7].

The eco-translatological analysis of public signs translation provides a particularly useful lens for examining foundational translation competence because public signs represent a relatively constrained translation genre with clear functional purposes. Failures in public signs translation directly reflect deficiencies in the translator's ability to make adaptive selections across the three dimensions. Moreover, the same deficiencies directly parallel the competency gaps observed in international e-commerce live streaming practitioners [8].

3. Methodology

3.1. Research Design

This study employs a multi-phase research design integrating empirical data collection, systematic error analysis, and theoretical framework development [5]. Phase I involves field investigation and corpus building of public signs in Jieyang City. Phase II comprises error identification and categorization using a three-dimensional eco-translatological framework. Phase III involves mapping identified errors and their underlying causes to corresponding competency gaps in international e-commerce live streaming. Phase IV synthesizes findings into a comprehensive talent cultivation framework.

3.2. Data Collection

Field investigation was conducted across major public areas in Jieyang City, Guangdong Province, from December 2025 to April 2026. The research team systematically photographed and documented English translations of public signs in various locations, including transportation hubs, public facilities, tourist attractions, commercial areas, and urban infrastructure. A total of 487 public signs were documented. Each sign was recorded with its location, type, original Chinese text, and relevant contextual information such as sign size, placement location, and apparent sign age [9].

3.3. Analytical Framework

The analysis was structured across three dimensions, as established in prior research, following the principles of Eco-Translatology [3].

The linguistic dimension analysis emphasized spelling accuracy, capitalization consistency, grammatical correctness including syntax and word forms, lexical appropriateness and register, as well as punctuation and formatting [10].

The cultural dimension analysis addressed cultural connotations and sensitivity, the handling of culture-specific items, politeness strategies, face-saving expressions, and the avoidance of culturally inappropriate or offensive language [8].

The communicative dimension analysis prioritized clarity and comprehensibility for English speakers, consistency across similar signs, functional equivalence with the Chinese source text, and effectiveness in achieving intended communicative purposes [11].

3.4. Mapping to Live Streaming Competencies

For each identified error category, a systematic mapping procedure was applied to determine corresponding competency requirements for professionals in e-commerce live

streaming [12]. Two independent researchers with expertise in translation studies and e-commerce education conducted the mapping, resolving disagreements through discussion and consultation with a third expert.

4. Findings and Analysis

4.1. Overview of Public Signs Translation Status in Jieyang

Among the 487 public signs documented in Jieyang City, a notable issue is the limited presence of accurate English translations [2]. Approximately two-thirds of the signs (about 325 signs, or 66.8%) either lack English translations entirely or substitute them with Pinyin (Romanized Chinese) instead of proper English. This approach undermines the communicative function of bilingual signage and highlights a significant deficiency in translation awareness or available resources.

The remaining 162 signs (33.2%) include some form of English text. However, the quality of these translations is generally unsatisfactory. Only 55 signs (11.3% of the total 487) are deemed acceptable or of good quality, while the majority—107 signs (22.0% of the total)—exhibit various translation errors [5].

An analysis of the 107 problematic English signs using the three-dimensional framework of Eco-Translatology indicates that linguistic dimension errors are the most prevalent, comprising 58.9% of all identified issues. Communicative dimension errors account for 28.1%, while cultural dimension errors represent 13.0%.

4.2. Linguistic Dimension: Error Categories and Corresponding Live Streaming Competencies

4.2.1. Spelling Errors

Spelling errors are the most frequent type of linguistic issues, comprising 31.2% of all identified problems within the linguistic dimension. Examples from Jieyang include: "Fire Fighting Equipment" written as "Fire Fighting Equipement"; "Attention" written as "Attenion"; "Entrance" written as "Enterance"; and "Caution" written as "Causiton".

Relevance to live streaming competencies [6]. Spelling errors in public signs highlight a lack of attention to detail, insufficient proofreading, and incomplete understanding of English spelling conventions. In live streaming for e-commerce, such errors are most evident in on-screen text overlays, product descriptions shown during streams, and captions or subtitles.

4.2.2. Grammatical Errors

Grammatical errors constitute 22.8% of linguistic dimension issues and encompass challenges such as incorrect word forms, improper verb-object collocations, tense inaccuracies, and article omissions [1]. Examples include: "No Smorking" instead of "No Smoking"; "Please Keep Cleanly" instead of "Please Keep Clean"; "This Door Will Locked" instead of "This Door Will Be Locked"; "Take Umbrella" instead of "Take an Umbrella".

Grammatical errors in live streaming are particularly significant, as spoken English must be delivered spontaneously without the benefit of editing [9]. A live streamer who frequently produces ungrammatical sentences risks being perceived as unprofessional and may inadvertently confuse international audiences.

4.2.3. Improper Word Choice

Inappropriate lexical selection accounts for 18.5% of linguistic dimension errors. Examples include using "WC" for public toilets, translating the source term Canjiren Tongdao as "Disabled Channel" rather than "Wheelchair Accessible," and using "Please Take Care of Your Children" for Qing Qianhao Haitong instead of more precise alternatives.

Correspondence to live streaming competencies: Word choice errors reflect limited vocabulary range and insufficient awareness of register and appropriateness. In live streaming, improper word choice can be particularly damaging due to the commercial stakes involved.

4.2.4. Pinyin Substitution and Formatting Inconsistencies

Pinyin substitution, such as using "Guangchang" instead of "Square" or "Yiyuan" instead of "Hospital," constitutes 15.4% of linguistic dimension errors. Additionally, inconsistent capitalization and formatting contribute to 12.1% of linguistic dimension errors.

The issue of Pinyin substitution highlights a fundamental misunderstanding of purpose, akin to live streamers relying on culturally opaque expressions. Similarly, inconsistent formatting mirrors irregularities in live stream presentations, which can undermine professionalism and audience trust.

4.3. Cultural Dimension: Errors and Live Streaming Competencies

Cultural dimension errors, representing 13.0% of all identified issues, may have implications that surpass their apparent frequency. The analysis categorized these errors into several distinct types [3, 11].

4.3.1. Cultural Insensitivity

Examples include "Accessible Restroom" instead of "Disabled Toilet," "Overseas Visitor Registration" instead of "Foreigners Registration," and the use of direct translations of Chinese idioms [4, 10].

Cultural insensitivity in public signs can alienate international visitors. Similarly, in live streaming contexts, such insensitivity may result in customer loss [10, 12]. Streamers who use terminology that disregards cultural sensibilities risk damaging their brand and losing their audience.

4.3.2. Cultural Misinterpretation

Examples include the direct translation of the term Wenming Ruce as "Civilized Toilet Use" and translations that presume cultural knowledge unfamiliar to international visitors [3].

Cultural misinterpretation may unintentionally convey unintended meanings. For instance, a streamer employing humor suitable for Chinese audiences might confuse or inadvertently offend international viewers.

4.3.3. Missing Cultural Adaptation

The absence of necessary cultural context for local concepts and the insufficient consideration of varying cultural expectations regarding personal space, queuing, and public behavior can lead to misunderstandings and reduced effectiveness [12].

Live streaming demands continuous cultural adaptation, including knowing when to clarify local contexts, avoiding culturally specific references when inappropriate, and effectively bridging cultural gaps to engage both the source culture and the target audience without causing alienation.

4.4. Communicative Dimension: Errors and Live Streaming Competencies

4.4.1. Ambiguity and Unclear Meaning

Ambiguous translations constitute 41.2% of errors within the communicative dimension. Examples include phrases such as "No Littering Randomly," "Carefully Slip and Fall Down," and "Please Do Not Disturb Flowers and Plants."

Relevance to live streaming competencies: Ambiguity in live streaming can critically undermine commercial outcomes. Professionals in this field must ensure exceptional clarity in both pre-prepared scripts and spontaneous interactions with audience inquiries.

4.4.2. Inconsistency Across Similar Signs

Inconsistent terminology for the same concept accounts for 28.7% of communicative dimension errors: terms such as "Exit," "Way Out," and "Out" are used interchangeably, while "Restroom," "Toilet," and "WC" appear inconsistently across facilities.

In live streaming, inconsistent terminology confuses audiences and diminishes professionalism [3, 8]. Establishing standardized terminology and ensuring consistent usage across sessions are essential professional competencies.

4.4.3. Inappropriate Register and Tone

Challenges related to register and tone constitute 18.6% of communicative dimension errors. These include the use of overly formal language in casual contexts, imperatives that may be perceived as impolite, and mismatches between tone and the intended function of the communication [3].

In the context of live streaming, register and tone are essential for achieving success [5, 9]. Professionals in this field must adeptly adjust tone to align with the product category, audience preferences, and platform-specific expectations.

4.4.4. Information Overload or Insufficiency

Providing either an excess or a deficit of information can lead to audience confusion.

Live streaming professionals must carefully assess audience needs in real time, delivering adequate details without causing information overload [8].

5. Discussion: Toward a Three-Dimensional Talent Cultivation Framework

5.1. Underlying Causes of Translation Failures and Their Implications for Training

The eco-translatological analysis of Jieyang's public signs reveals systematic failures that stem from multiple interconnected factors within the translation ecosystem. Each factor corresponds directly to gaps in current approaches to talent cultivation for international e-commerce live streaming.

Translator competence deficits [6, 7]. The prevalence of basic linguistic errors indicates that translators lack sufficient bilingual proficiency. In live streaming, similar competence deficits are evident in the oral fluency and accuracy limitations documented by empirical research. Language-focused training must therefore be intensified and tailored to specific contexts.

Lack of standardization. The observed inconsistencies across similar signs indicate the absence of standardized guidelines and terminology databases. In live streaming, lack of standardized terminology for product specifications reduces professionalism and may lead to compliance risks.

Insufficient quality control. The high frequency of obvious errors suggests inadequate proofreading and quality control mechanisms [1, 3]. In live streaming, analogous quality control failures include insufficient script review, inadequate rehearsal, and lack of post-broadcast evaluation.

Limited cultural awareness. Cultural dimension errors reveal that translators focus primarily on linguistic conversion without adequate consideration of target culture appropriateness [3]. Live streaming professionals similarly require training in cross-cultural communication strategies.

Resource limitations and low prioritization. The substitution of pinyin for proper translation may reflect budget constraints or time pressures [7]. Live streaming operations similarly face resource challenges but must nevertheless ensure high-quality communication.

5.2. A Three-Dimensional Talent Cultivation Framework for Cross-Border E-Commerce Live Streaming

Building upon the analysis presented earlier, this study introduces a comprehensive talent cultivation framework structured around three eco-translatological dimensions. Each dimension integrates specific competencies, aligned training objectives, pedagogical strategies, and assessment methods [5, 9].

5.2.1. Linguistic Dimension Cultivation

Core competencies. Linguistic dimension training emphasizes the development of essential language skills required for professional live streaming: (a) precise English pronunciation with suitable speed, rhythm, and intonation; (b) grammatical accuracy in both prepared scripts and spontaneous interactions; (c) extensive vocabulary tailored to specific products and industries; (d) mastery of register variation appropriate for diverse product categories and audience demographics [1].

Training objectives. Upon completing the training, students should be capable of accurately articulating product specifications without grammatical errors; consistently employing appropriate terminology during live streaming sessions; identifying and self-correcting pronunciation and grammar mistakes in real time; and delivering spoken content that is clear, concise, and engaging [1].

Pedagogical strategies. (1) Conducting intensive language drills targeting problem areas identified through research on public signs; (2) Utilizing shadowing exercises with professionally produced live streaming recordings; (3) Organizing error analysis workshops where students review video recordings of their own live streaming practice sessions; (4) Developing a comprehensive terminology database.

Assessment methods. (1) Implementing live streaming simulations where students present products and are evaluated on linguistic accuracy; (2) Employing portfolio assessments to track progress across multiple streaming sessions; (3) Administering timed tests for terminology recognition and production.

5.2.2. Cultural Dimension Cultivation

Core competencies. Cultural dimension training focuses on developing cross-cultural communication competence: (a) understanding of target market cultural values, communication norms, taboos, and consumer expectations; (b) ability to identify and avoid culturally inappropriate language or references; (c) capacity to adapt promotional messages for cultural resonance; (d) knowledge of target market holidays, customs, and consumer behavior patterns.

Training objectives [5]. By completion of training, students should be able to identify potential cultural challenges in prepared scripts before live delivery; modify language spontaneously to avoid cultural missteps; use culturally appropriate politeness strategies; recognize and respect cultural differences in communication norms.

Pedagogical strategies. (1) Cross-cultural pragmatics modules systematically addressing target market cultural frameworks; (2) Case study analysis of international marketing campaigns that succeeded or failed due to cultural factors; (3) Role-playing scenarios where students simulate live streaming for diverse cultural audiences; (4) Cultural mentor partnerships with native speakers from target markets.

Assessment methods. (1) Cultural sensitivity tests identifying appropriate and inappropriate expressions for specific cultural contexts; (2) Live streaming role-play evaluations with native-speaker raters assessing cultural appropriateness; (3) Reflective writing assignments analyzing cultural adaptation decisions [10, 11].

5.2.3. Communicative Dimension Cultivation

Core competencies. Training in the communicative dimension emphasizes the development of real-time communication effectiveness: (a) the ability to engage audiences through appropriate tone, energy, and interaction strategies; (b) the capacity to respond to audience questions and comments spontaneously and clearly; (c) the skill to manage information flow by providing sufficient detail without causing overload; (d) consistency in terminology and messaging throughout extended streaming sessions.

Training objectives [1]. Upon completing the training, students should be able to sustain audience engagement through dynamic presentations, respond to unexpected questions with clarity and appropriateness, balance prepared content with spontaneous interaction, and maintain a consistent brand voice and product terminology during live streams.

Pedagogical strategies [1, 9]. (1) Real-time response drills to develop the ability to answer unexpected audience questions spontaneously; (2) Live streaming practicums requiring students to conduct actual live streams featuring real products and audience interactions; (3) Post-broadcast analysis sessions to evaluate communicative effectiveness; (4) Peer feedback protocols where students assess each other's live streaming performance.

Assessment methods. (1) Live streaming performance evaluations using rubrics to assess audience engagement, the quality of responses to questions, and message clarity; (2) Audience satisfaction surveys; (3) Conversion tracking where applicable.

5.3. Integrated Training Model: The Three-Dimensional Approach in Practice

The three dimensions interact dynamically in live streaming practice, requiring a successful live streamer to simultaneously manage linguistic precision, cultural relevance, and audience engagement. The cultivation framework integrates these dimensions into a comprehensive training model with distinct structural features.

Modular curriculum structure. The program is divided into core modules addressing each dimension individually, followed by integrated modules where participants apply all three dimensions concurrently in both simulated and authentic live streaming scenarios [11].

Progressive difficulty scaffolding. Training begins with controlled settings, such as scripted presentations and simple product demonstrations, and advances to more complex situations, including spontaneous interactions, intricate technical products, and diverse audience profiles. Error tolerance is gradually reduced to align with professional standards [4].

Industry-education integration. Drawing on established models of collaboration, the framework incorporates real-world projects, guest lectures by experienced live streaming professionals, and internship opportunities with international e-commerce companies.

Technology-enhanced learning [12]. Digital tools, such as live streaming simulation platforms, automated pronunciation feedback systems, and video analytics, are utilized to facilitate efficient skill acquisition.

6. Conclusion

This study has systematically investigated the translation of public signs in Jieyang City through the lens of Eco-Translatology and has drawn implications for talent cultivation in international e-commerce live streaming. The empirical analysis of 487 public signs reveals that approximately two-thirds of the sampled signs either have no English translation or merely present Pinyin (Romanized Chinese) in place of a proper English version, indicating the low coverage of effective English translation. The remaining 107 signs (22.0% of the total) contain various types of translation errors, with linguistic-dimension errors (spelling, grammar, and word choice) being the most prevalent (58.9%), followed by communicative-dimension errors (28.1%) and cultural-dimension errors (13.0%). These problems stem from deficits in translator competence, a lack of standardization, insufficient quality control, and limited cross-cultural awareness, all of which closely parallel the competency gaps observed among practitioners of international e-commerce live streaming.

Theoretically, this study extends the application of Eco-Translatology from translation quality assessment to talent cultivation, demonstrating how the three-dimensional framework (linguistic, cultural, and communicative) can diagnose competency gaps and inform curriculum design. By explicitly linking translation competence with live-streaming competencies, it builds an interdisciplinary bridge between Translation Studies and digital commerce education, offering a rigorous theoretical basis for targeted training measures. Practically, the proposed three-dimensional talent cultivation framework provides educational institutions with actionable guidance: intensive language training for linguistic accuracy, cross-cultural pragmatics modules for cultural appropriateness, and real-time response drills for communicative effectiveness. The framework also advocates industry-education integration, modular curricula, progressive scaffolding, and technology-enhanced learning. For municipal governments and industry stakeholders, adopting such standardized and theoretically grounded training can enhance regional competitiveness in attracting international e-commerce investment and talent, just as high-quality public-sign translation improves a city's international image.

Funding: This study is funded by the 2024 Guangdong University of Science and Technology EdTech Innovation Integrated Teaching Project Team Building: Research Team on the English Live Streaming Talent Cultivation Model for Cross-border E-commerce Based on Person-Job Matching

(Project No.: GKJXXZ2024033). This paper also presents the research findings of the 2025 project of the Jieyang Federation of Social Sciences (Project No. JY25KL05).

References

1. Gengshen, H., "Translation as adaptation and selection," *Perspectives: Studies in Translatology*, vol. 11, no. 4, pp. 283-291, 2003.
2. X. Zhang and W. Zhang, "Research on the High-Quality Development of Agricultural Product Cross-Border E-Commerce Under Rural Revitalization," *Asia Pacific Economic and Management Review*, vol. 1, no. 3, 2024.
3. J. Chen, "The expression of polyphonic city image: A perspective from the linguistic landscape of Beijing's Hutongs," *Language & Communication*, vol. 104, pp. 9-28, 2025.
4. W. Xue and L. Te Chuan, "The Application of Artificial Intelligence in China's Cross border E-commerce Field," *Adv. Artif. Intell. Mach. Learn.*, vol. 4, no. 4, pp. 2837-2848, 2024.
5. S. Dawood, "English-Arabic Localization of Taglines on Food and Beverage Brand Websites: An Eco-Translatological Approach," *Textual Turnings: An International Peer-Reviewed Journal in English Studies*, vol. 5, no. 1, pp. 169-182, 2023.
6. Zhengwei, W., "Enlightenment of Eco-translatology Theory on English Linguistics and Second Language Acquisition," *Journal of Sociology and Education*, vol. 1, no. 6, 2025.
7. A. P. Wibowo and R. D. Kusumawati, "Revamping Video Game Localization Evaluation through Ecocritical Lens: Enhancing the E-Waste Management," *Grenze International Journal of Engineering & Technology (GIJET)*, vol. 10, 2024.
8. J. House, *Translation as communication across languages and cultures*. Routledge, 2015.
9. Y. Ge, "Research on Pattern Recognition of English Online Discussion Text Mining Data Based on Corpus," in *2025 Asia-Europe Conference on Cybersecurity, Internet of Things and Soft Computing (CITSC)*, pp. 491-495, Jan. 2025.
10. A. A. Metwally, "An Analysis of Translation Strategies in Tourism Discourse: A Case Study of Egyptian Governmental Tourism Websites," *Tourism Culture & Communication*, 2026.
11. N. P. R. Primayani, S. A. I. Maharani, and I. N. Udayana, "Translation Techniques In Bilingual Beauty Product Advertisements," *Citizen: Jurnal Ilmiah Multidisiplin Indonesia*, vol. 5, no. 4, pp. 1024-1036, 2025.
12. Q. Zhou, "Study on the Cultivation of Qualified BE Translators from the Perspective of Three-dimensional Transformation Theory," in *3rd International Seminar on Education Innovation and Economic Management (SEIEM 2018)*, pp. 541-544, Jan. 2019.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Publisher and/or the editor(s). Publisher and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.