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Dictionaries in the Age of Artificial Intelligence: Insights from Master's Students in Translation and Interpreting

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Abstract: The rapid emergence of artificial intelligence (AI) has raised important questions about the role of dictionaries in translation and interpreting. This study explores Master's students' perceptions of the relationship between dictionaries and AI-enabled tools in the performance of translation and interpreting tasks. Data were collected through an online semi-structured focus group involving students enrolled in the *Translation, Interpreting and New Technologies* Master's programme at Politehnica University of Timișoara. Thematic analysis of the discussion revealed that dictionaries continue to be perceived as reliable sources of linguistic information, terminology, and translation support despite the growing popularity of AI tools such as ChatGPT and DeepL. Participants valued AI-enabled tools for their speed, accessibility, and ability to provide contextualised explanations. However, concerns were raised regarding AI hallucinations, inaccuracies, and the lack of reliable and transparent sourcing. The findings suggest that future translators and interpreters increasingly adopt hybrid consultation practices that combine dictionaries and AI tools. The study highlights the importance of developing AI literacy, critical thinking, and information-evaluation skills within translator and interpreter training programmes.

Keywords: AI literacy, AI-powered language technologies, artificial intelligence, dictionaries, focus group, translation and interpreting

1. Introduction

The development of AI has impacted the entire society, including the language industry, in ways that could not have been foreseen several decades ago. Translation,

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interpreting, terminology management, lexicography and language learning are only some areas that are currently being reshaped by AI-enabled technologies. These transformations are redefining the language industry in terms of professional workflows, language pedagogy, access to information and lexical resources, to mention but a few, thus creating new opportunities and challenges alike (Atkins and Rundell 2008; Kasneci et al. 2023; Lew 2011a; Nguyen 2025; O'Hagan 2020; Rundell 2012; Stoian and Șimon 2018a).

In this context, dictionaries, which have served as main reference works for centuries, providing definitions, grammatical information, usage examples, pronunciation guidance, etymological information, terminological standardisation and translation, have also been reconceptualised (Lew 2011a; O'Hagan 2020). Traditionally, dictionaries have been classified according to four main criteria: (1) language(s), (2) field coverage, (3) size and (4) medium. In the first class, monolingual, unidirectional and bidirectional bilingual as well as multilingual dictionaries are included. The second class comprises general language dictionaries, encyclopaedic and cultural-material dictionaries, terminological dictionaries and dictionaries dealing with a specific language area, such as collocations, idioms or phrasal verbs. The third class considers the size of dictionaries, grouping them into standard (or 'collegiate'), concise or pocket editions. Finally, the fourth class comprises print, electronic and web-based dictionaries (Atkins and Rundell 2008, 24). Among these dictionary types, web-based dictionaries have known the most significant transformation since linguistic information can be currently accessed and processed through AI-powered language technologies such as neural machine translation systems, AI-assisted lexical resources, and large language models (Barrot 2024; Candé and Martinho 2026; Kasneci et al. 2023; Nguyen et al. 2025; Polakova and Klimova 2023). Users can now interact with intelligent systems capable of generating translations, paraphrases, contextual and terminological explanations. Therefore, digital lexicography has enabled searching for constantly updated, corpus-based and highly accessible information. These functionalities have transformed dictionaries into dynamic resources that can respond interactively to the linguistic needs of contemporary users (Fuertes-Olivera 2018; Lew 2011a; Rundell 2012).

This dynamism has sparked intense debates about the future of dictionaries. Rundell (2012, 75), for instance, contends that there is no "reason why dictionaries should survive in anything like their present form". He notes that modern online dictionaries can be constantly updated to reflect vocabulary changes. Furthermore, online dictionaries can link "dictionary entries and available corpus resources" (Rundell 2012, 76) and use multimedia features – especially those dedicated to pronunciation are game-changers as they question the need for the International Phonetic Alphabet. Furthermore, online dictionaries can combine multiple functions to integrate translation, thesaurus and encyclopaedic features within a single resource (Rundell 2012, 78). Last but not least, the adaptative technology rapidly developing nowadays may lead to the emergence of "personalized dictionaries" (Rundell 2012, 80) that are adapted to the needs of each individual user.

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Whereas online dictionaries are usually compiled, edited, and quality-controlled by human lexicographers, new large language models and conversational AI systems are able to produce definitions, translations, explanations and even examples through probabilistic language generation, without human oversight of their linguistic output (Atkins and Rundell 2008; Barrot 2024; Kasneci et al. 2023; Lew 2011; Rundell 2012). As a result, concerns regarding the reliability, transparency, and accountability of AI-generated linguistic information have become a major topic of debate among scholars and language professionals (Bender et al. 2021; Kasneci et al. 2023). These considerations are particularly relevant for translators and interpreters, whose work is evaluated not only in terms of fluency and communicative effectiveness but also with regard to terminological accuracy, consistency, and the appropriate use of specialised language (AsLing 2025; Bowker and Buitrago Ciro 2019). Yet, translators and interpreters have integrated technology into their workflows, employing corpora, translation memories, terminology databases, machine translation and interpreting systems, computer assisted translation and interpreting tools as well as AI assistants. As such, they have acquired critical thinking and problem-solving skills not only when they make the linguistic choices but also when they use technological resources. Nowadays, translation and interpreting study programmes and courses focus on developing these skills in their students from the very onset (O'Hagan 2020).

These developments have sparked the interest of researchers and scholars to investigate digital lexicography, machine translation and generative AI. However, little attention has been paid to language users' perception of the relationship between traditional dictionaries and AI-powered language tools. Furthermore, translation and interpreting students' perceptions of the role of the dictionaries in the AI age are still insufficiently documented in the literature (Bowker and Buitrago Ciro 2019; Candé and Martinho 2026; Kasneci et al. 2023; Lew 2024; O'Hagan 2020), although surveying language users' views on the content, organisation and functionality of dictionaries has been recognised as a valuable research tool that may supply valuable data (Lew 2011b).

As contributors to several dictionaries (Stoian and Șimon 2018b; Șimon et al. 2018a, 2018b, 2023; Șimon and Stoian 2018), the authors of this article have wondered about the future of dictionaries in the age of artificial intelligence, envisioned by translation and interpreting Master's students. Consequently, the following research questions (RQs) have been formulated:

RQ1. How do translation and interpreting Master's students perceive the role of dictionaries in the AI age?

RQ2. How do the students assess print, digital and online dictionaries in comparison to AI-powered language tools?

RQ3. How do AI-powered language tools influence dictionary consultation practices, lexical decision-making and translation and interpreting workflows?

RQ4. What are the students' expectations with regard to the future relationship between dictionaries and AI?

RQ5. Which skills are necessary in the future for translators and interpreters to be able to work in an AI-driven professional environment?

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2. Research methodology

To answer these research questions, this study was guided by five corresponding research objectives (ROs):

RO1. To explore students' perceptions of dictionaries and their continued relevance in contemporary translation and interpreting practice.

RO2. To examine students' experiences with AI-based lexical and translation tools and compare these with traditional dictionary use.

RO3. To identify the perceived advantages, limitations, and risks associated with AI-assisted lexical consultation.

RO4. To investigate students' expectations regarding the future development of dictionaries and AI-enhanced lexical resources.

RO5. To explore students' views on the future competencies required of translators and interpreters in an increasingly AI-mediated profession.

The research team addressed these objectives by collecting data through a semi-structured online focus group held in June 2026, with fifteen Master's students enrolled in the *Translation, Interpreting and New Technologies* programme at Politehnica University of Timișoara. The interview guide was designed to reflect the main themes underlying the research questions and objectives, for instance students' perceptions of traditional dictionaries in the AI age, current documentation practices, trustworthiness and reliability of AI-generated lexical information, future developments in lexicography and the impact of AI on the translation and interpreting profession. All the participants voluntarily agreed to participate in the study and were experienced users of both traditional lexical resources and digital language technologies, including AI-powered ones. The discussion lasted for about 90 minutes, was audio- and video-recorded. The resulting transcript was then used for thematic analysis, following Braun and Clarke's (2006) approach. Six themes were identified:

Theme 1. Dictionaries remain essential despite AI expansion

Theme 2. Hybrid resource use has become the norm

Theme 3. AI functions as dictionary, tutor, and brainstorming partner

Theme 4. Trust is conditional and requires verification

Theme 5. AI influences translator confidence and skill development

Theme 6. Future dictionaries will be AI-enhanced and human-guided.

3. Research results

Theme 1. Dictionaries remain essential despite AI expansion

The surveyed population agreed that dictionaries remain the most reliable linguistic resources and they continue to be indispensable. The focus group participants constantly referred to dictionaries as the "basis" or "foundation" of language knowledge, considering them more reliable than AI-generated linguistic output. Several students emphasised that AI systems themselves are built on lexicographic work and other linguistic resources, reinforcing the value of dictionaries and the need for their continued development in the future. Other students underscored that dictionaries are used to check the AI-generated linguistic output because AI systems

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are not always accurate. One participant even stressed that "AI is useful but does not have all the answers". Another participant stressed that all types of dictionaries are useful and essential because they provide verified linguistic information.

The findings show that students view traditional dictionaries and AI-powered language technologies as complementary rather resources that exclude each other. Furthermore, dictionaries are perceived as more trustworthy because they are compiled, reviewed and validated by professionals.

Theme 2. Hybrid resource use has become the norm

Participants reported that they resort to multiple lexical resources when they translate or prepare terminologically for an interpreting task, combining traditional and digital language tools such as print and online dictionaries, specialised glossaries, terminology databases, corpora and AI-powered tools. AI-enabled applications were valued for their speed, accessibility and explanatory capacity through conversational interaction. Yet, dictionaries were described as reliable and authoritative sources of linguistic and terminological information that are still consulted regularly.

Therefore, the findings suggest that participants use a triangulation of print and digital lexical resources to translate or interpret from one language into another. This hybrid resource use has emerged as a dominant practice among the surveyed population.

Theme 3. AI functions as dictionary, tutor, and brainstorming partner

The discussion also revealed that the participants used AI not only for translation purposes but also as a source of information and knowledge acquisition. So, AI systems became tutors, terminology consultants, stylistic advisors and brainstorming partners alike. Several students reported that they first employed AI systems to clarify concepts, offer alternative lexical and stylistic options. One participant specifically highlighted the ability of AI systems to provide personalised explanations, describing them as offered "in terms that I can understand."

In other words, from the participants' perspective, AI in the hands of translators is not only a mere dictionary, but it also becomes a source of knowledge in many fields. AI engages in conversation with the translator, it explains concepts, clarifies them and provides knowledge to the AI-users, thereby contributing to their understanding of specialised and general topics alike.

Theme 4. Trust is conditional and requires verification

Despite their frequent use of AI, particularly during the documentation and research phase of the translation process, students identified several concerns with these technologies. Among the issues mentioned were hallucinations, inaccurate terminology, lack of source transparency, domain-specific errors and contextual misunderstandings. Participants also stressed that specialised fields, such as legal, medical and biological translation, require extensive research, a high degree of responsibility and constant verification because translational errors might have serious

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consequences. That is why students emphasised that AI-generated outputs should be always checked against dictionaries and other specialised resources. Only one participant reported complete trust in AI because the AI agent was purposefully trained for a certain task, and then the outputs were reliable. Nevertheless, even in this case, the participant acknowledged the need for source verification and validation.

All in all, participants consider AI as a highly useful and pragmatic tool that can significantly facilitate translation and research activities. Yet, AI-output double-check is not only advisable but necessary, too.

Theme 5. AI influences translator confidence and skill development

Two divergent opinions with regard to the educational effects of AI were also formulated by the students making up the focus group. So, first of all, students argued that AI could support learning by providing explanations, exposing users to new vocabulary and stylistic alternatives as well as by facilitating self-correction. These students also highlighted that linguistic competence could be improved through constant interaction with AI systems. Second of all, students noticed dependency risks caused by excessive use of AI tools. This habit could weaken critical thinking, research skills, memory, cognitive effort and even creativity.

Theme 6. Future dictionaries will be AI-enhanced and human-guided

Participants contended that dictionaries would not disappear but rather undergo changes. Among the new developments mentioned by the participants were AI-assisted dictionary interfaces, multimodal entries, interactive search and query functions, and personalised lexical information. Participants anticipated that the future dictionaries would be intelligent ones, able to respond conversationally to user questions. In other words, they envisioned that AI assistants would be integrated into dictionary platforms. Nevertheless, participants underscored that human oversight provided by professional lexicographers and subject-matter specialists should be preserved. They strongly rejected the idea that AI should be allowed to have full control over the generation, validation, and dissemination of linguistic knowledge and meaning. Consequently, AI should enhance dictionary functionalities and human experts should be responsible for ensuring accuracy, reliability and quality.

4. Discussion and concluding remarks

The focus group discussion, conducted with fifteen Master's students in translation and interpreting, explored their perceptions of the use and future of dictionaries in the age of artificial intelligence. Participants continued to regard dictionaries as authoritative and reliable reference works, despite the growing popularity of AI-powered language tools. They also described hybrid consultation practices, combining dictionaries, corpora, terminology databases, and AI applications. These findings are consistent with research highlighting the integration of multiple resources into translators' and interpreters' workflows to address lexical and terminological problems (Fuertes-Olivera 2018; Kenny 2022; O'Hagan 2020).

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The focus group participants also reported that they used AI systems not only for translation but also for explanation, brainstorming, terminology clarification and linguistic support. This finding aligns with other studies focusing on the role of generative AI as facilitator of exploratory and personalised learning experiences (Kasneci et al. 2023).

In spite of the pragmatic and convenient use of AI for translation purposes, participants stressed that overreliance on AI-generated linguistic output should not characterise a translators' work since AI systems often hallucinate and lack contextual understanding. Consequently, students emphasised that critical thinking, research, verification and AI-literacy skills are competencies future translators should build in the age of artificial intelligence. Concerns about the reliability and limitations of AI-generated information have also been raised in research on large language models (Bender et al. 2021).

Finally, the research findings pointed to the emergence of an AI-based model of lexical consultation that does not replace dictionaries but rather reshapes them into digital, interactive and multimodal resources that can be more accessible and better integrated into the professional workflows. This aligns well with other studies on modern lexicography that highlight the transition of dictionaries from static to dynamic, digital reference works (Lew 2011a; Rundell 2012). Participants strongly expressed their support for such collaborative models; this is backed by current approaches to augmented translation practices, where human translators are supervisors, evaluators and post-editors rather than sole target-text producers (Bowker 2023). The challenge for dictionaries, therefore, is not simply to survive, but to adapt to a professional landscape increasingly shaped by artificial intelligence.

The study has several limitations that future research could address. The findings reflect the views of only fifteen Master's students in translation and interpreting, which limits the extent to which they can be generalised. Future studies could recruit a larger sample from the same and other programmes, as well as include professional translators and interpreters to compare their perspectives.

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