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THE LINGUISTIC IMPACT OF GENERATIVE ARTIFICIAL INTELLIGENCE ON ACADEMIC WRITING: A CORPUS-BASED INVESTIGATION OF HUMAN–AI TEXT PRODUCTION

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Abstract

The emergence of Generative Artificial Intelligence (GAI) has rapidly changed academic writing by offering high-quality tools that are able to generate coherent, grammatically correct, and contextually relevant text. Although the use of these technologies is increasingly becoming popular, there is still the issue of the linguistic impact of these technologies, authorship authenticity, and the effects of these technologies on academic integrity. This research paper explores the linguistic effects of generative artificial intelligence on academic text on the production of text by human and artificial intelligences based on a corpus analysis of human and AI text production. The research design used was a quantitative cross-sectional research design, and 275 participants who comprised of students, researchers, and faculty members of various academic disciplines were used to collect data. The questionnaire was a structured questionnaire comprising 30 items, six constructs, to measure awareness and use of generative AI, linguistic features of AI-generated writing, effects on writing quality, human-AI disparities in text generation, ethical issues, and future implications of AI-assisted writing. The data were analysed with the help of descriptive statistics, reliability analysis, and chi-square testing with the help of SPSS Version 29.

From the results, it was found that academic writers were highly aware and made use of generative AI tools. The respondents perceived that AI-generated texts were grammatically correct and had a good vocabulary, while human-generated texts were more creative, with unique authorial voice and varied language. The results also showed that using AI to write is far more effective in improving clarity, cohesion, organization, and quality of the writing. Nevertheless, there were major apprehensions about academic honesty, the risk of plagiarism, and overreliance on automatic content creation. The participants also agreed that the development of institutional guidelines, AI literacy programmes, and human supervision processes to ensure responsible use should be supported. Furthermore, the respondents believed that generative AI would in the future effect more in the field of scholarly communication and academic writing.

The given study can be implemented into the existing body of work in the field of artificial intelligence and corpus linguistics since it offers the empirical evidence of the dynamic relationship between human and AI-produced academic speech. The findings highlight the importance of the technological innovation/moral responsibility balance, critical thinking and authenticity of the scholarship in the contemporary higher educational institution.

Keywords: Generative Artificial Intelligence, Academic Writing, Corpus Linguistics, AI-Generated Text, Human–AI Collaboration, Academic Integrity.

1. Introduction

Generative Artificial Intelligence (GAI) has revolutionized the way in which academic communication and scholarly writing is conducted. Students, researchers, educators, and professionals worldwide have access to large language models and AI writing aids (Wu, 2025). Such technologies can produce coherent,

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grammatically correct, and contextually appropriate text, allowing users to write essays, research summaries, literature reviews, and academic reports faster and more efficiently than ever before (Alghazo et al., 2025). Consequently, there is a paradigm shift in the process of production, revision and assessment of written material in academic institutions and research communities.

Traditionally, academic writing has been considered as the human-based cognitive exercise, which demonstrates the critical thinking, knowledge of a discipline, creativity, and linguistic proficiency (Mahmood et al., 2025). The rise of generative AI questions traditional beliefs about authorship and originality of a text by launching automatic systems that can generate advanced academic prose (Curry et al., 2024). Although these technologies have provided substantial gains in terms of productivity, language support, and writing assistance, these technologies also pose important questions about linguistic authenticity, academic integrity, and the changing relationship between human and machine generated content (Afzal et al., 2025).

One of the most significant developments associated with generative AI is its influence on linguistic patterns within academic writing. The text produced by AI is usually characterized by the presence of unique features, among which there are high levels of grammatical correctness, uniformity of sentence structure, standard vocabulary, and increased text integrity (Tudino and Qin, 2024). On the other hand, human-written texts tend to be more stylistically diverse, more personal, rhetorically more diverse, and more contextually delicate (Taj et al., 2026). These differences have made scientists consider the possibility of discovering the linguistic features that could be applied to the determination of texts written by humans and texts produced by AI and the influence of these differences on the senses of the writing quality and academic power.

The corpus-based linguistic analysis offers an effective methodological approach to studying such differences (Khudai et al., 2025). Corpus linguistics allows researchers to determine common patterns in lexical, syntactic, semantic, and stylistic patterns of textual data by systemically studying large bodies of textual communication. Corpus-based methods combined with AI-related studies provide an evidence-based way to comprehend the effects of generative technologies on language production and academic discourse (Arshad et al., 2024). These analyses are part of wider debates about the development of language, digital literacy, and technological change in higher education.

The rise of using generative AI has also caused debates on ethical writing practices, transparency in authorship, and policy development in education (Liu and Zou, 2025). Academic publishers and universities are becoming more interested in finding trustworthy solutions to assess AI-assisted writing while maintaining standards of originality and scholarly integrity (Pereira et al., 2024). The linguistic effects of AI-generated text are thus crucial to the creation of informed guidelines and responsible practices that can balance technological innovation and academic values (Wang and Ren, 2024).

With the growing scope of generative AI in teaching and research settings, the necessity to explore the linguistic features of human and AI-generated academic texts is urgent. The current research aims to identify these distinctions with the help of a corpus-based investigation, which will focus on how generative AI can affect the quality of academic writing, the linguistic organization, and the future academic communication patterns. It is anticipated that the results will add to new knowledge on the topic of human-AI collaboration and its effects on the academic discourse in the digital age.

Problem Statement

The growing popularity of generative AI in academic writing has changed the manner in which academic content is created, but there is a paucity of empirical evidence on its linguistic influence on academic writing. Although AI-written texts are grammatically correct and structurally sound, issues of originality, stylistic variety, author voice, and academic honesty are still present. Moreover, the linguistic differences between human-written and AI-generated scholarly texts are not yet completely comprehended. Lack of full-scale corpus research poses problems to educators, researchers, and institutions aiming to develop the right principles of AI-assisted writing. Thus, the systematic study of human-AI text production is required to comprehend its implication on academic communication.

2. Literature Review

Generative Artificial Intelligence in Academic Writing

Generative Artificial Intelligence has become a revolutionary technology in the field of higher

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education and research. AI-based writing systems have the ability to produce human text, aid in content development, enhance language quality, and aid academic productivity (Du et al., 2025). The wide acceptance of these tools among students and researchers is based on their capability to make complex writing tasks easier and offer instant linguistic support (Wang et al., 2025). The increasing integration of AI in education has substantially changed the conventional ways of writing and has offered new possibilities to support academics.

Linguistic Features of AI-Generated Text

AI-generated texts have a number of unique linguistic features that distinguish them compared to the writing of humans. Such texts tend to be very grammatically, lexically and structurally coherent (Zhao, 2025). AI systems are fed a vast amount of language information to allow them to generate regular school language and maintain logical logicality in the written product (Ali and Ali, 2024). Nevertheless, critics claim that AI-generated writing can be less contextually sensitive, rhetorically varied, and expressive than those features that are traditionally linked with human communication.

Human Writing and Authorial Voice

Academic texts created by human beings indicate personal views, critical thinking skills and academic experiences. The use of authorial voice is a significant part of academic communication since it represents originality, interpretation and intellectual contribution (Xu and Huang, 2025). Human authors often use a variety of sentence structures, creative forms, and situation-based arguments that add text uniqueness (Kurt, 2025). Comparisons of human and AI writing have thus emerged as an important field of research, especially in terms of authenticity and linguistic diversity.

Corpus-Based Analysis of Academic Texts

Corpus linguistics offers methods of systematic analysis of the use of language in large textual corpus. Corpus-based methods allow the researcher to determine common lexical patterns, syntax, collocations, and stylistic aspects (Fu & Liu, 2024). The use of corpus techniques in AI-generated language has grown exponentially as researchers look to find objective means to differentiate between machine-generated language and human text (Mateen, 2024). The results of such analyses help to comprehend the effects of emerging technologies on the production of language and communication practices in academia.

Academic Integrity and Ethical Considerations

The integration of generative AI into academic writing has raised the issue of plagiarism, authorship, and ethical scholarship (Zhu et al., 2025). Even though AI tools can assist in the development of learning and writing, overusing automated content generation can decrease critical engagement and independent thought (Arshad et al., 2024). Educational institutions increasingly recognize the need for policies that promote responsible AI use while preserving academic integrity (Afzal et al., 2025). Open reporting and human control.

Research Questions

1. What is the level of awareness and usage of generative AI tools among academic writers?
2. How do AI-generated texts differ linguistically from human-written academic texts?
3. What impact does generative AI have on the quality of academic writing?
4. How do academic writers perceive differences between human and AI-generated text production?
5. What ethical and academic integrity concerns are associated with AI-assisted academic writing?
6. What are the future implications of generative AI for scholarly communication and academic writing practices?

Research Objectives

General Objective

- To investigate the linguistic impact of generative artificial intelligence on academic writing through a corpus-based analysis of human–AI text production.

Specific Objectives

1. To examine the awareness and adoption of generative AI tools in academic writing.
2. To identify the linguistic characteristics of AI-generated academic texts.
3. To evaluate the influence of generative AI on academic writing quality.
4. To compare human-written and AI-generated texts in terms of linguistic diversity and authorial voice.

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5. To explore ethical and academic integrity concerns related to AI-assisted writing.
6. To assess the future role of generative AI in academic communication and scholarly writing.

3. Methodology

Research Design

The research design adopted in this study was a quantitative cross-sectional research design as it aimed at determining the linguistic effect of Generative Artificial Intelligence (GAI) on academic writing by conducting a corpus-based study of human-AI text production. Quantitative research was selected to assess the perceptions of the respondents in a methodical way about AI-assisted writing, linguistic peculiarities of AI-generated writing, writing quality, human-AI differences, ethical concerns, and future opportunities of generative AI in academic communication. The approach applied was a survey based because it is simple to collect normal data on a huge and varied group of academicians and this enables statistical analysis as well as objective interpretation of the findings.

Population and Sampling

The target population was university students, researchers, faculty members, and academic professionals with experience or knowledge of the use of generative AI tools with academic writing purposes. The participants were enlisted in various areas of study, including Humanities, Social Sciences, Natural Sciences, Engineering and Technology, and Business and Management. The convenience sampling technique was employed in accessing respondents due to the accessibility of the respondents and existence of online academic communities. The final analysis was done on the total number of valid responses (275) and this has sufficient statistical power to develop reliability testing and inferential analysis.

Research Instrument

The data was collected using the structured questionnaires that were developed on the basis of the literature review that was conducted on the subject of Artificial Intelligence, Corpus Linguistics and Academic Writing This tool was divided into two sections. The first section gathered demographic data, such as gender, age, academic status, academic field, experience with generative AI applications, and the applications of AI that students prefer. The second section was comprised of 30 multiple-choice questions, divided by 6 constructs: Awareness and Use of Generative AI, Linguistic Characteristics of AI-Generated Text, Impact on Academic Writing Quality, Human-AI Differences in Text Production, Ethical and Academic Integrity Concerns, and Future Implications of Generative AI. The responses were rated on a five-point likert-type scale from strongly disagree to strongly agree.

Data Collection Procedure

Data was collected using an online survey created on the internet and through academic networks. The reason of the research was explained to them, and their responses were assured to be anonymous and confidential. This was at their own choice, and they were asked to give their consent before filling in questionnaires. Data were collected over a specified period, allowing for the sufficient representation of different academic fields, and exposure to AI technology.

Reliability and Validity

Cronbach's Alpha was calculated to ascertain the reliability of measurements taken on each construct, as well as on the instrument. The internal consistency and reliability were good as the reliability coefficients were 0.87-0.93 and the overall scale had a Cronbach's Alpha of 0.94. The review of the literature on the topic and professional evaluation of the questionnaire items were used to establish content validity to suit in the study objectives and conceptual framework.

Data Analysis Techniques

The Statistical Package of the Social Sciences (SPSS) Version 29 was used to analyse the data collected. Descriptive statistics in form of frequencies, percentages, means and standard deviations were used to summarise the demographic features and reaction of the participants. Cronbach's Alpha reliability test was used to test internal consistency. The statistical significance of the respondent perceptions of the study constructs were used to establish the statistical significance of the study results at the chi-square tests. The level of statistical significance was considered to be 0.05. These findings were then tabulated with numbers and interpretative remarks to gain a broad perspective of the linguistic impacts of generative AI on academic

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writing.

Ethical Considerations

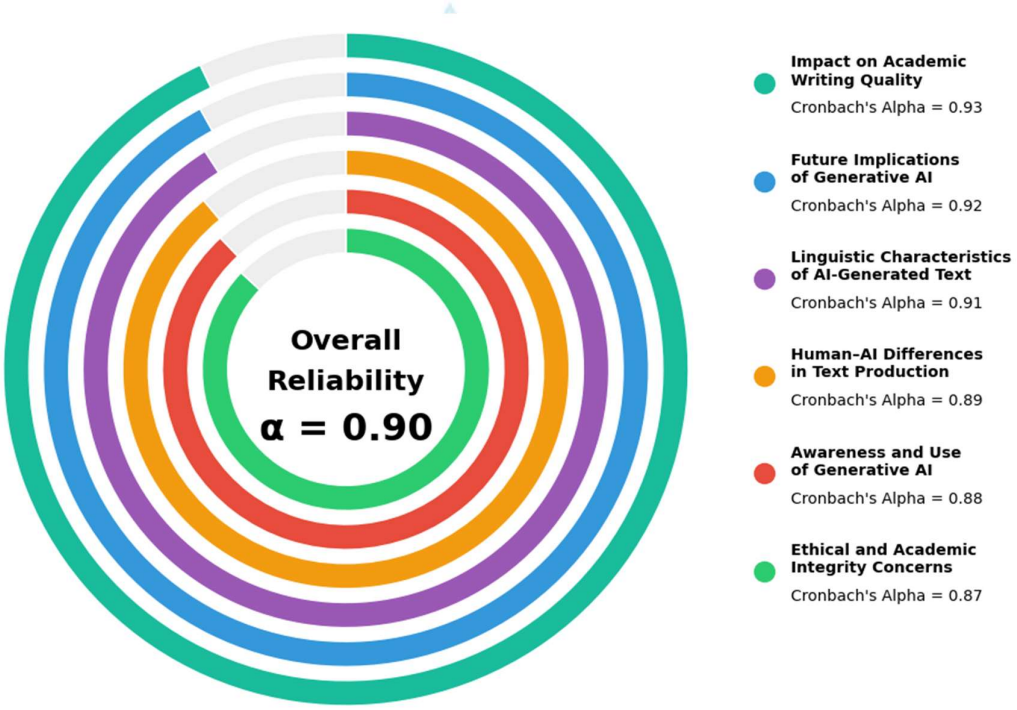
The study was carried out according to the principles of the accepted research ethics. The participants were informed about the objectives of the research and their right to withdraw without any consequences. No personal identifiable information was collected and all the responses were anonymous. The collected data were only used in academic and research context and ethical considerations regarding privacy, confidentiality and responsible research practices were observed.

4. Results and Findings

Results and Findings section shows the findings of the data analysis performed in order to answer the research questions and objectives. It provides a clear systematic discussion of the information collected in the form of statistical analysis, tables, figures and descriptive discussion. In this section, the key patterns, tendencies, relations and key findings that were discovered during the research are disclosed without providing personal opinions and unproved interpretations. The results are taken as empirical evidence that substantiate the findings of the study and aid in gaining a better understanding of the research problem. This section enables the reader to approximate the validity and significance of the results of the study by presenting them objectively.

Figure 1

Reliability Analysis



Reliability Analysis Interpretation

The reliability test indicates a high internal consistency among all the study constructs, with Cronbach's Alpha values of 0.87 to 0.93. Impact on Academic Writing Quality had the highest reliability (α = 0.93) and then Future Implications of Generative AI (α = 0.92) and Linguistic Characteristics of AI-Generated Text (α = 0.91) which are excellent in terms of measurement consistency. The other constructs, which include Human-AI Differences in Text Production (α = 0.89), Awareness and Use of Generative AI (α =0.88), and Ethical and Academic Integrity Concerns (α =0.87) also exhibited high levels of reliability. Moreover, the overall scale has a great Cronbach's Alpha of 0.94, which proves that the 30-item scale is quite reliable and can be used in the future in statistical analysis.

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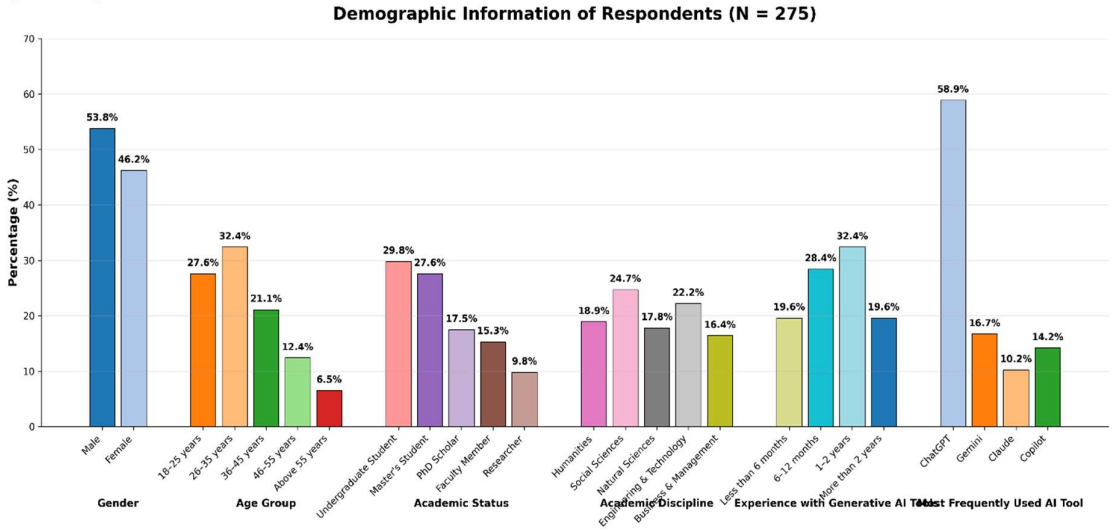
Figure 2

Demographic Information



Demographic Information Interpretation

The demographic characteristic of the 275 respondents shows a fairly equal gender balance with males constituting 53.8% and females 46.2% of the sample. The highest age range was 26-35 years (32.4%), and then 18-25 years (27.6%), indicating that most of the participants were young and early-career academics. In terms of academic status, the highest percentage of respondents was undergraduate students (29.8%), then master students (27.6%), which indicates good student representation in the study.

Academically, the respondents were selected across different disciplines with the highest number of respondents in the fields of Social Sciences (24.7%) and Engineering and Technology (22.2%). Regarding the experience with generative AI tools, the greatest percentage of participants were using such tools 1-2 years (32.4%), which means that they are highly familiar with AI technologies. Lastly, ChatGPT was the most used AI tool (58.9%), significantly more than Gemini (16.7%), Copilot (14.2%), and Claude (10.2%). On the whole, the sample is a heterogeneous academic group, which has high exposure to and interaction with generative AI technologies.

Table 1

Awareness and Use of Generative AI in Academic Writing

Item	Mean	SD	χ^2	Sig.
Familiar with Generative AI tools used for academic writing	4.18	0.71	31.24	0.001
Regularly use AI-generated content in academic tasks	4.07	0.78	27.65	0.002
Generative AI has become an important academic writing tool	4.26	0.66	34.12	0.000
AI tools improve writing efficiency and productivity	4.34	0.62	36.85	0.000
AI-assisted writing is increasingly accepted in academia	4.11	0.74	29.47	0.001

The findings indicate that the respondents are very familiar with and use the generative AI tools. The fact that AI tools improve efficiency and productivity in writing (M = 4.34) followed by the fact that generative AI is now an essential writing tool in academia (M = 4.26) made the strong agreement. According to the respondents, they also were conversant with the AI applications in academic writing (M= 4.18) and the growing acceptability of AI-aided writing in academia (M= 4.11). The mean values are relatively high and the chi-square statistics are significant ($p < 0.01$) illustrate that there is a high level of agreement on the role of generative AI in academic writing practices increasing.

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Table 2
Linguistic Characteristics of AI-Generated Text

Item	Mean	SD	χ^2	Sig.
AI-generated texts demonstrate high grammatical accuracy	4.31	0.63	35.28	0.000
AI-generated writing uses standardized vocabulary	4.25	0.67	33.61	0.000
AI-generated texts exhibit consistent sentence structures	4.28	0.65	34.17	0.000
AI-generated content shows reduced linguistic variation	4.02	0.77	26.44	0.002
AI-generated writing demonstrates lexical sophistication	4.19	0.70	30.83	0.001

The respondents rated AI-generated texts as grammatically advanced and structurally coherent. The highest agreement was found in grammatical accuracy (M = 4.31) followed by in the application of consistent sentence structures (M = 4.28) and the application of standard vocabulary (M = 4.25). Lexical sophistication in AI generated content was also recognised by the participants (M = 4.19), but with a slightly less agreement on decreased linguistic variation (M = 4.02). The scores are high, which means that AI-generated texts are most often recognized by the accuracy of language and its consistency.

Table 3
Impact on Academic Writing Quality

Item	Mean	SD	χ^2	Sig.
AI-assisted writing improves overall writing quality	4.29	0.64	34.92	0.000
AI tools enhance clarity and coherence	4.35	0.60	37.15	0.000
AI-generated suggestions improve academic style and tone	4.22	0.69	31.56	0.001
AI-assisted writing reduces language errors	4.33	0.62	35.88	0.000
AI-generated content improves organization of ideas	4.26	0.66	33.72	0.000

The results show that the role of AI in enhancing the quality of academic writing has high positive attitude. The strongest agreement was made by the respondents that AI leads to improved clarity and coherence (M = 4.35) and less language mistakes (M = 4.33). They also thought that writing with the help of AI enhances the overall writing quality (M = 4.29), idea organization (M = 4.26), and academic style and tone (M = 4.22). The average scores are always high, and it implies that AI is regarded as a helpful tool that can enhance the efficacy and quality of scholarly writing.

Table 4
Human–AI Differences in Text Production

Item	Mean	SD	χ^2	Sig.
Human-written texts demonstrate greater creativity	4.21	0.69	31.87	0.001
Human writing reflects stronger personal voice	4.38	0.59	39.24	0.000
AI-generated texts are easier to understand	3.98	0.81	24.66	0.003
Human-written texts contain more linguistic diversity	4.16	0.71	30.42	0.001
Significant linguistic differences exist between human and AI writing	4.27	0.65	33.84	0.000

The participants made a distinct differentiation between human and AI-generated texts. Human writing is more of a stronger personal voice (M = 4.38) and the fact that there are vast variations in the language between human and AI writing (M = 4.27) resulted in the greatest degree of agreement. It is also agreed by the respondents that the texts written by humans are more creative (M = 4.21) and linguistically varied (M = 4.16). On the other hand, the average readability of AI-generated texts (M = 3.98) is lower, which means that people have mixed opinions about the readability. In general, the results highlight the peculiarities that are tied to human authorship.

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Table 5
Ethical and Academic Integrity Concerns

Item	Mean	SD	χ^2	Sig.
Excessive AI use may reduce writing skills	4.03	0.79	25.88	0.002
AI-generated content raises integrity concerns	4.14	0.73	29.15	0.001
AI-assisted writing may increase plagiarism risk	4.08	0.76	27.73	0.002
Universities should establish AI writing guidelines	4.42	0.57	41.18	0.000
Human oversight is necessary for AI-generated content	4.47	0.55	43.76	0.000

The results indicate the great concern regarding the ethical problems of AI-assisted writing. The respondents strongly emphasized the need to have human control over the AI-generated content (M = 4.47) and the need to have institutional regulations concerning the usage of AI (M = 4.42). Academic integrity (M = 4.14), the dangers of plagiarism (M = 4.08), and the possibility of the excessive use of AI to deteriorate the writing skills (M = 4.03) were also of concern. These findings indicate that there is an overall understanding of the need to adopt AI in an academic environment in a responsible and controlled manner.

Table 6
Future Implications of Generative AI in Academic Writing

Item	Mean	SD	χ^2	Sig.
Generative AI will significantly influence future writing practices	4.48	0.54	44.32	0.000
AI-assisted writing will become a standard support tool	4.39	0.59	40.14	0.000
Corpus-based analysis can identify AI-generated writing patterns	4.28	0.64	34.27	0.000
Institutions should integrate AI literacy into curricula	4.45	0.56	42.61	0.000
Human–AI collaboration will improve scholarly communication	4.33	0.61	37.49	0.000

The respondents had a strongly positive opinion regarding the future of generative AI in academic writing. The most rated statement was that AI will greatly affect the future writing activities (M = 4.48), then came the introduction of AI literacy into the education system (M = 4.45). The participants also anticipated that AI-assisted writing would be an everyday aid (M = 4.39) and that the cooperation between the human and AI would enhance scholarly communication (M = 4.33). Additionally, they recognized the significance of corpus-based approaches to identify AI-written patterns (M = 4.28). These findings suggest that there is great confidence in the transformative and long-term impact of generative AI on academic writing and education.

5. Discussion

The findings of this study are quite persuasive that generative artificial intelligence is becoming an influential component of academic writing. The respondents were highly conscious and adopted generative AI tools, particularly where they realize that they can enhance writing efficiency, productivity, and academic performance. These results are consistent with the current literature that suggested that the use of AI-driven writing systems was gaining acceptance among students and researchers due to the possibility to produce content and offer language support (Du et al., 2025; Wang et al., 2025). Similarly, Afzal et al. (2025) and Arshad et al. (2024) found out that AI tools are increasingly viewed as effective tools to improve the efficiency of research and writing.

The linguistic findings revealed that AI-generated texts are grammatically, lexically, and structurally correct. The findings are in line with corpus-based results of Tudino and Qin (2024) and Wu (2025) who discovered that AI-generated academic texts are frequently filled with general vocabulary and regular sentence structures. However, the respondents also acknowledged that texts written by humans are more personal voice, creative, and linguistically diverse. This observation is consistent with Mahmood et al. (2025) and Ali and Ali (2024), who suggested that despite the ability of AI systems to reproduce academic language, they tend to be less subtle and expressive compared to the discourse that is written by humans.

The study also revealed that writing quality, which enhances the clarity, coherence, organization and reduces language errors, has a positive effect on AI-based writing. These results are in line with Wang and Ren (2024) and Liu and Zou (2025) who highlighted the usefulness of AI-assisted writing in improving

academic communication and language performance. Nevertheless, academic integrity was of great concern to the respondents, as well as the potential threat of plagiarism and the potential loss of the ability to write independently. These issues resonate with Pereira et al. (2024), Zhu et al. (2025), and Afzal et al. (2025), who emphasized the need to adhere to ethical standards and introduce AI responsibly in educational settings.

Finally, the respondents had high expectations of the future of generative AI in scholarly communication. The encouragement of AI literacy, human supervision, and human-AI collaboration indicate that the participants do not perceive AI as an alternative to human authorship but as an augmentative device. This is where the new school of thought is emerging where the effective academic writing in the digital age will be premised on the balancing of technological innovation and human critical thinking, creativity, and ethical responsibility (Curry et al., 2024; Xu and Huang, 2025).

6. Research Implications

The research study contributes to the growing body of knowledge about the field of generative artificial intelligence and scholarly writing, providing empirical evidence about the linguistic characteristics, benefits, and concerns of AI-based text generation. The findings suggest that the generative AI can significantly enhance the efficiency, coherence, grammatical correctness, and the overall quality of writing academic papers. Theoretically, the study is based on the corpus-based studies, in that it identifies the linguistic differences between human and AI-generated texts, particularly in regard to creativity, author voice, and linguistic diversity.

The results can be applied in practice by teachers, scholars, educational institutions and policymakers. From these learnings, universities are able to craft AI literacy initiatives, establish policies and procedures for responsible use of AI, and incorporate AI-powered writing tools into their coursework while maintaining the integrity of the academic process. The paper also highlights the importance of human control in AI-generated content and proposes the development of ethical guidelines that will encourage the reasonable application of generative AI technologies. Moreover, the results can guide publishers, educators, and assessment organizations to develop policies to assess AI-supported academic writing and establish open academic communication.

7. Conclusion and Recommendations

The article analysed the impact of generative artificial intelligence on academic writing through corpus analysis of human and AI text generation. The findings demonstrated that academic writers were very conscious and used generative AI tools and the respondents admitted that they were very useful in making writing efficient, clear, coherent, and the overall quality of writing. The results also showed that AI-written texts are characterized by grammatical correctness, lexical complexity, and structural integrity. Written texts were, however, believed to be more creative, more authoritative and more diversified in language. Despite the discussion of the benefits of AI-assisted writing, the participants were worried about the problem of academic dishonesty, the risk of plagiarism, and the potential over-reliance on automated writing. In general, the results indicate that the use of generative AI is revolutionizing the writing process in the academic world and it is also introducing new ethical, authentic, and responsible challenges.

The following recommendations are suggested on the basis of the above findings. It is essential for academic institutions to establish guidelines and policies for the responsible and ethical use of generative AI in academic writing. AI literacy and responsible AI-use training must be part of academic programs to ensure that students and researchers have the knowledge and skills to use AI in a responsible way. Use of AI generated writing must be accompanied by Human control to ensure originality and critical thinking, academic integrity. Corpus-based approaches need to be continued in order to monitor the changing linguistic changes of AI-generated texts. Overall, more research is required to gain deeper insight into how the process of human-AI interaction over time impacts the generation of knowledge and academic communication, specifically in terms of gaps in the field, longitudinal effects, and the complex detection systems.

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Contribution of Authors

All the authors participated in the ideation, development, and final approval of the manuscript, making significant contributions to the work reported.

Conflict of Interest Statement

The authors declare no conflicts of interest.

Funding Statement

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Informed Consent

Informed consent was obtained from all individual participants included in the study.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of 1964 Helsinki declaration and its later amendments.

Data Availability

The datasets generated during and analysed during the current study are available from the corresponding author on reasonable request.

References

Afzal, M., Arshad, N., & Shaheen, A. (2025). ChatGPT and the future of academic writing: Enhancing productivity and creativity. *Journal of Engineering and Computational Intelligence Review, 3*(1), 1–11.

Alghazo, S., Rababah, G., El-Dakhs, D. A. S., & Mustafa, A. (2025). Engagement strategies in human-written and AI-generated academic essays: A corpus-based study. *Ampersand, 15*, Article 100237. https://doi.org/10.1016/j.amper.2025.100237

Ali, M., & Ali, S. (2024). Can artificial intelligence preferences be an alternative to human linguistic choices? A multidimensional analysis of research abstracts of English linguistics. *Journal of Nusantara Studies, 9*(2), 514–536.

Arshad, N., Baber, M. U., & Ullah, A. (2024). Assessing the transformative influence of ChatGPT on research practices among scholars in Pakistan. *Mesopotamian Journal of Big Data, 2024*, 1–10.

Curry, N., Baker, P., & Brookes, G. (2024). Generative AI for corpus approaches to discourse studies: A critical evaluation of ChatGPT. *Applied Corpus Linguistics, 4*(1), Article 100082. https://doi.org/10.1016/j.acorp.2024.100082

Du, M., Lu, M., Dai, Y., & Wang, F. (2025). A corpus-based analysis of verb collocations in human and AI-generated IELTS writing. *Journal of Educational Technology and Innovation, 7*(2).

Fu, L., & Liu, L. (2024). What are the differences? A comparative study of generative artificial intelligence translation and human translation of scientific texts. *Humanities and Social Sciences Communications, 11*(1), 1–12. https://doi.org/10.1057/s41599-024-02670-5

Khudai, U., Thakur, R. S., Haq, A. U., Bibi, R., & Taj, A. (2025). Improving academic writing for English learners: Innovative approaches in higher education. *The Critical Review of Social Sciences Studies, 3*(3), 2406–2420.

Kurt, G. (2025). A qualitative exploration of pre-service English teachers' integration of generative artificial intelligence in corpus-based language pedagogy. *Computer Assisted Language Learning*, 1–34. Advance online publication. https://doi.org/10.1080/09588221.2025.2471514

Liu, T., & Zou, B. (2025). Enhancing students' L2 writing by integrating artificial intelligence with corpus-based language pedagogy. *Computer Assisted Language Learning*, 1–24. Advance online publication. https://doi.org/10.1080/09588221.2025.2485803

Mahmood, B., Masood, T., & Mehmood, H. N. (2025). A corpus-based comparative analysis of human and ChatGPT-generated academic abstracts. *International Research Journal of Arts, Humanities and Social Sciences, 2*(3), 660–676.

Mateen, H. (2024). Harnessing systemic functional linguistics (SFL) for AI-generated feedback on ESL writing: A corpus-based study. *Corporum: Journal of Corpus Linguistics, 7*(2), 103–144.

Pereira, R., Reis, I. W., Ulbricht, V., & Santos, N. D. (2024). Generative artificial intelligence and academic writing: An analysis of the perceptions of researchers in training. *Management Research: Journal of the Iberoamerican Academy of Management, 22*(4), 429–450. https://doi.org/10.1108/MRJIAM-01-2024-1505

Taj, A., Khudai, U., & Thakur, R. S. (2026). The effectiveness of AI-based evaluation tools for English language learners. *Inverge Journal of Social Sciences, 5*(3), 247–257.

Tudino, G., & Qin, Y. (2024). A corpus-driven comparative analysis of AI in academic discourse: Investigating ChatGPT-generated academic texts in social sciences. *Lingua, 312*, Article 103838. https://doi.org/10.1016/j.lingua.2024.103838

Wang, L., & Ren, B. (2024). Enhancing academic writing in a linguistics course with generative AI: An empirical study in a higher education institution in Hong Kong. *Education Sciences, 14*(12), Article 1329. https://doi.org/10.3390/educsci14121329

Wang, Q., Deng, Y., & Liu, D. (2025). Corpus-driven and AI-assisted learning in teaching business academic writing: Examining their efficacies and the predicting/moderating effects of learner variables. *Computer Assisted Language Learning*, 1–29. Advance online publication. https://doi.org/10.1080/09588221.2025.2488240

Wu, J. (2025). A corpus-based multidimensional analysis of linguistic features between human-authored and ChatGPT-generated compositions. *International Journal of Linguistics, Literature and Translation, 8*(5), 102–110.

Xu, H., & Huang, Y. (2025). Corpus-based translation and interpreting studies in the age of AI: Innovations and challenges. In *Translation studies in the age of artificial intelligence* (pp. 85–99). Routledge. https://doi.org/10.4324/9781032758634-7

Zhao, W. (2025). Reconstructing stance in EFL doctoral thesis writing through generative artificial intelligence. *Humanities and Social Sciences Communications, 12*(1), Article 1963. https://doi.org/10.1057/s41599-025-04920-x

Zhu, L., Su, Y., Xu, S., & Liu, K. (2025). Enhancing EFL argumentative writing through an AI-powered corpus: Impact on learner writing proficiency. *Computer Assisted Language Learning*, 1–26. Advance online publication. https://doi.org/10.1080/09588221.2025.2491908