

Integrating terminology management in developing student translators' competence

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Abstract

The current debate in translation pedagogy highlights the gap between learners' general language proficiency and the demands of professional translation, particularly in maintaining terminological consistency. This study investigates how terminology management contributes to the development of student translators' competence in technology-mediated translation contexts. A systematic literature review was conducted following the PRISMA framework, analyzing 23 selected studies published between 2021 and early 2026. The findings indicate that terminology management functions as an integrative competence connecting linguistic knowledge, technological literacy, and professional practice. Students' difficulties in maintaining consistent terminology are often associated with limited terminological awareness and insufficient exposure to structured professional workflows, while corpus-based resources and AI-assisted technologies support both learning and evaluation. However, technological integration still requires critical human supervision when automated outputs are evaluated. These findings suggest that translation pedagogy, particularly in English language education and translator-training contexts, should prioritize structured terminology instruction supported by digital resources to better prepare students for professional translation practice.

Keywords

terminology management, translation competence, digital pedagogy, English language education, systematic literature review

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INTRODUCTION

The rapid development of digital technologies has significantly transformed translation studies, shifting it from a primarily language-based activity into a practice closely integrated with technological tools. In recent years, the increasing use of machine translation systems, corpus-based resources, and artificial intelligence has reshaped how translation is performed and evaluated. These technological developments have also redefined the competencies required of translators. In this context, technological proficiency is no longer optional but has become an essential component of professional translation practice (Duś, 2025). In addition, translators are increasingly expected to develop machine translation literacy and to engage critically with AI-driven tools to ensure the accuracy and reliability of their work (Ehrensberger-Dow et al., 2023). These shifts highlight the need to reconsider how translation competence is conceptualized and taught, particularly within English language education contexts that incorporate translator training and English for Specific Purposes (ESP) instruction.

In English language teaching contexts, translation is often positioned as a supplementary skill rather than a central competence. However, recent studies suggest that student translators continue to face significant challenges in achieving adequate proficiency. This difficulty is further complicated by the tendency of current translation pedagogy to overlap vocational translator training with general English as a Foreign Language (EFL) classroom. Mekheimer (2026) identifies notable gaps in both linguistic and intercultural competence among learners in English as a Foreign Language program. These limitations affect students' ability to produce translations that are accurate, coherent, and contextually appropriate. Furthermore, comparisons between novice translators and professionals reveal persistent issues in maintaining terminological consistency. This issue is particularly evident in the use of collocations, where students tend to produce inconsistent or less natural equivalents, which ultimately affects translation quality (Leńko-Szymańska & Biel, 2023). These findings indicate that translation competence cannot be fully developed through general language instruction alone, but requires structured pedagogical frameworks tailored specifically for language education settings where translation serves as an instructional tool.

One of the key factors influencing translation quality is terminology management. Rather than being a simple collection of technical terms, terminology represents a structured system of concepts that are closely related to specific domains. Within translation studies, this is often associated with Language for Specific Purposes, which requires translators to possess both domain knowledge and the ability to manage specialized terminology effectively (Clouet, 2021). Platonova (2022) further emphasizes that terminological awareness enables translators to analyze, select, and apply domain-specific terms appropriately across different contexts. Without this awareness, students tend to rely on surface-level translation strategies, which often result in inconsistency and inaccuracy. Therefore, terminology management plays a crucial role in bridging general language competence and professional translation practice, particularly for student translators who are still developing their expertise. This perspective also aligns with contemporary competence-oriented approaches in translation pedagogy, which position terminology handling, technological literacy, and strategic resource management as interconnected dimensions of translator competence (Plaza-Lara, 2022; Prieto Ramos, 2024).

Despite the growing body of research on terminology, most existing studies focus on specific domains, such as medical (Lazer-Pankiv & Pysmenna, 2021) and legal translation (Al-Tarawneh et al., 2024). While these studies provide valuable insights into domain-specific practices, they often remain limited in scope and do not offer a comprehensive perspective on how terminology management can be systematically integrated into translation education. In addition, studies that combine terminology practices with technological developments, such as corpus tools and artificial intelligence-based resources, within a unified pedagogical framework are still relatively limited. This fragmentation indicates a clear gap in the literature, particularly in relation to the development of student translators' competence in English language programs. A more integrative perspective is needed to understand how terminology management, technology, and pedagogy can work together in supporting translation learning.

To address this gap, this study aims to examine the role of terminology management in developing student translators' competence through a systematic literature review. By analyzing 23 selected studies published between 2021 and early 2026, this research explores how terminology practices, technological tools, and pedagogical approaches contribute to translation competence. More specifically, this review seeks to provide a more integrative perspective by explaining how terminology management functions not merely as an isolated lexical skill, but as an integrative competence that connects domain knowledge, technological literacy, and strategic decision-making within language education. The study also seeks to identify recurring patterns and challenges in terminology use, as well as the potential of digital resources in supporting translation learning. The findings are expected to provide a more comprehensive understanding of terminology management in contemporary translation pedagogy and to offer practical implications for improving translation teaching, particularly in English language education contexts.

RESEARCH METHOD

This study employs a Systematic Literature Review (SLR) to identify, synthesize, and evaluate existing studies on terminology management and its role in developing student translators' competence. The review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure a transparent, systematic, and replicable selection process. The use of this framework is essential for maintaining the methodological rigor of a literature-based study, as it allows the selection procedure to be clearly documented and evaluated. By applying a structured review process, this study seeks to minimize potential bias and provide a comprehensive overview of current developments in translation pedagogy and technology. This approach is particularly suitable for integrating findings from various specialized domains and constructing a more coherent understanding of terminology management in translation education. The review incorporates multiple forms of evidence, including empirical studies, theoretical papers, corpus-based analyses, curriculum studies, and review articles. These different forms of evidence were synthesized according to their respective analytical contributions, with empirical studies primarily informing pedagogical and competence-related claims, while theoretical studies were used to support conceptual interpretation and framework development.

Data sources and search strategy

The data collection was conducted in March 2026 using the Scopus database as the primary source of academic literature. Scopus was selected due to its extensive coverage of high-quality peer-reviewed journals in linguistics and social sciences, as well as its strict indexing standards which enhance the reliability of the retrieved data. In addition to the primary Scopus search, several supporting references from Google Scholar and Sinta-indexed journals were consulted to strengthen contextual and pedagogical discussions. However, these supporting references were not included in the final synthesis corpus or PRISMA screening process. To support the search process, the Publish or Perish software was utilized to facilitate the identification and retrieval of relevant publications.

The search strategy involved a combination of keywords related to terminology and translation using Boolean operators such as AND and OR. The primary search strings included: ("terminology management" OR "terminological competence" OR "terminological awareness") AND ("translation competence" OR "translator training" OR "translation pedagogy"), as well as supplementary combinations involving terms such as "translation technology," "computer-assisted translation," "machine translation literacy," and "translation performance." These combinations were designed to capture studies discussing terminology practices, technological integration, and competence development within translation education contexts.

The publication period was limited to 2021 to early 2026 to ensure that the review reflects recent developments in translation pedagogy and digital technology. This period represents a phase of rapid transformation, particularly due to the widespread adoption of machine translation systems and artificial intelligence. The search process primarily focused on peer-reviewed journal articles, particularly within linguistics, translation studies, language education, and related social science fields. Although the review mainly prioritized English-language publications, several highly relevant non-English studies were retained due to their direct contribution to discussions of terminology management and translator competence development. The initial search across all keyword combinations generated approximately 1,500 records. After executing the initial retrieval, a deduplication process was performed using Publish or Perish software to compile a clean database of unique entries, which was then systematically compiled for the subsequent title and abstract screening stage.

Screening and selection process

The screening process was conducted in several systematic stages in accordance with the PRISMA protocol. During the identification stage, records retrieved from the primary database search were compiled, and duplicate records generated from overlapping keyword combinations were removed. This process resulted in 1,500 records for title and abstract screening. In the screening stage, the titles and abstracts of these records were reviewed against the focus of the study. A total of 1,416 records

were excluded because they were not directly related to terminology management, translator competence, or translation pedagogy. As a result, 84 studies were identified as potentially relevant and selected for full-text evaluation.

In the eligibility stage, the full texts of the 84 selected articles were carefully examined to assess their relevance and methodological quality. A total of 61 articles were excluded for four main reasons: (1) not relevant to terminology management, (2) not focused on translation training, (3) non-journal publication, or (4) unclear methodology. After applying the inclusion and exclusion criteria, a final set of 23 studies was selected for qualitative synthesis. Supporting references used for contextual comparison and discussion were not included in the synthesis corpus. The study selection process is illustrated in Figure 1.

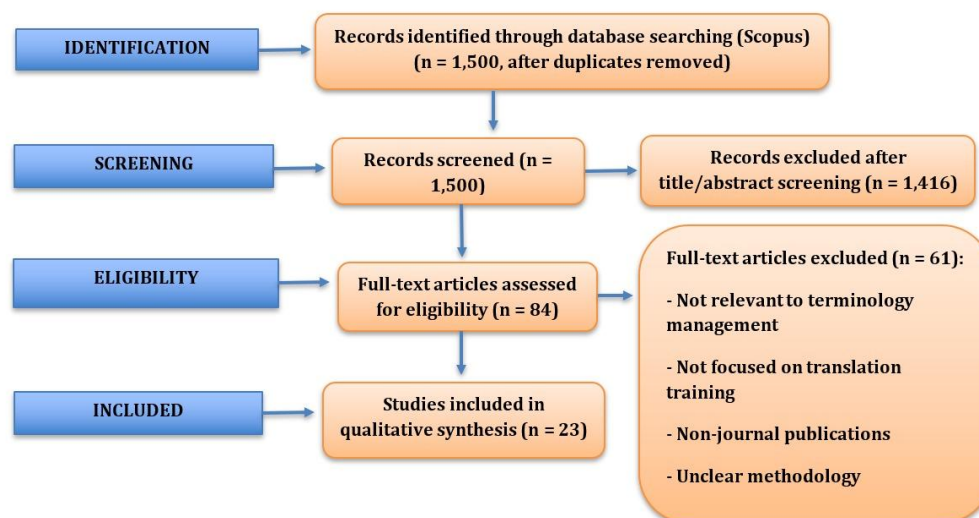


Figure 1. PRISMA flow diagram of the study selection process.

Inclusion and exclusion criteria

In order to maintain the focus and quality of the review, clear inclusion and exclusion criteria were established. Studies were included if they met the following conditions: (1) they addressed terminology management, terminological awareness, or terminological competence; (2) they were conducted within the context of translation practice, translator training, translation pedagogy, or English language education involving translation activities; (3) they were published in peer-reviewed journal articles indexed in Scopus with English-accessible metadata, including titles, abstracts, and keywords; and (4) they were published between 2021 and early 2026.

On the other hand, studies were excluded based on several considerations to ensure academic rigor. These included: (1) studies discussing unrelated linguistic fields such as phonology, syntax, or general language acquisition without direct relevance to translation; (2) non-journal publications such as books, book chapters, conference proceedings, theses, or reports; (3) articles that lacked clear methodological descriptions or analytical frameworks. Additional supporting references consulted for contextual discussion were not treated as part of the primary review corpus. The application of these criteria ensured that only relevant and methodologically sound studies were included in the final analysis.

Data analysis and synthesis

The selected 23 studies were analyzed using a qualitative thematic synthesis approach. This method involved an iterative process of identifying key concepts, grouping related findings, and developing thematic categories that reflect patterns across the literature. In the initial stage, relevant data from each study were coded to extract key ideas related to terminology management and translation competence. This was followed by a mapping process, in which the extracted concepts were aligned with broader frameworks of translation competence.

Given the diversity of the selected studies, different forms of evidence were interpreted according to their respective analytical functions. Empirical studies, including classroom-based research, corpus studies, and case studies, were primarily examined for their pedagogical findings and practical evidence regarding competence development. Meanwhile, theoretical and conceptual papers were used to support interpretive discussions concerning terminology awareness, technological literacy, and professional translation standards. Curriculum analyses and review-based studies were also utilized to identify broader trends related to translator training and competence frameworks.

The analysis focused on understanding how terminology management functions as a bridge between theoretical knowledge and practical translation performance. Through this process, recurring themes and relationships between concepts were identified. Particular attention was also given to identifying differences across the reviewed literature, especially between technology-oriented studies emphasizing AI efficiency and corpus-based approaches emphasizing exploratory learning and contextual analysis. To facilitate a more structured interpretation, the studies were categorized into five thematic groups: (1) terminology practices and resources, (2) competence development frameworks, (3) technological integration, (4) psychological factors such as self-efficacy, and (5) training models and professional standards. The thematic distribution also revealed that technological integration and terminology-resource practices were more extensively represented in the literature, whereas psychological and cognitive dimensions appeared in a smaller number of studies. This classification enabled a comprehensive and systematic understanding of how terminology management contributes to the development of translation competence across different contexts.

FINDINGS AND DISCUSSION

Findings

A systematic search and screening process resulted in a final selection of 23 peer-reviewed studies for qualitative synthesis. These studies represent a range of domains within translation studies, including legal, medical, educational, and technology-related contexts. Methodologically, the selected literature consists of empirical studies, theoretical analyses, corpus-based investigations, curriculum analyses, and case-based research, providing a broad overview of how terminology management is addressed across different settings. The main characteristics of these studies are summarized in Table 1.

As shown in Table 1, the reviewed studies approach terminology management from multiple perspectives and with varying analytical emphases. Several studies concentrate on domain-specific practices, particularly in legal and medical translation, where accuracy, consistency, and conceptual precision are considered essential (Lazer-Pankiv & Pysmenna, 2021; Wissik et al., 2024). These studies highlight continuing challenges related to accessing standardized terminology and maintaining consistency across specialized translation tasks. Other studies emphasize resource utilization, demonstrating that translators rely on glossaries, databases, corpus consultation, and parallel texts, with the effectiveness of these strategies often influenced by professional experience (Prieto Ramos, 2021).

Within educational contexts, terminology management is consistently associated with the development of translation competence. Corpus-based approaches and structured terminology training have been shown to improve students' ability to understand specialized concepts, maintain lexical consistency, and apply terminology appropriately across contexts (Juste & Molés-Cases, 2022; Mockiene et al., 2022). However, learner-corpus evidence also reveals that student translators continue to struggle with terminological collocations and consistency, particularly when compared to professional translators (Leńko-Szymańska & Biel, 2023). These findings suggest that terminology management contributes to competence development not only through vocabulary acquisition, but also through conceptual mapping, revision practices, and contextual decision-making.

Table 1. Summary of Included Studies

No	Author (Year)	Focus	Method	Key Findings
1.	(Wissik et al., 2024)	Terminology in court interpreting	Survey	Difficulty accessing consistent legal terminology
2.	(Sánchez-Torrón et al., 2025)	AI for terminology assessment	Case study (GPT-4)	AI useful but needs refinement
3.	(Prieto Ramos, 2021)	Legal terminology decision-making	Empirical study	Use of mixed resources varies by experience
4.	(Platonova, 2022)	Terminological awareness	Theoretical	Awareness is key to competence
5.	(Oleksandra, 2022)	Technical term translation	Comparative analysis	Etymology improves translation accuracy
6.	(Mockiene et al., 2022)	Corpus tools in ESP	Educational study	Corpus improves terminology learning
7.	(Leńko-Szymańska & Biel, 2023)	Terminological collocations	Corpus study	Trainees less accurate than professionals
8.	(Lazer-Pankiv & Pysmenna, 2021)	Medical terminology adaptation	Linguistic analysis	Understanding adaptation improves competence
9.	(Borodina, 2024)	Lexical-semantic transformation	Theoretical	Improves technical translation accuracy
10.	(Juste & Molés-Cases, 2022)	Corpus in legal training	Educational study	Enhances legal translation skills
11.	(Mekheimer, 2026)	Translation competence gaps	Diagnostic study	Students lack linguistic & intercultural competence
12.	(Duś, 2025)	Technical competence	Theoretical	Tools shape translation profession
13.	(Vitalaru, 2025)	Public service translation training	Review	Integration improves competence
14.	(Al-Tarawneh et al., 2024)	Legal translator training	Theoretical	Need structured professional training
15.	(Clouet, 2021)	LSP in translation	Theoretical	Translation as domain-specific language
16.	(Ehrensberger-Dow et al., 2023)	MT literacy	Empirical study	MT literacy is essential competence
17.	(Granell & Chaume, 2023)	Audiovisual translation & tech	Review	Human–machine collaboration
18.	(Korol, 2022)	Digital feedback	Educational study	Improves translation performance
19.	(Lu et al., 2022)	Self-efficacy & performance	Quantitative study	Self-efficacy improves performance
20.	(Miggiani, 2022)	Translation quality model	Theoretical	Provides structured assessment model
21.	(Plaza-Lara, 2022)	Translation project competence	Curriculum analysis	Identifies key professional skills
22.	(Prieto Ramos, 2024)	AI & translator competence	Theoretical	Competence includes AI literacy
23.	(Prieto Ramos & Guzmán, 2024)	Training & quality assurance	Empirical study	Training improves revision quality

The integration of technology is another prominent pattern across the reviewed studies. Artificial intelligence and digital tools are increasingly used to support terminology-related tasks, including assessment revision, and translation workflows (Ehrensberger-Dow et al., 2023; Sánchez-Torrón et al., 2025). Nevertheless, the reviewed studies do not present technology as a replacement for human expertise. Instead, many studies emphasize the continuing importance of human evaluation and critical literacy, particularly in verifying terminology accuracy and contextual appropriateness.

Overall, the findings indicate that terminology management functions as an integral component of translation competence that intersects with domain knowledge, technological literacy, pedagogical practice, and cognitive development. To provide a transparent overview of the weight of evidence, the reviewed studies reveal an uneven thematic distribution across the literature. Technological integration and terminology-resource practices emerge as the most extensively represented areas, whereas psychological and cognitive dimensions remain comparatively underrepresented. In addition, some tensions are visible across the literature, particularly between AI-oriented studies prioritizing efficiency and automation and corpus-based approaches emphasizing exploratory learning and contextual analysis. To facilitate a more systematic interpretation, the findings are organized into five thematic categories, which are discussed in the following section.

Terminology practices and resources

Analysis of the selected studies indicates that terminology management practices are strongly influenced by domain-specific requirements, the availability of specialized resources, and the translator's level of professional experience. Within the reviewed literature, this theme is supported by several studies focusing on legal, medical, and technical translation contexts (Wissik et al., 2024; Prieto Ramos, 2021; Oleksandra, 2022; Lazer-Pankiv & Pysmenna, 2021; Clouet, 2021). In contemporary translation environments, terminology is no longer treated as isolated lexical units. Instead, it is managed as part of a structured system supported by digital resources such as institutional glossaries, specialized databases, corpus platforms, and internal guidelines aimed at maintaining consistency across translation projects. This shift suggests that effective terminology management now involves not only linguistic accuracy but also the ability to navigate documentation systems and technological resources strategically.

Empirical evidence from professional contexts highlights recurring challenges, particularly in maintaining terminological consistency in high-stakes environments. Wissik et al. (2024) report that court interpreters frequently encounter difficulties in accessing reliable and standardized legal terminology. This finding suggests that one important mechanism through which terminology management supports translation quality is consistency in lexical and conceptual choices. When centralized terminology resources are unavailable, inconsistencies may emerge and reduce translation accuracy across specialized contexts. Similarly, contextual studies on translation quality demonstrate that inconsistencies in terminology and contextual interpretation can weaken communicative effectiveness when semantic and stylistic equivalence are not maintained throughout the translated text (Firdausi et al., 2025; Setyowati & Nababan, 2020). In addition, Prieto Ramos (2021) shows that experienced translators tend to rely on multiple resources rather than a single source, including institutional databases, parallel texts, and specialized glossaries. This pattern indicates that professional translation performance is closely associated with strategic corpus consultation practices, documentation habits, revision routines, and contextual decision-making rather than simple vocabulary retrieval.

Beyond the legal domain, terminology use becomes more complex in technical and multilingual contexts. Oleksandra (2022) emphasizes the importance of understanding the etymological origins of technical terms, particularly those derived from Latin and Greek, in order to ensure accuracy in translation. In the medical field, Lazer-Pankiv and Pysmenna (2021) further demonstrate that students' ability to manage terminology is influenced by their understanding of phonetic and orthographic adaptation. These findings suggest that effective terminology use involves more than memorization, as it requires conceptual mapping and a deeper understanding of how terms function across different linguistic and disciplinary contexts. At the same time, differences emerge across the reviewed studies regarding the primary goals of terminology management. Professional-context studies tend to prioritize standardization, consistency, and workflow efficiency, whereas educational studies place greater emphasis on conceptual understanding, exploratory learning, and terminology acquisition as part of the learning process.

Terminological competence development

Building on the terminology practices and resource use identified earlier, the development of terminological competence among student translators can be understood as a cognitive process rooted in terminological awareness. Within the reviewed corpus, this theme is primarily supported by four core studies focusing on terminological awareness, learner performance, and domain-specific competence development (Platonova, 2022; Leńko-Szymańska & Biel, 2023; Clouet, 2021; Borodina, 2024), alongside supporting educational studies examining corpus-based terminology learning (Mockiene et al., 2022; Juste & Molés-Cases, 2022). Platonova (2022) describes this awareness as a foundational element that enables translators to recognize the conceptual relationships underlying terms before attempting translation. Without such awareness, students tend to rely on surface-level strategies, often overlooking the systematic structures of specialized domains. As a result, the development of competence involves a shift from simple recognition toward a more consistent and context-sensitive use of terminology.

A recurring issue highlighted in the literature is the gap between professional translators and student learners. The learner corpus study by Leńko-Szymańska and Biel (2023) shows that terminological collocations are used differently by these two groups. Students often struggle with both accuracy and consistency, frequently using multiple equivalents for the same term within a single text. This inconsistency demonstrates that terminological competence is closely connected to conceptual coherence and revision ability rather than vocabulary knowledge alone. In professional practice, terminology functions as part of a unified conceptual system, whereas novice translators frequently approach terms as isolated lexical items. This difference reflects a limited ability to perceive the text as a coherent conceptual unit, which is commonly associated with novice translation behavior and can negatively affect overall translation quality.

To address these challenges, several studies emphasize the importance of approaching translation training from a Language for Specific Purposes perspective. (Clouet, 2021) argues that translation competence requires domain-specific knowledge rather than general language proficiency alone. Similarly, (Borodina, 2024) highlights the role of lexical-semantic transformation strategies in teaching technical translation. These strategies help students manage shifts in meaning across languages while maintaining conceptual accuracy. Corpus-oriented educational studies further reinforce this perspective by demonstrating that competence develops more effectively when students engage directly with authentic disciplinary language rather than relying solely on static vocabulary memorization (Mockiene et al., 2022; Juste & Molés-Cases, 2022). Several educational studies also indicate that novice translators tend to rely excessively on general bilingual dictionaries rather than specialized glossaries or corpus-based resources, which may limit conceptual accuracy in technical translation contexts. In the context of English language education, this suggests that translation instruction should move beyond grammar-focused teaching and incorporate the logic and conventions of specialized discourse.

At the same time, some differences can be observed across the reviewed studies regarding how competence itself is defined. Theoretical studies tend to describe terminological competence as a broad cognitive and strategic framework, whereas empirical classroom studies focus more specifically on observable learner performance, consistency, and terminology application during translation tasks. This distinction suggests that the conceptual scope of terminological competence may sometimes extend beyond what current classroom-based evidence is able to measure directly.

Technological integration

In the context of translation competence development, technology has become an essential component of contemporary translation workflows. Within the reviewed corpus, technological integration emerges as one of the most extensively discussed themes, supported by a dominant group of empirical, educational, and review-based studies examining machine translation literacy, AI-assisted evaluation, corpus-based learning, and digital feedback systems (Sánchez-Torrón et al., 2025; Ehrensberger-Dow et al., 2023; Mockiene et al., 2022; Juste & Molés-Cases, 2022; Korol, 2022; Granell & Chaume, 2023). The reviewed studies consistently show that digital tools are no longer used as supplementary resources, but as integral elements in acquiring, applying, and

evaluating terminology. This shift reflects broader changes in the translation profession, where technological competence increasingly shapes how translators interact with both texts and tools.

One notable development is the growing use of generative artificial intelligence in translation-related tasks. Sánchez-Torrón et al. (2025) provide an empirical example through the use of GPT-4 to design assessments for identifying terminological equivalences in engineering contexts. Their findings indicate that large language models are capable of generating test items efficiently. However, human intervention remains necessary to review and validate the accuracy of AI-generated materials. Recent classroom-based evaluations further reinforce this cautious perspective by demonstrating that machine translation assessment cannot rely exclusively on automated metrics such as BLEU scores, since expert human judgment remains essential for evaluating contextual accuracy, semantic equivalence, and stylistic quality in educational settings (Shalawati et al., 2026). These findings suggest that technology does not replace human expertise, but rather reshapes the role of educators and translators in overseeing and refining automated outputs.

In addition to AI-based tools, corpus-driven resources continue to play a significant role in supporting terminology learning. Mockiene et al. (2022) demonstrate that integrating corpus tools into English for Specific Purposes instruction enables students to engage directly with authentic language data. This approach moves beyond memorization and allows learners to observe how terminology is used in context. Similarly, Juste and Molés-Cases (2022) highlight the usefulness of web-based corpora in providing contextual support for legal translation, helping students understand not only the meaning of terms but also their usage in real texts. Furthermore, Korol (2022) shows that digital feedback platforms can enhance learner performance by providing timely and targeted revisions. These findings suggest that corpus-based approaches tend to prioritize exploratory learning and contextual interpretation, which differs from AI-driven approaches that often emphasize efficiency, automation, and post-editing practices.

When these technological pathways are compared more closely, a pedagogical tension becomes visible across the reviewed literature. AI-oriented approaches generally prepare students for fast-paced professional workflows in which the translator's role increasingly involves verification and refinement of machine-generated outputs. In contrast, corpus-based approaches emphasize slower exploratory learning processes that encourage students to analyze collocations, terminology patterns, and contextual usage independently. This distinction indicates that different technological approaches may promote different dimensions of translation competence. While AI integration strengthens efficiency and technological adaptability, corpus-based learning tends to foster deeper linguistic awareness and critical analysis. This observation also aligns with Ehrensberger-Dow et al. (2023), who emphasize the importance of machine translation literacy in enabling translators to engage with technology critically rather than passively accepting automated results. Similarly, Granell and Chaume (2023) argue that contemporary translation workflows increasingly rely on human-machine collaboration rather than complete automation. In this sense, technological integration is not limited to tool usage, but also involves the development of critical awareness in evaluating digital outputs.

Psychological and cognitive factors

Beyond technological and methodological aspects, the development of translation competence is also influenced by psychological and cognitive factors, particularly in the context of translator training. Compared to the themes of technological integration and terminology-resource practices, psychological and cognitive dimensions receive more limited attention within the reviewed corpus, primarily supported by studies focusing on self-efficacy, cognitive readiness, and professional awareness (Lu et al., 2022; Mekheimer, 2026; Miggiani, 2022). Rather than weakening the framework, this limited concentration of studies highlights an important gap in current translation research, which more frequently prioritizes technological and methodological dimensions over learners' internal cognitive processes. Nevertheless, the reviewed studies highlight the role of intrinsic variables, such as self-efficacy, cognitive readiness, and the gradual formation of professional identity, in shaping translation performance. These findings suggest that learners' internal readiness plays an important role in how effectively they engage with complex translation

tasks and specialized discourse, indicating that translation competence is not solely a technical skill but also a cognitive and psychological process.

One of the key factors identified in the literature is self-efficacy in translation tasks. Lu et al. (2022) examine the relationship between students' online search behavior and their translation performance, emphasizing the mediating role of self-efficacy. Their findings indicate that students who are more confident in using digital resources and evaluating terminology tend to produce more accurate and consistent translations. This suggests that terminology management contributes to competence development not only through access to information, but also through learners' confidence in selecting, validating, and applying terminology appropriately across contexts. One possible explanation is that stronger self-efficacy reduces hesitation during terminology search and evaluation activities, enabling students to engage more critically with digital resources and documentation practices. In this sense, the ability to work with technological tools is closely linked to learners' confidence in their own skills, highlighting that psychological barriers can be as significant as technical limitations.

At the same time, several studies point to challenges related to cognitive preparedness. Mekheimer (2026) identifies persistent gaps in linguistic and intercultural competence among students in English as a Foreign Language (EFL) context. These limitations may increase cognitive load during translation tasks because learners must simultaneously process sentence structure, contextual meaning, terminology selection, and textual coherence. When foundational linguistic skills are not sufficiently automated, students' working memory may become overloaded, causing their attention to become divided and reducing their capacity to maintain terminological accuracy and consistency throughout the translation process. This finding demonstrates that effective terminology application depends not only on knowledge and resources but also on learners' cognitive processing capacity during complex translation activities.

Furthermore, the reviewed literature reveals differences in how psychological dimensions of translation competence are conceptualized. Theoretical discussions tend to frame self-efficacy and professional identity as long-term developmental dimensions of translator competence, whereas empirical classroom studies focus more specifically on measurable performance outcomes such as terminology accuracy, consistency, and task completion. This distinction suggests that some psychological dimensions of translator competence remain difficult to observe directly within classroom-based research settings. Taken together, these findings indicate that terminology management is not solely a technical or linguistic issue but also involves critical cognitive and psychological dimensions. The ability to apply terminology effectively depends not only on knowledge and resources but also on how learners process information and manage task demands. This highlights the importance of supporting both cognitive readiness and learner confidence in translation training, particularly in the complex and technology-rich environments that define modern professional practice.

Training models and professional standards

Recent developments in translation pedagogy suggest that instructional frameworks are gradually moving beyond conventional language-focused approaches. Contemporary curricula increasingly integrate terminology management with broader professional skills, such as project coordination and quality control. Within the reviewed corpus, this final theme aligns institutional training with industry standards, supported by a cluster of five studies focusing on curriculum development, professional translator training, and quality assurance frameworks (Plaza-Lara, 2022; Prieto Ramos & Guzmán, 2024; Al-Tarawneh et al., 2024; Vitalaru, 2025; Miggiani, 2022). This shift reflects the changing expectations of the translation profession, where translators are required not only to produce accurate texts but also to manage information, maintain consistency, and collaborate within increasingly complex translation workflows.

Plaza-Lara (2022) provides insight into this trend through an analysis of the European Master's in Translation (EMT) programs. The study shows that effective training models tend to connect theoretical knowledge with practical translation activities. In these programs, terminology management is embedded within broader translation processes rather than treated as a separate

linguistic component. As a result, students are exposed to terminology use as part of real translation workflows, particularly in relation to quality assurance and project management. This suggests that terminology management contributes to competence development through repeated engagement with professional translation procedures rather than isolated vocabulary exercises.

Further evidence highlights the relationship between structured training and translation performance. Prieto Ramos and Guzmán (2024) demonstrate that specialized training contributes to improved performance in complex translation tasks, especially in domain-specific contexts. Their findings indicate that translators with targeted training are more consistent and accurate in handling terminology compared to those who rely primarily on general language competence. Similarly, Al-Tarawneh et al. (2024) emphasize the importance of structured professional preparation in legal translator education, while Vitalaru (2025) highlights the growing need to connect academic training with evolving professional realities in multilingual public-service contexts. Taken together, these studies suggest that terminological competence develops more effectively through authentic professional simulations, revision activities, and collaborative translation environments.

Overall, these studies indicate that translation training needs to align more closely with professional standards. Programs that combine terminology management, domain knowledge, and practical translation skills are better positioned to prepare students for real-world translation demands. At the same time, a distinction can be observed between classroom-oriented training models and professional-context studies. Educational studies tend to prioritize competence development and internal learning processes, whereas professional-context studies focus more strongly on workflow efficiency, quality assurance, and industry expectations. In this context, terminology management becomes part of a broader professional framework that supports both accuracy and quality in translation practice.

Discussion

The findings of this literature review indicate that terminology management plays a central role in shaping translation competence, particularly in technology-mediated contexts. When synthesized across the five thematic categories identified in Table 2, terminology management can be understood not as an isolated linguistic skill, but as an integrative competence that connects cognitive awareness, technological literacy, structured resource use, and professional training. When critically compared with established translation competence frameworks, such as the PACTE model and the European Master's in Translation (EMT) competence profile, these findings further suggest that terminology management functions as a central intersection where cognitive, technological, and professional sub-competences interact in practical translation activities. This perspective helps explain why challenges in translation performance are not limited to language proficiency, but are closely related to how learners engage with terminology in structured and meaningful ways. Furthermore, the synthesis of these findings suggests that terminological mastery serves as a stabilizing factor in the translation process, reducing the risk of conceptual errors that often occur when students focus solely on surface-level linguistic transfer.

One of the main challenges identified across the reviewed studies is the gap between student performance and professional practice. Mekheimer (2026) shows that many learners in EFL contexts struggle to produce contextually appropriate translations due to limitations in linguistic and intercultural competence. This difficulty is often accompanied by inconsistent terminology use, which reflects a fragmented understanding of the source text. In contrast, studies of professional practice, such as Wissik et al. (2024), indicate that even experienced translators face challenges in maintaining consistency, particularly in specialized domains. However, professionals tend to rely on structured resources and established workflows to manage these issues. This comparison reinforces the argument presented in Table 2 under the theme of “Competence Gap Bridging,” where terminology management functions as a stabilizing mechanism connecting novice learning processes with professional translation practices. Therefore, bridging this gap requires a pedagogical shift that moves away from traditional memorization toward the strategic use of professional databases and collaborative terminology management systems.

This gap highlights the importance of integrating structured terminology practices into translation training. When students are introduced to professional tools and workflows, such as glossaries, databases, and domain-specific resources, they are better able to produce consistent and reliable translations. In this sense, terminology management can be seen as a bridging mechanism that supports the transition from novice to professional performance. More specifically, the reviewed studies suggest that terminology management improves competence through several interconnected mechanisms, including terminology consistency, conceptual mapping, documentation habits, revision practices, and contextual resource consultation. Moreover, this approach helps students develop "terminological resilience," allowing them to navigate unfamiliar technical domains with greater confidence and methodological rigor.

Another important finding is the transferability of terminology practices across domains. Studies in legal and medical translation (Prieto Ramos, 2021; Lazer-Pankiv & Pysmenna, 2021) show that while terminology is context-dependent, the underlying principles of consistency, standardization, and conceptual understanding can be applied more broadly. These results indicate that terminology management should be treated as a core component of translation pedagogy rather than a domain-specific skill. Integrating insights from specialized fields into general translation training can therefore help students handle a wider range of translation tasks more effectively, preparing them for the diverse demands of the global translation market. This finding directly aligns with the "Cross-Domain Adaptation" category presented in Table 2, which demonstrates that terminological competence develops through transferable conceptual and procedural strategies rather than isolated memorization of specialized vocabulary.

The role of technology further reinforces this shift. The integration of artificial intelligence (AI), corpus tools, and digital platforms has reshaped how translators' access and apply terminology. Ehrensberger-Dow et al. (2023) highlight the growing importance of machine translation (MT) literacy, while Granell and Chaume (2023) emphasize the move toward human-machine collaboration. Similarly, Sánchez-Torrón et al. (2025) show that AI can support both learning and assessment, although human validation remains necessary. Recent classroom-based evaluations also demonstrate that machine translation assessment cannot rely solely on automated metrics such as BLEU scores, since contextual accuracy and semantic equivalence still require expert human judgment (Shalawati et al., 2026). These findings suggest that technological competence involves not only tool usage, but also the ability to critically evaluate digital outputs. In an era where AI can generate plausible but inaccurate terminology, the translator's role as a critical evaluator and MT-literate professional becomes increasingly important in maintaining translation quality. At the same time, the reviewed literature reveals a pedagogical tension between AI-oriented approaches that prioritize efficiency and automation, and corpus-based approaches that emphasize exploratory learning and contextual analysis.

These interconnected dimensions can be synthesized into a conceptual framework of terminology management that includes competence bridging, cross-domain adaptability, technological integration, cognitive factors, and alignment with professional standards (see Table 2). From a pedagogical perspective, these findings have important implications for English language education. Terminology management should be incorporated as an active and structured component of instruction rather than treated as a supplementary activity. For example, students can be encouraged to document their terminology choices using "Digital Terminology Portfolios," allowing them to reflect on their decision-making processes. Such practices support a shift from surface-level translation toward a more conceptually grounded approach. Furthermore, by integrating these practices into the EFL syllabus, institutions can better equip students with the analytical skills necessary to maintain professional standards in increasingly complex communicative environments.

Finally, the findings suggest that translation training needs to be more closely aligned with professional practice. By relating the thematic findings to broader competence frameworks such as EMT and PACTE, this study suggests that technological competence should not be interpreted merely as tool mastery, but also as the continuous critical evaluation of automated outputs through human verification and corpus validation. Incorporating project-based learning, collaborative

Table 2. Thematic Classification of Terminology Management in Translator Competence Development

Theme	Description	Key Components	Supporting Studies
Competence Gap Bridging	Terminology management as a bridge between student limitations and professional practices	Terminology consistency, resource utilization, structured workflows	(Mekheimer, 2026); (Wissik et al., 2024)
Cross-Domain Adaptation	Transfer of terminology practices across legal, medical, and general translation contexts	Standardization, etymological awareness, domain knowledge	(Prieto Ramos, 2021); (Lazer-Pankiv & Pysmenna, 2021); (Oleksandra, 2022)
Technological Integration	Use of digital tools and AI in learning, assessment, and translation processes	MT literacy, corpus tools, AI-assisted evaluation	(Ehrensberger-Dow et al., 2023; Granell & Chaume, 2023); (Sánchez-Torrón et al., 2025)
Cognitive & Psychological Factors	Influence of internal learner factors on terminology acquisition and performance	Self-efficacy, quality awareness, professional identity	(Lu et al., 2022); (Duś, 2025); (Miggiani, 2022)
Training & Professional Standards	Alignment of educational models with industry requirements	Project management, quality assurance, curriculum design	(Plaza-Lara, 2022); (Vitalaru, 2025); (Prieto Ramos & Guzmán, 2024)

workflows, and domain-specific tasks can help students develop both technical and cognitive skills required in real-world contexts. By positioning terminology management as a central element in this process, translation education can better prepare students to meet the evolving demands of the profession. At the same time, this review acknowledges several limitations, including the mixed nature of the reviewed evidence, the stronger concentration of studies in legal and medical translation contexts, and the possibility that maximum search-result limits may have excluded some relevant publications. In addition, although the study integrated supporting references beyond the main review corpus, the synthesis primarily relied on Scopus-indexed studies published between 2021 and early 2026, which may limit broader disciplinary representation. In this regard, the study addresses its main objective by showing how terminology management contributes to the development of more consistent, informed, and professionally relevant translation practices. This research provides a foundation for future studies to explore the long-term impact of integrated terminology training on the employability of English Education graduates.

CONCLUSION

This study has examined the contribution of terminology management to the development of student translators' competence through a systematic review of recent literature. The findings indicate that terminology management should be understood as a central component of translation competence, influencing accuracy, consistency, and overall translation quality. The challenges experienced by student translators, particularly in maintaining terminological consistency, are closely related to limited awareness and insufficient exposure to structured professional practices. These results suggest that terminological competence is not a single skill, but a multidimensional construct involving linguistic knowledge, strategic use of resources, and domain-specific understanding, and technological literacy.

The review also highlights the increasing role of technology in shaping translation competence. The integration of corpus tools and artificial intelligence has expanded the expectations placed on translators, who are now required to evaluate and manage digital outputs rather than rely solely on linguistic ability. In this context, terminology management functions as a bridge between academic learning and professional practice, supporting more consistent and contextually appropriate translation performance.

These findings have important implications for English language education. Translation training needs to adopt a more integrated approach that combines terminology management, domain knowledge, and technological skills within regular instruction. Rather than being treated as a separate

component, terminology should be embedded in authentic learning activities that reflect professional workflows. While this review is bound by specific scope and corpus limitations as discussed earlier, the findings still provide important insights into the evolving relationship between terminology management, technology, and translator competence development. Future research may further explore how these approaches can be implemented in classroom settings, particularly in relation to the use of AI-assisted tools in developing students' terminological competence.

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