



## New Advances in Translation Technology: Applications and Pedagogy

**Yuhong Peng, Huihui Huang & Defeng Li (Eds.)**

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The pervasive integration of AI throughout the translation process necessitates a critical reevaluation of the profession's future, along with the requisite skills and competencies translators need to adapt to this new reality. This shift also demands a corresponding realignment of translation pedagogy, preparing professionals and translators in the making to navigate a landscape where human expertise and AI technologies fuse seamlessly to meet evolving market demands. Addressing the urgent need for updated pedagogical resources, *New Advances in Translation Technology: Applications and Pedagogy*, edited by Yuhong Peng, Huihui Huang, and Defeng Li, makes a timely contribution by providing a multifaceted overview of recent breakthroughs in translation technology, interwoven with pedagogical insights from eminent scholars worldwide. The wide-ranging topics and logical structure render it an illuminating collection, offering educators, trainers, and researchers valuable resources to equip would-be translators with the knowledge and tools necessary to thrive in the technology-intensive translation industry.

Following the introduction, in which Peng details the overall purpose and structure of the book, the work is divided into two parts: "Rise and Application of Translation Technology" (Part I) and "Pedagogy and Students' Feedback on Translation Technology" (Part II). Part I (Chapters 2-8) offers an overview of the evolving landscape of translation technology, covering topics from the historical underpinnings of machine translation (MT) to the latest trends shaping the industry. In Chapter 2, Burcin Kagan Mustafa investigates the political ambitions behind early MT attempts, arguing that these endeavors were geared more towards "projecting US power than developing a working MT system" (p. 10). The author further reveals how advances in military translation technologies remained tied to ideological pursuit post-9/11, urging readers to pay attention to the cultural

hierarchies embedded within technological representations. Chapter 3, by Sai Cheong Siu, unravels the intricacies of the ongoing AI revolution within the translation field. The chapter navigates through the basics of deep learning, the Transformer model, and the pros and cons of neural machine translation (NMT) and large language models (LLMs). Chapters 4 and 5, authored by Alejandro Bolaños García-Escribano and Annalisa Sandrelli respectively, focus on recent technological advances in audiovisual translation. Chapter 4, with a particular emphasis on cloud-based revoicing and subtitling tools, examines how state-of-the-art cloud technologies have transformed media localization workstations and explores their potential applications in educational settings. A detailed introduction of relevant concepts and tools in Chapter 4 ensures a smooth transition to the next chapter, where Sandrelli presents the results of ¡Sub! and its follow-up ¡Sub!2—two pilot projects conducted at UNINT University—to investigate whether and how the integration of automatic speech recognition (ASR) and MT tools into cloud subtitling workflows can help achieve the optimal balance between efficiency and quality.

In Chapter 6, Roser Sánchez-Castany effectively bridges the gap between academic discourse and professional realities, offering a much-needed industry perspective. Drawing on a thorough review of grey literature (i.e., publications from industry stakeholders), Sánchez-Castany asserts that “human translation is still the service most in demand”, yet some uncertainty lingers regarding “where the profession is heading” (p. 113). This concern over the increasing role of machines in the workplace sets the stage for the critical question explored in the following chapter: what aspects of translation literacy will remain resilient in the face of automation?

Chapter 7, authored by Nune Ayvazyan, Ester Torres-Simón, and Anthony Pym, utilizes the O\*Net system to pinpoint the knowledge, skills, and competencies that translators possess, which are either resistant or vulnerable to automation. Their findings offer practical suggestions for future training initiatives, emphasizing the importance of spoken communication skills, trust-building initiatives, and the strategic use of automation in key areas of translation workflows.

Chapter 8, co-authored by Els Lefever and Ayla Rigouts Terryn, delves into the rapidly growing field of computational terminology. The chapter explores subfields such as monolingual/multilingual automatic term extraction, automatic term translation, and related research areas, including

automatic ontology building. The authors conclude with a valuable resource guide that provides a thoughtfully compiled list of tools, beneficial for both seasoned practitioners and inquisitive beginners.

Part II of the book offers a comprehensive exploration of the pedagogical application of translation technology, featuring five insightful chapters (Chapters 9-13). In Chapter 9, Lynne Bowker delivers a meticulous analysis comparing plain language and NMT writing guidelines. She argues convincingly for merging these into “a single set of guidelines” to create texts that are both “reader- and NMT-friendly” (p. 163). Bowker further advocates for the inclusion of plain language training into translation curriculums, empowering would-be translators to adapt to evolving job profiles as market demands.

Chapter 10, authored by Gloria Corpas Pastor and Marta Alcaide-Martínez, introduces an innovative, corpus-based didactic proposal featuring four gamified activities (GAs) designed to help students master AI domain-specific terminology. The effectiveness of the proposal is demonstrated through a pilot study at the University of Malaga, aiming to encourage “the dissemination of gamification as a teaching-learning methodology” and gather empirical evidence supporting larger-scale research in the future (p. 194).

In Chapter 11, Nune Ayzvazyan, Yu Hao, and Anthony Pym address the challenges posed by rapid technological advancements in pedagogy. They advocate for a student-led discovery approach, urging novice translators to experiment with various translation technologies. The authors present 18 group activities that foster a dynamic learning environment, encouraging students to engage in active critical evaluation and profound reflection.

User experience evaluation takes center stage in Chapter 12, as Joke Daems examines student reflections on their experiences using Intellingo and Lilt over four academic years at Ghent University. Daems’ analysis indicates that students respond positively to Lilt’s “minimalist interface” and its “interactive and adaptive elements” (p. 239). These features are highlighted as having significant potential as beneficial tools for future translation technology classes.

The final chapter, co-authored by Yu Hao, Ke Hu, and Anthony Pym, examines students’ attitude towards the post-machine translation editing of literary texts. Their study compares post-edited and unaided translations of Agatha Christie’s works, revealing differences in strategies between post-editors and translators working from scratch. Despite these differences, the

superior quality of the latter justifies “students’ insistence on human centrality” in the translation process (p. 279).

Overall, the volume under review places a strong emphasis on pedagogy, with five dedicated chapters in Part II focusing on this aspect. Pedagogical considerations are consciously woven into many of the chapters in both Part I and II, with authors providing an abundance of teaching and learning resources—such as teaching-focused platforms and links to useful tools—along with concrete suggestions and practical advice across different chapters. This makes the volume particularly valuable for seasoned educators, teacher candidates, and researchers. Furthermore, the book features a clear layout, colorful visuals, and accessible writing style, making it inviting and accessible to a wider audience. However, certain minor issues may affect the readability for some of its target readers, such as newcomers to the field. The heavy use of abbreviation, for instance, could confuse readers without a solid background in translation. A list of abbreviations and a glossary of terms would have made the text more reader-friendly. Additionally, while each chapter is well organized with a clear introduction, body, and conclusion, the inclusion of cross-references could have further enhanced the interconnectedness of the chapters.

The book showcases a cooperative effort by an outstanding international team of scholars, aiming to bridge theoretical underpinnings with practical applications. Moving beyond Western language pairs and Eurocentric research paradigms, the volume also incorporates the expertise of scholars based in Eastern countries such as China and Saudi Arabia, seeking to “capture recent advances in translation technologies and their impact on practice, profession, and training in diverse social and cultural contexts” (p. 1). The volume is enriched by the inclusion of empirical data from pilot studies led by dedicated scholars, such as those examining the application of gamification in terminology acquisition and comparative analyses of different translation workflows, significantly enhances the volume’s practical relevance. Despite certain shortcomings in research design (e.g., relatively small sample sizes and a lack of controlled groups), these pilot projects serve as valuable references for educators and hold great potential for inspiring further research. Additionally, the chapters abundant with industry insights provide a crucial real-world perspective. They effectively ground the technical and pedagogical discussions in the realities of professional translation, providing a much-needed connection between academic exploration and industry practice.

The volume raises critical questions of practical importance, such as what aspects of translation literacy might remain robust against automation. It also covers a wide spectrum of topics, touching on several under-researched areas that deserve further exploration, such as computational terminology and gamification methodology. Taken altogether, the book's minor flaws are insufficient to overshadow its strengths. Boasting a diverse range of topics and insights from a dedicated group of international scholars, it seeks to illuminate the multifaceted ways in which translation technologies can enhance pedagogical practices. Professionals committed to shaping the future of translation practice and training will find this book a significant addition to their resources.

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Reviewed by **Zhujun Jiang & Victoria Lai Cheng Lei**  
University of Macau (China)  
jiangjujun222@foxmail.com; viclcl@um.edu.mo

