



<https://doi.org/10.22363/2687-0088-44754>

EDN: ADNJWY

Research article / Научная статья

AI-assisted academic writing: Balancing linguistic enhancement with legal and ethical oversight

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Abstract

Artificial intelligence (AI), which impacts both business and academic writing, has emerged as a revolutionary force in the digital age. It has the potential to fundamentally change the way scientific research is conducted, from improving the accuracy of scientific predictions to automating certain tasks and improving the overall quality of academic writing. AI solutions are often more efficient than conventional approaches when it comes to meeting writing requirements. The purpose of this article is to clarify the possibilities and risks of the use of artificial intelligence, based on the theoretical analysis of modern research, and to propose norms and standards for the safety of the use of artificial intelligence in scientific research. AI tools have improved performance by generating grammatically correct sentences, generating original ideas, and modifying language (making it conform to academic style conventions). Additionally, AI research tools can accelerate discovery and gain valuable insights by automating time-consuming tasks. However, the significant changes that AI has brought to academic writing have also raised many ethical and legal concerns. While the present study draws on concepts and debates that are relevant to linguistic research, it does not aim to provide a detailed linguistic analysis of data. Rather, it adopts an interdisciplinary perspective in which Artificial Intelligence used in academic writing is discussed primarily from legal and ethical viewpoints with reference to language-related issues where relevant.

Keywords: *artificial intelligence (AI), academic writing, research tools, AI-based language tools, legal regulation, ethics*



For citation:

Baltezarević, Radoslav, Lazar Stošić & Olga B. Mikhailova. 2026. AI-assisted academic writing: Balancing linguistic enhancement with legal and ethical oversight. *Russian Journal of Linguistics* 30 (1). 105–123. <https://doi.org/10.22363/2687-0088-44754> EDN: ADNJWY


Использование искусственного интеллекта в научных публикациях: соотношение лингвистического совершенствования с юридическим и этическим контролем

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Аннотация

Искусственный интеллект (ИИ), влияющий как на деловое, так и на академическое письмо, стал революционной силой цифровой эпохи. Он способен коренным образом изменить подход к проведению научных исследований, от повышения точности научных прогнозов до автоматизации некоторых задач и общего повышения качества академического письма. Решения на основе ИИ зачастую оказываются более эффективными, чем традиционные подходы, когда речь идет о выполнении требований к написанию работ. Цель данной статьи — определить возможности и риски использования искусственного интеллекта на основе теоретического анализа современных исследований, а также предложить нормы и стандарты безопасности использования искусственного интеллекта в научных исследованиях. Инструменты ИИ повысили производительность, генерируя грамматически правильные предложения, оригинальные идеи и модифицируя язык (приводя его в соответствие с академическим стилем). Кроме того, инструменты для исследований на основе ИИ могут ускорить процесс и предоставить ценную информацию, автоматизируя трудоемкие задачи. Однако значительные изменения, которые ИИ внес в академическое письмо, также вызвали множество этических и правовых проблем. Хотя настоящая статья опирается на концепции и дискуссии, имеющие отношение к лингвистическим исследованиям, оно не ставит своей целью проведение подробного лингвистического анализа данных. Скорее, в нем используется междисциплинарный подход, в рамках которого искусственный интеллект, используемый при написании научных работ, рассматривается в первую очередь с юридической и этической точек зрения, при необходимости затрагивая и языковые вопросы.

Ключевые слова: *искусственный интеллект (ИИ), академическое письмо, инструменты исследования, основанные на ИИ языковые инструменты, юридическое регулирование, этика*

Для цитирования:

Baltezarević R., Stošić L., Mikhailova O.B. AI-assisted academic writing: Balancing linguistic enhancement with legal and ethical oversight. *Russian Journal of Linguistics*. 2026. Vol. 30. № 1. P. 105–123. <https://doi.org/10.22363/2687-0088-44754> EDN: ADNJWY

1. Introduction

When integrated into education, artificial intelligence has great potential to transform the educational process and enable activities such as increased productivity and personalized learning (Stošić & Janković 2023). Artificial intelligence software is expected to surpass human capabilities in the near future (Baltezarević 2023). Higher education institutions, therefore, must prioritize raising awareness, and developing the skills needed to fulfill the intellectual mission of academics in this new era (Wang & Wang 2024). Among many other capabilities, artificial intelligence algorithms are incredibly useful tools for conducting scientific studies on any topic due to their ability to accurately and quickly process vast amounts of data (Sreenu 2023). While the present study draws on concepts and debates that are relevant to linguistic research, it does not aim to provide a detailed linguistic analysis of data. Rather, it adopts an interdisciplinary perspective in which Artificial Intelligence is discussed primarily from legal and ethical viewpoints, with reference to language-related issues where relevant. The purpose of the paper is therefore not to advance linguistic theory as such, but to contribute to a broader discussion that may be of interest to linguists alongside scholars in adjacent fields.

Given that many industries in the modern world depend on the ability to communicate and understand language, linguistic analysis technologies have become invaluable resources in areas such as marketing and research. By enabling users to analyze texts and conversations, these technologies provide insights that can inform strategies and influence choices (Williams 2024). At the same time, modern AI systems further extend these capabilities, enabling faster and more accurate processing of linguistic data and thus improving the quality of analysis. According to the findings of a July 2024 survey of international students, two-thirds of participants used AI to help them with research, writing, and personalized content recommendations (Korhonen 2025). AI solutions accelerate research and enable scientists to solve previously unsolvable problems (Ching et al. 2018). Artificial intelligence is constantly advancing, and each new application of this technology offers a new opportunity for autonomous systems to exploit data to cause harmful outcomes (Bjelajac, Filipović & Stošić 2023). It can be concluded that it is undeniable that AI makes education much more complex and demanding (Baltezarević & Baltezarević 2025).

Chatbots, like ChatGPT, are one of the most promising applications of AI in academic writing. They can assist academics and scientists in organizing their work and improving the caliber of their output (Salvagno, Taccone & Gerli 2023). The use of IT in foreign language learning will undoubtedly continue to expand, shaping the way we learn, teach and communicate in an international context (Stošić & Guillén-Gámez 2024: 106).

Currently, there are three main types of AI-based research tools: a) AI tools for conducting literature reviews to find, organize, and synthesize research; b) AI tools for processing and displaying search data; c) AI tools for creating and editing

academic documents. AI tool — Litmaps helps researchers visualize citation networks and track research and development over time. Google AutoML allows users to build machine learning models without extensive coding knowledge. QuillBot supports paraphrasing, clarity, and summarization of scientific texts (Litmaps 2025). In addition to the AI tools listed above, there are many other tools that can be useful for academic writing and research, but the most notable are: Grammarly, which provides grammar checking, plagiarism detection, and style improvement. Hemingway Editor improves readability and conciseness. Trink AI improves clarity and compliance with academic style guides. ProWritingAid provides in-depth analysis and Elicit helps you find and summarize relevant articles (Boboc 2025).

Intellectual and political debates about the use of AI in scientific methods continue at the European and international level (Birhane et al. 2023). Addressing common issues such as algorithmic transparency, fair access to technology, and security of student data requires not only providing students with a proper digital education, but also spending more time and effort developing new hardware and software. Regardless, AI will soon be fully integrated into the education system (Baltezarević & Baltezarević 2024). Although there are many benefits to using AI in academic writing, there may also be some drawbacks. For example, over-reliance on AI can overwhelm human abilities and intuition (Gao et al. 2022).

However, it is crucial that institutions and research groups establish specific guidelines and policies for the responsible use of AI in research (Spivakovsky et al. 2023). Countries with common law legal systems rely on case law to establish precedents when certain cases are heard in court. Further *laissez-faire* policies are being pursued by the United States, Canada, India, and Switzerland (Kohn & Pieper 2023).

As artificial intelligence technology continues to advance rapidly, data security threats are also constantly evolving. For this reason, it is recommended that academic institutions regularly change their security policies to adequately address these new challenges (Gao et al. 2025).

2. Background of the study

AI tools help with organization, grammar, citations, and disciplinary rules. Therefore, authors can focus on the creative and important elements of their work (Golan et al. 2023). Theoretically, a plethora of digital platforms are available today that employ practical AI methods to find books, articles, and editorial comments of any kind. These tools provide summaries, show trends on any topic, and analyze data, helping researchers to synthesize content, organize information, and determine the best hypothesis for their studies (Musib et al. 2017).

In today's fast-paced environment, organizations and researchers must leverage the best linguistic tools to get the most out of data. These technologies are crucial for analyzing and understanding large amounts of textual data. These linguistic analysis tools use advanced algorithms and machine learning techniques

to find patterns, trends, and insights (Williams 2024). In addition to the AI tools, we've already discussed in this paper, like DiscourseAnalyzer, which helps identify patterns in discourse and clusters semantics, there's a rapidly expanding array of advanced platforms that are either specifically designed for or easily adaptable to linguistic research. These tools indicate a shift towards data-rich and computation-focused strategies in the field of linguistics. Stanford CoreNLP, a comprehensive suite of natural language processing (NLP) tools, is a prominent example. It offers a full pipeline that includes part-of-speech tagging, lemmatization, dependency parsing, named-entity recognition, and sentiment analysis (Manning et al. 2014). CoreNLP is particularly valuable in syntax-heavy linguistic studies, offering high levels of precision in parsing sentence structure and capturing grammatical dependencies. Its modular design allows researchers to fine-tune components based on specific linguistic needs, which makes it an important tool for syntactic annotation and morphosyntactic analysis.

Stanza (closely related to CoreNLP) is a neural NLP tool that boasts enhanced multilingual capabilities. It is designed with Universal Dependencies (UD) in mind, a grammar annotation framework that supports more than 60 languages (Qi et al. 2020). The inclusion of UD standards allows researchers to make robust typological comparisons across languages, which is essential for studies in contrastive linguistics and corpus linguistics. Its high performance in morphological tagging and dependency parsing makes it especially suitable for research that involves non-English texts or morphologically rich languages.

When it comes to going beyond simple parsing, tools like Sketch Engine have really made a name for themselves in the world of computational lexicography and phraseology. This handy tool allows researchers to delve into large custom corpora and create frequency lists, concordances, and “word sketches.” These sketches provide a clear overview of how a word functions in various syntactic contexts (Kunilovskaya & Koviagina 2017). Thanks to its adaptability, Sketch Engine has established itself in multiple fields, including applied linguistics, language teaching, translation studies, and even digital humanities (Maci & Sala 2022).

KH-Coder is a powerful tool that combines text mining features such as co-occurrence networks, topic modelling, and clustering, making it an excellent choice for socio-linguistic studies and critical discourse analysis (Higuchi 2017). One of its standout features is the support for multiple scripts and languages, which really broadens its application for cross-linguistic comparisons and building corpora from non-English sources.

These tools really elevate our expectations of what standard grammar checkers and AI writing aids can do. While ChatGPT is great for paraphrasing, summarizing, or offering stylistic tips, specialized linguistic platforms like CoreNLP, Stanza, Sketch Engine, and KH-Coder deliver the in-depth methodology needed for comprehensive academic research. Their application in academic settings highlights how AI can evolve from merely being a writing assistant to becoming an essential analytical partner in the study of linguistics.

According to the study, most participants expect artificial intelligence technology to be used more frequently in academic research over the next decade (Ekundayo, Khan & Nuzhat 2024). Academic writing and research are increasingly supported by various artificial intelligence tools designed for specific needs. Although essential for organizing research materials and curating literature, tools such as Mendeley, EndNote, and Zotero are not useful for writing essays. ChatGPT and Grammarly are useful for grammar checking, plagiarism detection, and text generation (Khalifa & Albadawy 2024).

AI-assisted writing tools are uncovering some fascinating trends in language. For instance, they often lean on familiar academic phrases like “delve” and “meticulous,” and there's a noticeable rise in the use of compact noun phrases. While these can make writing more efficient, they might also limit the diversity of styles we can express (Parker 2025). Research based on language corpora shows that non-native English writers using ChatGPT tend to produce texts with greater lexical complexity, showcasing a more sophisticated and consistent choice of words (Lin et al. 2025). However, these traits can sometimes dilute the author's unique voice and linguistic variety, even as they enhance the formal tone and clarity of the writing. In comparison, traditional texts produced by non-native students often show greater lexical diversity and a higher frequency of grammatical errors, particularly with verb forms, articles, and cohesive devices, when set against AI-assisted writing (Hyland & Jiang 2017). A large number of AI tools provide (additionally) visual summaries that facilitate insights into language features and patterns, which improves users' understanding and use of language (Williams 2024). These features make linguistic AI tools increasingly indispensable for the needs of modern academic research.

For scientific research, identifying gaps in the literature is important, but the volume of existing research makes this difficult to achieve. Advanced AI simplifies literature searches and highlights unexplored areas (Uno 2024). It also helps authors effectively manage peer feedback during iterative revisions (Tang et al. 2023). ML methods can identify patterns and extract useful information from high-dimensional data (Jumper et al. 2021). AI systems such as GPT-4 and Julius Advanced Data Analytics enable autonomous analysis and visualization of complex datasets (Jones 2023).

Programs such as NVivo, MAXQDA, Quirkos, Leximancer, and Dedoose offer automatic coding, sentiment analysis, and pattern recognition, while Provalis Research and RapidMiner combine artificial intelligence with text analysis for more complex analysis (Khalifa & Albadawy 2024). Take NVivo, for instance. It helps researchers quickly visualize and interpret crucial patterns by using AI tools like Auto Code to detect sentiment and recurring themes in extensive text datasets (Hai-Jew 2016). Similarly, MAXQDA streamlines the identification of key concepts, eliminating the need for tedious manual sorting through automated word frequency analysis and coding (Maxqda 2023). These features not only boost the effectiveness of qualitative analysis but also save a lot of preparation time. On the flip side,

traditional qualitative analysis often involves a deep dive into developing themes and meticulously coding every single line, which can turn into a pretty time-consuming and tedious task. Without the help of AI, researchers have to wade through heaps of data to spot important patterns, themes, and word frequencies. This can lead to a higher risk of subjectivity and inconsistency in their findings (Braun & Clarke 2006). While these classic methods can provide valuable insights and context, they tend to be slower and require a lot more time.

However, programming errors in AI software can lead to a number of dangers. Although great progress has been made, the study of verifying the behavior of software systems is crucial and difficult (Mannino et al. 2015). The effectiveness of AI tools can inadvertently limit scientific research by encouraging researchers to focus on questions that lend themselves to AI, creating the illusion of global exploration. Research that requires real-world behavior or personal data may be diminished because AI-based alternatives, while appearing simpler and cheaper, have a narrower perspective (Cummings 2024).

To find out how the research community is responding to and leveraging AI in their work, more than 2,000 researchers from different career stages, disciplines (humanities, social sciences, technology, etc.), and geographic regions were recently surveyed. The results highlight important factors that influence scientists' choices regarding the use of AI, including current or planned uses of the tools at their disposal, interests and concerns. Nearly 70% of respondents who have already utilized AI in their study say it has helped them in some way. Of all respondents, nearly 30% are enthusiastic about the potential of AI in scholarly research. According to 76% of respondents, chatbots and machine translation were the most common AI technologies in the study. Half of those polled were worried about how AI would impact scholarly research in the future. However, 37% of respondents thought AI will help scholars save time. Nevertheless, just 6% of respondents said they trust businesses to meet their data privacy and security concerns, and only 8% said they trust AI companies to not utilize their research data without their consent (Oxford University Press 2024).

Frontier models are still quite limited to a single task or need close manual supervision, even though they have already been employed to assist human scientists in tasks like writing code or coming up with ideas. As the first all-inclusive system for completely automated scientific discovery, the AI Scientist allows Foundation Models, including Large Language Models (LLMs), to conduct research on their own (Sakana.ai 2024). Theoretically, the AI Scientist can work in an unending loop, using its previous scientific discoveries to improve concepts in following generations (Zucchelli, Horak & Skinner 2021).

AI offers solutions to enhance and speed up every stage of the research process, from data gathering to article production. AI must, however, have access to data and sufficient processing power in order to operate. Many AI systems meet these objectives by dividing work among many processors and by storing data in large, distributed databases. For these AI applications to function, they must remain

online. Researchers are therefore more vulnerable to data leaks and privacy abuses when they post scholarly content from unpublished publications to websites like ChatGPT (Elsevier 2024). AI systems may also be vulnerable to hacks and data breaches, which could endanger personal information and have dire repercussions. For example, hackers could modify an AI system to produce false results, which could lead to errors or disruptions in essential services (Goodfellow, Bengio & Courville 2016).

3. Legal, ethical and linguistic concerns with Ai-assisted academic writing

As AI writing tools grow in popularity, a number of pressing legal issues have also emerged. In particular, existing academic and legal standards face significant challenges in the areas of data security, academic integrity, and copyright attribution (Matulionyte & Lee 2022). The way in which works generated by artificial intelligence are treated varies significantly from country to country. While some emphasize the requirement for human authorship, other countries strive to provide broader protection. For international academic collaboration, these differences present new challenges (Gao et al. 2025).

Besides the undeniable fact that AI provides powerful tools for analyzing language patterns, it also poses several ethical challenges. The first challenge is certainly data bias. This phenomenon can occur when artificial intelligence models inherit biases from the training data. Nevertheless, the results obtained can be biased and unusable. Privacy must be ensured, as the protection of sensitive language data of users is crucial for the protection of human rights. The third challenge is related to interpretability. Today, many AI models, (especially deep learning systems) operate as so-called “black boxes”, which can significantly complicate understanding how they generate language models (Talkpal.ai 2025).

The attention of experts, as well as the general public, is increasingly being drawn to copyright attribution in AI-assisted work. Conventional copyright law highlights human creation as a necessary condition, emphasizing that works must accurately convey the original meaning (Guadamuz 2017). AI systems should be seen as complementary tools for content creation, and users should own the copyright to the materials they create (Matulionyte & Lee 2022). However, these systems can mimic expression patterns from training data, increasing the risk of copyright infringement (Masood 2025).

Legal standards requiring originality and human authorship have been challenged by the emergence of works generated by artificial intelligence. International initiatives such as the European Law on Artificial Intelligence provide guidance, but they remain insufficient to deal with these complex challenges. The legal environment continues to evolve as digital organizations seek to reduce risk, and future litigation will determine the balance between innovation and intellectual property (Khan 2024).

AI can be useful in detecting and stopping dishonest behavior in the digital environment, but its use also raises many ethical questions. These questions relate

in particular to the areas of privacy and tracking. Also, although artificial intelligence tools can be a great support, primarily to administrators and educators (to promote academic integrity), they cannot replace their work. Establishing a culture of integrity and clearly defining ethical standards can ensure honesty (Libguides.unm 2025). The scientific work published by academics around the world is heavily influenced by numerous publishers, in terms of legitimacy and integrity. They invest in procedures, safeguards, and knowledge to ensure that due process is followed (Lawrence & Alam 2023). Traditional standards of academic integrity are now facing significant challenges as artificial intelligence technologies are increasingly integrated into academic writing. Considering technological advances, this phenomenon certainly requires new interpretations and approaches (Moya et al. 2024).

Large Language Models (LLMs) are self-supervised (pre-trained) models capable of performing a wide range of natural language tasks. They possess so-called emergent skills, which allow them to acquire new skills through input preparation, rather than requiring separate models for each task. With additional training, these models can perform a variety of language operations (Sejnowski 2023). Ethical use includes maintaining compliance or monitoring plagiarism, so in order to maintain scientific integrity, the ethical implications of LLMs should be carefully considered (Meyer et al. 2023).

These new (AI) types of academic misconduct are more complex than traditional plagiarism and copying, and three typical indicators are identified. The first is the use of AI tools to create works without clear announcement, which qualifies as non-public use that hides the actual creative process. The second is overconfidence, which weakens researchers' ability to think independently and shifts AI tools from support to replacement. Finally, the third one concerns data manipulation, that is, using artificial intelligence techniques to falsify references or alter research data, thereby compromising the integrity of academic results (De Angelis et al. 2023). AI sometimes makes mistakes and provides inaccurate information. This is a concern because the data initially appears reliable and increasing the likelihood of it being published in a scientific paper. Therefore, if information and data sources from AI are not carefully examined, it might damage scientific credibility and lead to a cycle of falsification within the research community (Elsevier 2024). Furthermore, researchers frequently alter data in order to get a desired or prepared conclusion. In order to accomplish their goals, morally reprehensible academics who lack the imagination to write creatively frequently utilize public facts and older works as a point of reference. This kind of intellectual thievery is becoming more widespread (Cloudmask 2023). Nevertheless, these alterations could be detected using AI technology (Sharma 2023).

However, any use of AI must comply with Cambridge's rules against academic misconduct and plagiarism. In light of the accountability requirements, AI does not comply with Cambridge's authorship requirements. Therefore, it is prohibited to list AI and the LLM tools as co-authors in any work. Furthermore, just as researchers

are expected to disclose and provide a clear explanation of the use of other software, tools, and methodologies, so too must the use of AI be declared and described in research articles (University of Cambridge 2019). The Committee on Publications Ethics (COPE) published a position statement on authorship and AI tools to offer guidelines to authors, journal editors, publishers, and anybody else involved in producing publications connected to research. The statement emphasizes the following: AI tools cannot be cited as authors of research; Authors must be transparent and honest about the methods and AI tools that may have been used to collect and analyze data or to generate text. Authors are solely responsible for the data contained in their works (including data obtained from AI tools) and are therefore held accountable for potential ethical violations (Thinkscience 2023).

Institutional standards and capacity building in the academic community are essential for scientific integrity. One of the most important factors is continuing education in the field of academic ethics. Such education should go beyond simply acquainting the academic community with traditional standards, so that it can fully understand the new meaning of academic integrity in a digital world and develop habits of responsible usage (Dabis & Csáki 2024). To determine whether the use of artificial intelligence is morally permissible, “Nature” presented a series of scenarios to 5,000 scientists around the world. According to this study, scientists disagree about what is good practice. Although academics generally agree that it is acceptable to use AI chatbots to assist with manuscript preparation, only a few admit to doing so, and those who do often claim that they are not disclosing this information. the majority (90%) of respondents believe it is acceptable to use generative AI to edit and translate research. There are different opinions about using AI to generate text. For example, when writing an article in whole or in part, more than 60% believe this is generally morally acceptable (Kwon 2025).

Given the upcoming AI laws around the globe, let's look at some of the most crucial data security standards and best practices related to AI use. By utilizing these obligations and best practices, AI systems can start to follow data protection regulations. AI systems must have a suitable legal basis for processing personal data that complies with applicable privacy laws. If consent is needed or used as a legal basis, it must be freely given, informed, explicit, and unambiguous in accordance with the majority of privacy laws, and it must be documented. Transparency for users should be guaranteed. The user must be notified of the reasoning behind any decisions made by the AI system if it uses their personal information to make decisions. It is necessary to conduct privacy risk assessments before implementing AI systems. Given the risks that AI systems pose to humans, it is important to take data security measures. Adherence to data protection principles, such as purpose limitation and data reduction, as well as their accuracy, are essential. Due to privacy concerns and high risk to humans, some AI systems cannot be permitted to process data subjects' personal information and generate results. Finally, careful use of real-time biometric systems and other personal data is necessary, in a manner that complies with applicable data protection regulations (Baig & Hasan 2023).

The use of AI in academic research, but also in professional practice, requires the establishment of clear rules. This means that the explicit use of AI systems, responsible ML implementation, but also the creation of organizations that educate stakeholders about the possibilities of this new technology are necessary (AlSamhori & Alnaimat 2024). Plagiarism law governs the ethical use of AI tools within the bounds of academic integrity, institutional standards, and anti-plagiarism policies. Academic standards for originality and copyright also do not define what is appropriate use of AI in academic research and writing. As a result, faculty and students may end up damaging their reputations and academic integrity, sometimes unintentionally (Ghimire 2024).

However, research by the University of Queensland and Australia's KPMG shows that the public does not trust government agencies that oversee the use of AI. The survey of more than 17,000 people in 17 countries found that only one-third of respondents expressed strong or complete confidence in governments' ability to regulate and monitor artificial intelligence tools and systems. Respondents expressed similar distrust not only of authorities regulating AI, but also of current technology companies and regulators. Universities, research centers, and the military are considered to be the most competent in this field (Zandt 2023).

4. Discussion

The advent of AI-based language tools such as DiscourseAnalyzer, Stanford CoreNLP, Stanza, Sketch Engine, and KH Coder represents a major shift toward more systematic, data-rich, and reproducible research in computational linguistics. Unlike traditional language support systems, these tools stand out because they prioritize academic rigor. CoreNLP provides deep syntactic and semantic analysis, and Stanza's multilingual capabilities facilitate comparative linguistic research using universal dependencies (Manning et al. 2014, Qi et al. 2020). Sketch Engine and KH Coder are tools that allow researchers to explore the rich language landscape. They help uncover how words function, how they relate to one another, and the themes that emerge from large bodies of text (Higuchi 2017).

Biases in training data are one of the key issues in artificial intelligence in science and can, for example, distort results, especially for languages with complex structures or low representation. This highlights the importance of using carefully selected and culturally diverse datasets (Birhane et al. 2023, Gao et al. 2025). In addition, although CoreNLP and Stanza are widely used in English-language research, the portability of their components to other languages remains uneven, providing opportunities for multilingual adaptation of models and the development of tailor-made tools. Tools like Sketch Engine may generate misleading frequency-based conclusions if corpora are not carefully balanced across genres, domains, and registers (Kunilovskaya & Koviiazina 2017).

This paper also presents a review of the current state of ethical issues that arise in connection with the collection, annotation, and sharing of linguistic data. Transparency in reporting workflow, such as specifying pipeline versions or

annotation conventions, enhances reproducibility and integrity, in line with COPE and journal standards (Tang et al. 2023). When dealing with sensitive documents, special attention should be paid to personal data regulations, both locally and internationally (Gao et al. 2025). Following these precautions is key to maintaining trust in computational results and ensuring that our linguistic insights are accurate.

Looking ahead, the future of AI-supported linguistic research appears promising but demands intentional refinement. Hybrid systems that integrate structured data (e.g., UD syntactic annotations) with deep contextual embeddings could produce richer semantic models, especially if designed for typologically diverse languages. Bringing in explainable AI techniques can really boost how we interpret results, helping researchers grasp why algorithms come to specific linguistic conclusions (Birhane et al. 2023). Additionally, tools like Sketch Engine, combined with interactive visual interfaces, improve accessibility by allowing scientists with limited programming experience to gain insights from corpora. In any case, there is no doubt that the creation of collaborative repositories for sharing pipelines, models, and annotated datasets will foster interdisciplinary collaboration and stimulate the emergence and development of new AI tools. This infrastructure would, moreover, support the alignment of AI applications in linguistics with methodological, legal, and ethical standards.

In summary, AI-based language tools have evolved from simple writing assistants to influential agents that shape both the process and outcomes of linguistic research. The ability of AI tools to improve clarity, speed up production, and generate (at first glance) original text is reshaping both the nature of the research outputs that scientists can produce, and the timeframe in which they can produce them. Precisely because these tools can fabricate plausible citations or generate refined texts that are beyond the stylistic capabilities of researchers, their integration raises questions about authorship, expertise, and academic integrity. Students also have access to the same AI tools, which blurs expectations for independent work and requires new forms of assessment and transparency in education as well. For all of the above, a major task for the research community is to formulate safeguards and standards that balance the legitimate benefits of work enabled by AI tools while maintaining trust, accountability, and meaningful scientific contributions.

4. Conclusion

Based on the conducted theoretical analysis, the article examined the possibilities and risks of using artificial intelligence from the perspective of an interdisciplinary approach. The literature review in this paper shows that artificial intelligence has revolutionized scientific research in some respects, but it has not yet reached a level of development that allows it to replace human intelligence. Despite rapidly influencing the way we interrogate large amounts of data and solve complex problems, critical thinking and creativity have yet to play a role.

Introducing these technologies into the literature search process represents a major shift in academic thinking by prioritizing efficiency, relevance, and intelligent search. As we move forward in academia, it becomes clear that implementing AI is not an option, but rather a necessity for modern researchers. In addition to posing numerous challenges in the realm of education, AI-assisted academic writing also foretells serious dangers to academic research and can significantly undermine the intellectual prowess of purported academics.

The study of language patterns is being radically transformed by the ability of artificial intelligence to manipulate the diversity of human language. Today, researchers can gain insights into human communication by preparing data, training models, and interpreting the results using artificial intelligence tools. However, if academics want to conduct linguistic research successfully and, above all, responsibly, many problems and ethical issues related to this new technology must first be resolved.

To prepare for this rapidly changing environment, universities are no longer just formulating general principles for the responsible use of AI, but actively implementing concrete institutional measures. Many modern educational institutions, in order to keep up with advances in the development of new technology, are setting guidelines and establishing artificial intelligence working groups. They are also updating their honor codes and anti-plagiarism policies to include AI-generated content, implementing discovery and disclosure requirements, and using assessment methods that are less likely to be exploited by AI. At the same time, institutions should develop internal policies to address issues of copyright, data privacy, research integrity, academic publication standards, and peer review procedures in the field of AI. These efforts reflect the dual goals of mitigating the risks associated with AI while strategically leveraging its potential to support innovation and improve academic research.

Scientific papers generated by AI are part of a complex and evolving legal context. Local policies, ethical guidelines, and institutional procedures regarding the use of AI in academia should be updated regularly.

This article shows that, although artificial intelligence offers significant opportunities to support academic writing, at the same time it introduces profound challenges that reach to the core of scientific practice. The ease with which large language models can generate coherent arguments, summarize complex theoretical frameworks, or produce citations without real engagement risks weakening the cognitive and intellectual foundations of academic work. When students can bypass foundational reading, and researchers can inadvertently present AI-generated insights as their own, long-established processes of knowledge formation, critical thinking, and disciplinary mastery are put under pressure. Responding to these developments requires more than general calls for collaboration: it requires coordinated, concrete action by universities, educators, and policymakers to articulate what counts as legitimate human contribution, protect meaningful engagement with primary sources, and create regulatory frameworks that enable

innovation while respecting the pedagogical and ethical principles on which science depends.

CRedit authorship contribution statement

Radoslav Baltezarević: Conceptualization, Methodology, Formal Analysis. **Lazar Stošić:** Methodology, Formal analysis, Data Curation, Writing — Original Draft, Writing — Review & Editing. **Olga B. Mikhailova:** Formal Analysis, Validation, Writing — Review & Editing.

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Article history:

Received: 29 June 2025

Accepted: 25 January 2026

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