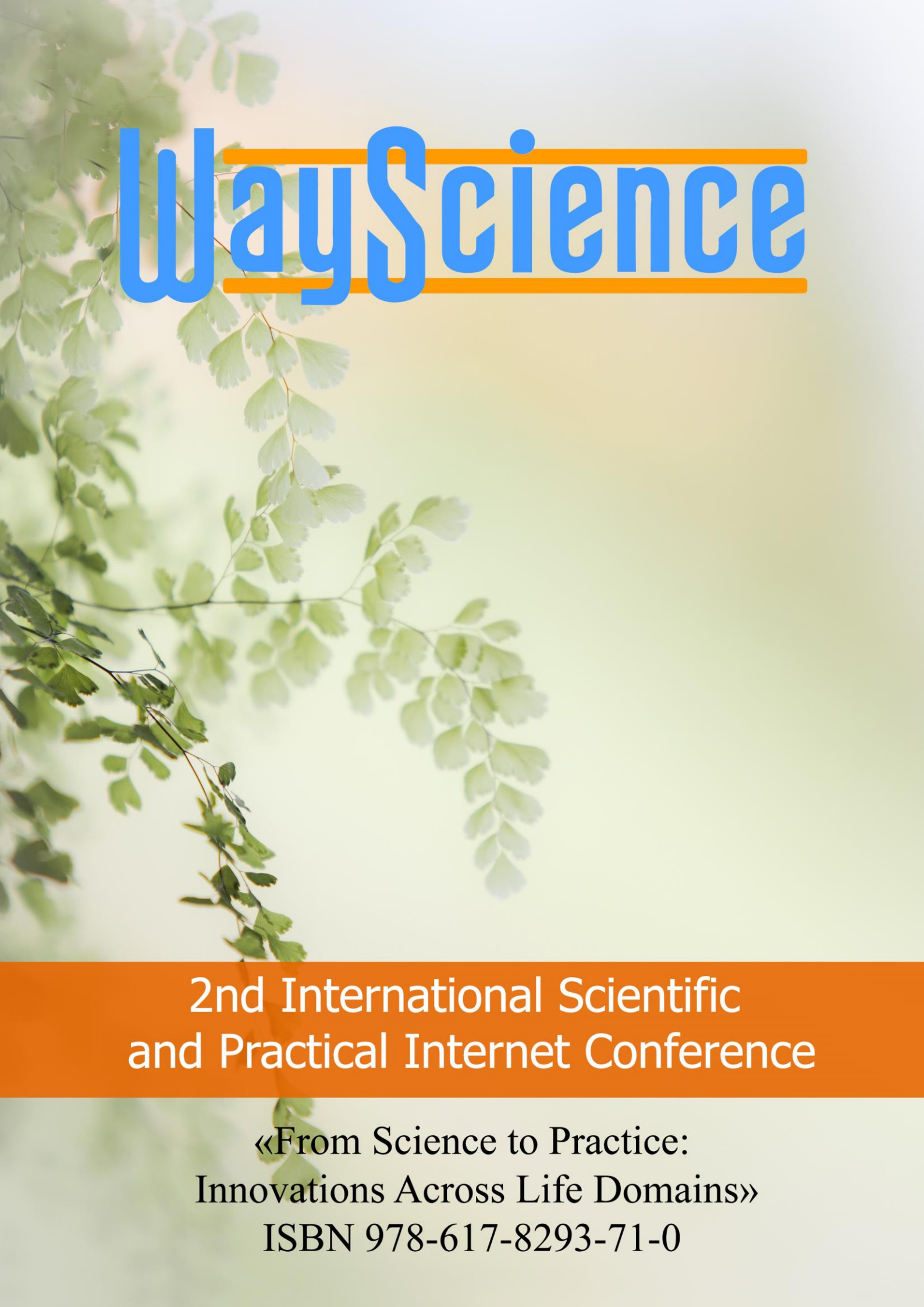


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AI TRANSLATION TOOLS IN HIGHER EDUCATION: PEDAGOGICAL IMPLICATIONS AND CLASSROOM STRATEGIES

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Keywords: AI translation tools, translation pedagogy, machine translation post-editing, AI literacy, human-centered AI, higher education.

Introduction. The big arrival of AI translation tools has not just given translators a new tool to use; it has shaken up the basic ideas on which translation teaching is based. Tools such as DeepL, Google Translate, and GPT-4 have gone from being new and interesting tools for professionals to everyday tools that students use regularly — and this change has arrived in classrooms, even if teachers didn't expect it. A curriculum that doesn't include teaching these tools isn't keeping students away from distractions — it's actually not making them ready for the job they are being taught for. The real question isn't whether we should use AI in the translation classroom, but how we can use it in a way that really helps students learn and master the important skills of the field.

Methods and Materials. This abstract focuses on peer-reviewed empirical studies, systematic reviews, and practitioner reflections published between 2024 and 2025. We focused on studies that used mixed-methods, quasi-experimental, or systematic review approaches. The study was structured around four main topics: (1) how students and teachers are using AI tools right now; (2) what learning advantages do these tools provide; (3) where AI tools keep failing, and what does that mean for teaching methods; (4) what classroom approaches can be suggested.

Results and Discussion. A recent survey shows that many students are frequently using AI translation tools in various ways, mostly on their own. Klímová (2025) found that Google Translate was the most popular choice, with DeepL and ChatGPT next most used. Zhang and Doherty (2025) found that while students could use terms like "deep learning" and "neural network" smoothly, they didn't really understand what these technologies do. This difference between using AI tools confidently and truly understanding them is one of the most important discoveries in recent educational research: students are using these tools every day, but they don't have the skills to check, fix, or really think about what the tools produce.

Documented Learning Benefits. In various types of studies, AI translation tools have proven to provide real learning advantages when used with a purpose. The biggest clear benefit is that it speeds up the writing process: students who used NMT tools liked being able to write their first drafts more quickly, which gave them more time for revision and critical reflection. Since revising and post-editing translations are among the most important competencies for professional translators — they are rarely practiced enough in traditional classroom settings — this change is a real pedagogical gain. Duan, Gao, and Zhang (2025) discovered that groups using NMT showed clear improvements in translation accuracy and correctness, but also warned that using these tools must be guided by structured teaching methods to get the full benefits.

Persistent Limitations and Failure Modes. The same studies that show the advantages of AI tools also clearly explain their drawbacks. The biggest problems keep happening because of differences in culture, practical meanings, common sayings, and how emotions are expressed. Al-Zayed et al. (2025) found that both novice and advanced students identified significant problems with AI tools in understanding and expressing the language and culture of original literary texts. Zhang and Doherty (2025) point out that most translation learners have to use these tools on their

own without any proper instruction, meaning the difference between how confident students are and their ability to think critically about what the AI produces is widening rather than narrowing.

Toward a Human-Centered Framework. The best framework we have right now is human-centered artificial intelligence (HCAI), discussed by Rodríguez (2025). HCAI changes the traditional "human-in-the-loop" approach by focusing on Intelligence Amplification (IA): humans are still the main ones making decisions, and AI tools help them out instead of acting on their own. In translation teaching, this means the teacher's main role changes from fixing obvious language mistakes to helping students develop important skills that machines can't do. Instead of seeing AI results as something to stop or ignore, good teaching methods use AI-generated translations as things to carefully examine and analytically think about. The AI's output isn't the end of the task, but the beginning.

Practical Classroom Strategies. Post-editing tasks, where students are given a translation made by an AI and asked to improve it, are similar to what professionals do today in machine translation post-editing (MTPE). Comparing translation tasks — giving the same text to both students and AI tools, then talking about the results in class — leads to meaningful discussions based on real examples. Error analysis exercises help students find and classify mistakes in AI translations using frameworks such as MQM. Whenever AI tools are used in a translation class, it's also important to have clear discussions about the professional and ethical sides: when it's okay to use AI help, how to properly disclose that AI was used, and what responsibilities a translator has when sharing work done by AI.

Conclusions. Nowadays, AI translation tools are commonly used by students in their studies, even if teachers haven't intentionally included them in their lessons. The main issue for translation programs is not whether to use these tools, but how to use them in a way that improves, rather than decreases, the skills needed to become a professional translator. AI tools can really help with learning, but only if they're used intentionally as part of well-planned teaching activities. At the same time, AI tools consistently struggle with the very aspects that make a good translation skillful: cultural context, idiomatic expressions, and register. These failure modes aren't just temporary bugs; they show basic limits of statistical pattern-matching. Teachers can turn these limits into useful tools for teaching.

The AI literacy gap — the growing difference between students' confidence in using tools and their understanding of how those tools actually work — is one of the most urgent and overlooked challenges in translation education. The purpose of translation education is not to create skilled users of translation tools, but to develop thoughtful, culturally aware professionals who can make fine, thoughtful decisions that no algorithm can yet do.

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