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Critical Thinking and Foreign Language Teaching: A Comparative Review of International and Domestic Research

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Abstract

Criti-cal thinking has become a vital component of 21st-century core competencies and a key issue in the shift of foreign language education from a "language competency-based" to a "competency-based" orientation. Drawing on literature searches of the Web of Science Core Collection and CNKI, combined with bibliometric and thematic analysis, this paper traces the disciplinary evolution of critical thinking—from philosophical speculation and psychological measurement to pedagogical applica-tion—and, centering on the "domain specificity" debate, compares international and domestic (Chinese) research on critical thinking in foreign language teaching in terms of core themes and shortcomings. International research has made considera-ble progress in theoretical frameworks, assessment tools, instructional interventions, and teacher cognition, yet it tends to privilege general thinking over subject-specif-ic adaptation, short-term interventions over longitudinal tracking, and the student perspective over teachers' perspectives. Domestic research has advanced in localized theory-building, instrument development, and instructional intervention, but suffers from structural imbalances in research subjects, design, and stage coverage, as well as limited empirical response to generative AI. The rapid rise of generative AI has further reshaped this landscape, raising new demands for human–ma-chine collaboration, AI literacy, and ethical governance. Future studies should clarify the mechanisms of language–think-ing interaction, adopt longitudinal and multi-method designs, attend to teachers' criti-cal thinking literacy and assessment capacity, strengthen articulation across education-al stages, and build an operational framework and assessment tools for critical AI literacy in the generative AI era.

Keywords

Critical Thinking; Foreign Language Teaching; Generative Artificial Intelligence; Teacher Cognition; Assessment Tools

1. Introduction

In the 21st century, critical thinking has become a focal point of educational reform worldwide. In China, the National English Curriculum Standards for Senior High Schools (2017 Edition, 2020 Revision) lists "thinking quality" as one of the four core competencies of the English subject (Ministry of Education of the PRC, 2020), while the National Standards for Teaching Quality of Foreign Languages and Literatures incorporates "critical thinking skills" into the core competency requirements for foreign language majors (Higher Education Teaching Steering Committee, 2018). As foreign language education shifts from a "language-ability-oriented" to a "competence-oriented" paradigm, critical thinking is moving from a generic educational goal to a core issue within the discipline. Drawing on a search of Web of Science and CNKI and integrating recent systematic reviews, bibliometric studies, and policy texts, this paper reviews the field along four dimensions: disciplinary evolution, international research, domestic research, and research gaps and future directions.

2. Disciplinary Evolution of Critical Thinking and the Debate on Domain Specificity

2.1. From Philosophical Speculation to the Psychological Turn of Skill Acquisition

The intellectual origins of critical thinking are usually traced to the Socratic method of guided, rigorous questioning (Paul & Elder, 2006).However, its modern discourse begins with Dewey's (1910) concept of "reflective thinking," which reframed critical thinking from philosophical speculation into a cultivable habit of mind. Glaser (1942) then first formally used the term in his doctoral dissertation, proposing that it comprises attitudes, knowledge, and skills, and thereby moving the field toward educational empiricism.

In the mid-to-late 20th century, research entered a psychological phase aimed at deconstructing abstract thinking into measurable, trainable dimensions. Ennis (1962) defined critical thinking as "the correct assessing of statements" and systematized its elements, marking its entry into a psychometric, skill-classification phase. The 1990 Delphi consensus led by Facione (1990) further specified a two-dimensional structure—six core cognitive skills (interpretation, analysis, evaluation, inference, explanation, and self-regulation) plus an independent affective-disposition dimension. Paul and Elder (2001) subsequently proposed the "Elements of Thought -Intellectual Standards-Intellectual Traits" model, turning critical thinking into an operational framework that can be taught and assessed.

2.2. Educational Transformation and the Debate on Domain Specificity

Since the 1950s, critical thinking has transformed into an educational objective. Bloom's (1956) *Taxonomy of Educational Objectives* classified the cognitive domain into six hierarchical levels, placing analysis, synthesis, and evaluation at the higher

end, which implicitly assumed the transferability of general thinking skills. However, as research deepened, McPeck (1981) argued that critical thinking is intrinsically tied to specific domain content—a position known as “domain specificity.” He maintained that all thinking is directed at specific objects, and the standards for judging a claim must be determined by the norms of the relevant discipline. Against this backdrop, critical thinking began to permeate foreign language education. Since the 1990s, with the rising demand for academic English and the emphasis on sociocultural factors in SLA research, critical thinking gradually became a significant issue in foreign language teaching.

3. Review of International Research

Research on critical thinking in the field of international foreign language teaching started early and has accumulated rich findings. Overall, relevant studies mainly revolve around theoretical construction, teaching practice, assessment tools, and teacher cognition. It should be noted that "international research" in this section primarily refers to studies in the context of English as a Foreign/Second Language (EFL/ESL), not necessarily all studies in non-Chinese contexts.

3.1. Research Overview and Core Theme Distribution

To objectively map the current landscape of international EFL critical thinking research, this study utilized the Web of Science Core Collection as the data source, setting the search terms as “critical thinking” and “EFL/ESL,” with a time span from 2015 to 2025. After refining by document type, a total of 389 sample articles were obtained.

As shown in Figure 1, the number of publications remained relatively stable between 2015 and 2020. However, from 2021 onwards, the volume increased significantly, reaching 130 articles in 2025. This growth trajectory mirrors the recent digital transformation in education and the integration of Generative AI in language pedagogy.

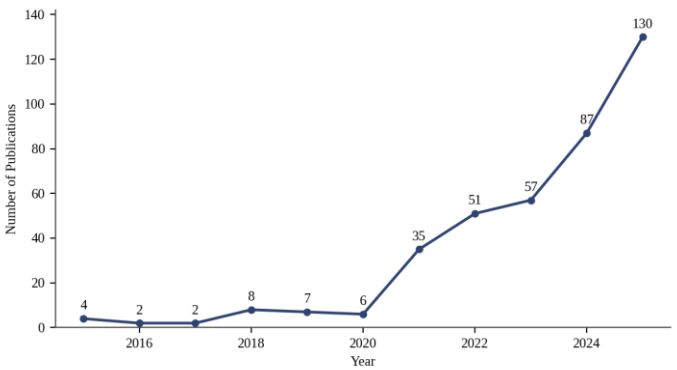

Figure 1. Publication trends of international EFL research (2015–2025)

In terms of disciplinary and thematic distribution, the field exhibits certain interdisciplinary characteristics. At the macro level (Figure2), research primarily belongs to two major disciplines: “Language and Linguistics” (165 articles) and “Education and Educational Research” (134 articles). At the micro-theme level (Figure 3), Multilingual Education (145 articles) is the main research area; meanwhile, the research scope extends to English for Specific Purposes such as Science Education (49 articles), and focuses on metacognitive mechanisms such as Self-Regulated Learning (45 articles). Additionally, Ethical and Trustworthy AI (41 articles) has emerged as a novel hot cluster. Drawing on Sajidin’s (2026) systematic review of 47 articles, current empirical research in this field is mostly concentrated in non-English-speaking countries in Asia (e.g., Iran, China, Indonesia). Although classic theories such as Bloom (1956) and Ennis (1987) remain important foundational frameworks, discrepancies persist in the specific operational definitions and measurement methods of higher-order thinking across different empirical studies.

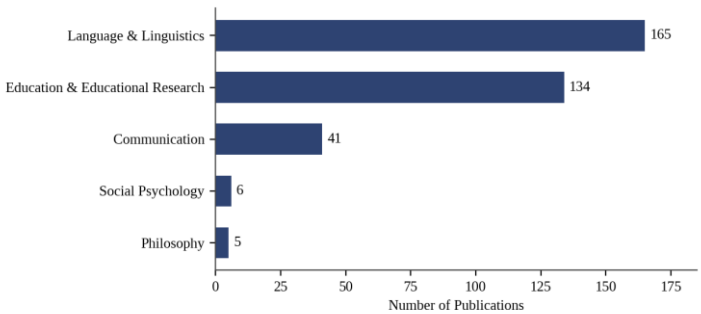

Figure 2. Macro-level disciplinary distribution (top 5)

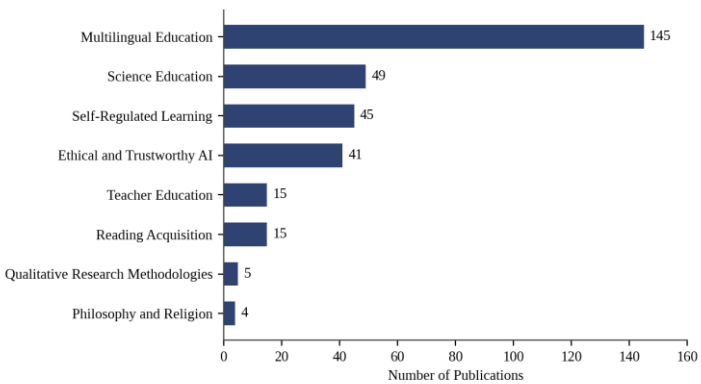

Figure 3. Micro-level thematic clusters (top 8)

3.2. Assessment Tools and Pedagogical Intervention Pathways

In terms of assessment, widely used generic tools include the CCTST (P. A. Facione & N. C. Facione, 1992), the CCTDI (N. C. Facione & P. A. Facione, 1992), and Ennis's (1987) classification system. Because such tools rarely capture dimensions specific to foreign language learning—such as language analysis and discourse

evaluation—some scholars call for adaptive scales grounded in disciplinary tasks, together with cross-contextual validity testing.

Regarding intervention pathways, research findings are often influenced by specific contexts and task designs. The empirical study by Karimi and Veisi (2016) showed that teaching critical thinking has a positive effect on improving EFL learners' reading comprehension. The meta-analysis by Khalili et al. (2024) in the Iranian context further indicated a significant positive correlation between critical thinking and L2 learning, but the effect size is moderated by specific language skills (e.g., listening, speaking, reading, writing, and emotional factors), with the most pronounced effect at the master's level. Sajidin's (2026) systematic review also concluded that combining immersive and integrated instruction yields better results, and that blended learning environments demonstrate consistently positive effects on enhancing critical thinking.

Concurrently, with the proliferation of Large Language Models (LLMs), AI-assisted critical thinking instruction has emerged as a novel research avenue. The qualitative study by Darwin et al. (2023) pointed out that although AI can assist in academic research and data analysis, it easily leads to "cognitive offloading," i.e., over-reliance on tools reducing deep thinking. Furthermore, algorithmic recommendations easily form "echo chamber effects" and have limitations in understanding nuances such as irony and emotion. Zakaria et al. (2025) also cautioned in their systematic review that while AI can improve writing quality, without guidance, it can easily trigger academic integrity risks and weaken independent problem-solving abilities. Therefore, existing research predominantly advocates integrating "AI literacy" into teaching to prevent the cognitive laziness brought about by technology.

3.3. Teacher Cognition and Beliefs

Figure 3 shows that teacher education comprises only 15 articles, indicating that empirical studies targeting foreign language teachers remain a small share of the literature. This aligns with Yuan et al.'s (2022) systematic review of EFL teacher cognition from 2010 to 2020.

Existing studies suggest that EFL teachers generally recognize the value of critical thinking; however, in actual classroom practice, constrained by exam pressures, prescribed curricula, and their own knowledge bases, they often struggle to translate this recognition into pedagogical action. As Yuan et al. (2022) noted, there remains a distinct "gap between rhetorical commitments and classroom reality." Liu and Sihes (2025), examining the Chinese EFL context, further argued that a traditional respect for authority, exam orientation, and insufficient teacher training are important factors constraining pedagogical transformation. Much of the literature describes this tension between "beliefs and behaviors," while intervention studies on how teacher education, action research, and related approaches might promote changes in teachers' pedagogical practices remain scarce.

Overall, international research has established a relatively solid foundation in introducing theoretical frameworks, exploring teaching strategies, and examining teacher cognition, yet three deficiencies remain. First, research has overemphasized generic critical thinking at the expense of disciplinary adaptation; most studies adopt generic frameworks and rarely address the intertwined linguistic and cognitive demands of foreign language learning. Second, studies tend to rely on short-term interventions rather than long-term tracking, and often provide insufficient evidence on the reliability and validity of assessment tools or on discipline-specific dimensions. Third, research has prioritized students over teachers, leaving teachers' critical thinking literacy, classroom transformation mechanisms, and assessment practices underexplored. These gaps point to directions for future research.

4. Review of Domestic Research

4.1. Research Landscape from a Bibliometric Perspective

Using CNKI as the data source (1986-2025, PKU Core and CSSCI), this study yielded 506 valid research articles after manually excluding non-research literature such as book reviews and conference notices. Domestic research exhibits the following characteristics:

1) Publication Trends and Policy Drivers.As shown in Figure 4, domestic research was initially driven by the call to address the "absence of critical thinking" (Huang, 1998). From 1997 to 2006, the field was in its infancy, averaging less than two articles per year. With subsequent national educational reforms, publications climbed steadily, reaching a historical peak in 2014 with 40 articles, and have since stabilized at approximately 30 articles per year. Recently, the academic community has begun to call for upgrading the educational objective from basic "critical thinking" to higher-order "advanced thinking" (Wen, 2026).

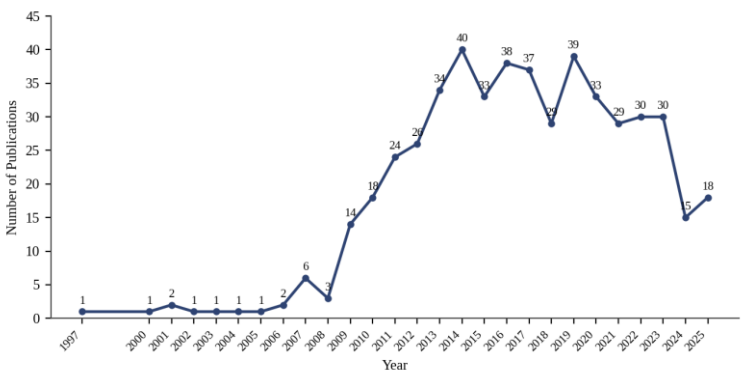

Figure 4. Publication trends of domestic research (1997–2025)

2)Disciplinary Distribution and Cross-domain Radiation. "Foreign Languages and Literatures" constitutes the absolute majority, with 431 articles (74.05%). Notably, the field shows a clear spillover effect into "Secondary Education" (28 articles) and

"Educational Management" (13 articles), indicating an initial trend of cross-stage and interdisciplinary integration.

3)High-frequency Keywords and Research Foci. Figure 5 shows the top 20 keywords. "Critical thinking competence" (104 articles) and "cultivating critical thinking competence" (55 articles) are clearly dominant, indicating a consolidated understanding of the concept in domestic research. In pedagogical contexts, "College English" (23 articles), "English Majors" (19 articles), and "Writing Teaching" (13 articles) appear most frequently, suggesting that college public English, English majors, and writing-based instruction remain the main sites for critical thinking interventions.

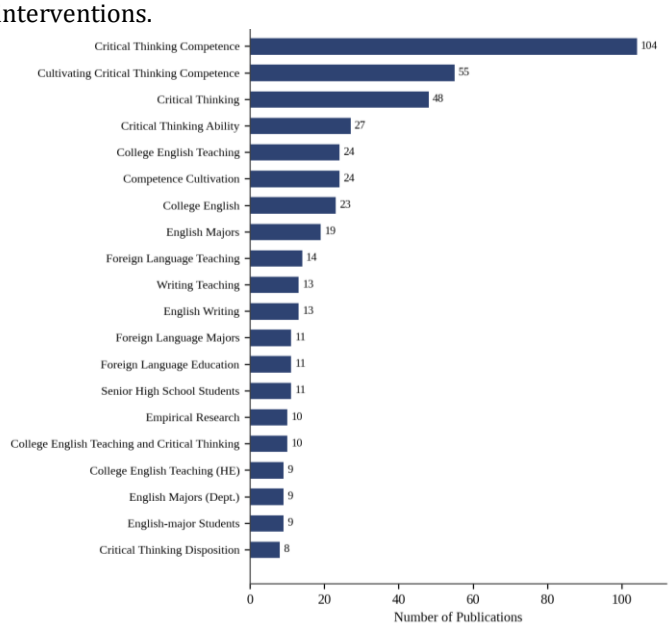

Figure 5. Distribution of high-frequency keywords in domestic EFL research

4.2. Core Research Themes and Knowledge Base

Among highly cited domestic studies, Wen et al. (2009) and Sun (2011) are the most influential, with 2,124 and 1,194 citations respectively according to CNKI. Early research relied on adapting foreign scales, such as Luo and Yang's (2002) revision of the CCTST. Subsequently, Wen et al. (2009) constructed a localized hierarchical theoretical model and developed the corresponding assessment instrument for Chinese foreign language undergraduates, providing a measurement benchmark across liberal arts disciplines.In terms of teaching practice, writing courses constitute one of the primary pedagogical contexts. Studies in this area have examined the interaction between critical thinking and language factors (Gao & Wen, 2017) and the backwash effect of integrated instruction on argumentative writing (Wang, 2019). Oral and debate courses are also regarded as key vehicles, with Lin (2012) examining their impact using reflective journals. Additionally, reading, translation, and ideological-political education have gradually integrated critical thinking cultivation

into their designs, expanding the pedagogical space for critical thinking education.

4.3. Limitations of Existing Domestic Research and Future Prospects

Despite these achievements, domestic research still faces four structural limitations requiring future breakthroughs:

1)Research Subjects: “Emphasizing Students over Teachers” and “Emphasizing Pedagogical Interventions over Teacher Literacy.”Among the 506 core articles, only 10 have titles containing both “teacher” and “critical thinking,” with merely 6 genuinely examining foreign language teachers' own critical thinking literacy. Teachers are mostly treated as agents of pedagogical intervention, leaving their beliefs, assessment literacy, and thinking levels as instructional leaders underexamined.

2)Research Design: “Emphasizing Short-term Cross-sectional Studies over Long-term Longitudinal Tracking.”Only three studies explicitly include “tracking” or “longitudinal” in their titles, indicating that most remain at the level of short-term, single-semester interventions. Wen et al. (2018) offer a rare long-term exploration, yet it is confined to foreign language majors. Short-term cross-sectional data are thus insufficient to reveal the deeper developmental mechanisms of language learning and thinking.

3)Research Context: “Emphasizing Traditional Classrooms over Generative AI.” Only 4 articles, all published after 2023, explore foreign language critical thinking in relation to AI or ChatGPT. The redefinition of critical thinking in human–AI collaboration, the risk of cognitive laziness caused by AI dependence, and the assessment of students' critical use of AI-generated content have yet to receive systematic empirical attention.

4)Educational Stage Distribution: “Emphasizing Higher Education over Basic Education.”Literature classified under “Foreign Languages and Literatures” accounts for 431 articles, whereas only 28 explicitly belong to "Secondary Education" (4.81%). Critical thinking instruction in basic education remains underdeveloped and lacks a vertically connected cultivation system across educational stages.

5. Conclusion and Prospects

This paper reviews critical thinking research in foreign language teaching, tracing a shift from debating “whether to cultivate it” to exploring “how to cultivate and assess it.” International research has solid theoretical and intervention frameworks but overemphasizes generic logic and short-term interventions. Domestic research has progressed in localized models and instruments but suffers from imbalances in subjects, designs, and educational stages.

Generative AI is reshaping the context for critical thinking. It is no longer confined to text comprehension; learners must evaluate AI-generated content for reliability, bias, and boundaries of use. While AI can assist with mechanical language tasks, it may

weaken deep processing. Thus, AI should be viewed within a "human-led, machine-assisted" paradigm, where critical thinking helps learners pose layered questions and verify algorithmic outputs rather than equating them with personal cognition.

Future research should clarify language–thinking interactions through longitudinal designs, break down the barrier between higher and basic education, and enhance teachers' assessment literacy. Furthermore, it is imperative to construct a critical AI literacy framework covering information authentication, bias identification, and ethical judgment. Ultimately, the field must return to its fundamental mission: enabling learners to form prudent judgment and responsible expression in real language use.

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