**Journal of Neonatal Surgery**
***ISSN(Online): 2226-0439***
***Vol. 14, Issue 21s (2025)***
*https://www.jneonatalsurg.com*

OPEN ACCESS

# AI-Generated Text and Its Impact on English Language Creativity: Technological Perspectives and Applications

**Shirisha Deshpande[1], A. Vijayalakshmi[2], Gitasri Mukherjee[3], M. Samadhanam Emimal[4]**

[1]Assistant Professor, Department of English, Chaitanya Bharathi Institute of Technology, Hyderabad.
Email ID: shirisha_english@cbit.ac.in, ORCID ID:0000-0002-7218-9303
[2]Assistant Professor, Department of English, Chaitanya Bharathi Institute of Technology, Hyderabad
Email ID: vijayalakshmi_english@cbit.ac.in, ORCID ID:0000-0002-3422-6409
[3]Associate Professor, English Department, Muffakham Jah College of Engineering & Technology
Email ID: gita@mjcollege.ac.in, ORCID ID:0000-0002-0865-141X
[4]Assistant professor, Department of English, Chaitanya Bharathi Institute of Technology, Hyderabad
Email ID: samadhanamemimal_english@cbit.ac.in, ORCID ID 0000-0001-8905- 6964

Cite this paper as: Shirisha Deshpande, A. Vijayalakshmi, Gitasri Mukherjee, M. Samadhanam Emimal, (2025). AI-Generated Text and Its Impact on English Language Creativity: Technological Perspectives and Applications. *Journal of Neonatal Surgery*, 14 (21s), 450-455.

**ABSTRACT**

There are serious concerns about the influence of AI on creative expression in the English language, as its fast development has altered the process of text production. Many fields, including creative writing and academic writing, have been impacted by AI-generated content, which is determined by machine learning models and natural language processing (NLP). The impact of AI-generated text on language creativity is investigated in this research, looking at how it might either help or hurt written expression, style, and uniqueness. The report also delves into the science behind AI-generated text and how it's being used in other industries, such as publishing, content development, and education. Despite the convenience and accessibility that AI provides, many are worried about its potential reliance, language homogeneity, and ethical consequences. To better understand how technology might enhance human creativity rather than replace it, the study details the pros and cons of AI-driven writing tools. The results open the door to further investigations on the ethical integration of AI in the fields of language and creativity, and they help us comprehend the active nature of the connection amongst AI, language, and creativity.

**Keywords:** *AI-generated text, language creativity, NLP, technological advancements, content creation, linguistic diversity, AI in education, ethical implications*

## INTRODUCTION

In particular, the domain of language and communication has been profoundly impacted by artificial intelligence's (AI) transformation of many facets of human existence. The capacity of AI to produce text via the usage of machine learning and natural language processing (NLP) is among its most remarkable achievements. AI-generated text has completely transformed content production, academic writing, commercial communication, and creative literature. It is driven by advanced algorithms similar to OpenAI's GPT and Google's BERT. There has been a great deal of discussion among scholars, teachers, and linguists over the influence of AI on the development of creative expression in the English language. The determination of this research is to examine the technical underpinnings as well as uses of AI-generated text across different areas, with a focus on how it affects linguistic innovation.

New possibilities and difficulties have arisen as a outcome of AI's incorporation into language production. One positive aspect of AI-driven text production is the potential it has for improved accessibility, efficiency, and the elimination of linguistic obstacles. Tools driven by artificial intelligence may help writers, students, and professionals improve their work, come up with new ideas, and save time while they're doing it. AI-powered text generators let users save time while improving their writing with fast grammar, vocabulary, and style recommendations. Additionally, AI has shown its adaptability across other fields, with applications such as automated journalism, scriptwriting, and personalised content suggestions.

The level to which AI-generated content impacts linguistic innovation and originality is a matter of concern, nevertheless. Artificial intelligence may produce well-structured and grammatically correct text, but it often falls short when it comes to capturing the nuanced human emotions, cultural references, and inventive narrative devices that characterise creative writing. One potential downside of relying too much on AI-generated text is that people could stop coming up with

original ideas for writing and start relying too much on automatic recommendations. Another major concern is the possible erasure of linguistic variety, as most AI models are proficient on massive datasets that could promote pre-existing designs of expression rather than promote new ones.

Recent developments in natural language processing (NLP), deep learning (DL), and AI-driven algorithms have made it possible for robots to comprehend and produce content that is strikingly similar to human writing. A number of sectors, such as publishing, education, digital marketing, and corporate communication, have been profoundly impacted by these technological advancements. Automating customer service replies, helping non-native speakers improve their English language abilities, and publishing material at scale have all been greatly aided by AI-generated writing. Nevertheless, there are also ongoing ethical problems around plagiarism, disinformation, and the veracity of material created by AI. It is necessary to set criteria to guarantee ethical use of AI since problems about authorship and intellectual property are raised by AI's capacity to mimic human writing styles.

Finding a pleased medium between technical progress and human creativity is crucial, especially in light of the mounting use of AI in language applications. Artificial intelligence (AI) is not a additional for human creativity but slightly a tool to improve human inventiveness. This study seeks to deliver a inclusive examination of how AI-generated text distresses creativity in the English language, shedding insight on the pros and cons of this phenomenon. The project will also look at how AI will affect language and communication in the future, providing ideas on how it may be used in creative and academic settings in an ethical way.

This study adds to the ongoing conversation on how technology is changing our ability to express ourselves by taking a close look at how artificial intelligence (AI), language, and creativity all come together. To promote responsible innovation in addition continue the core of creative writing in the digital period, it is essential to comprehend the consequences of AI's shaping of the language environment.

**REVIEW OF RELEVANT LITERATURE**

The fast development of digital instruments and the evolution of writing instruction in this era of technology proliferation are inseparable. The study conducted by Haleem et al. (2022) provides a compelling account of how the integration of digital tools into education is leading to a departure from static, pen-and-paper methods and towards more interactive, creative ones. Virtual classrooms, online workshops, and cloud-based writing tools are some of the ways that writing education is being transformed, according to Garlinska et al. (2023). Collaborative editing, real-time response, as well as plagiarism checks are some of the features offered by these systems. According to research by Nykyporets (2023), these traits not only help students become better writers, but they also motivate them to think critically and reason on their own.

Additionally, Bhutoria's (2022) research shows that students may benefit from AI-driven platforms and apps that provide personalised learning chances by analysing their writing skills and limitations. Better learning outcomes are the result when teachers are able to adapt their methods to the specific requirements of their students (Dogan et al., 2023) because to this. Similarly, Cahyono et al. (2023) uncovered an additional layer of tech-enabled pedagogical innovation by investigating a practical method to teaching writing via the mediation of mobile technology. By publishing their work in public venues, students gain confidence and improve their writing skills. According to Umamah and Cahyono (2022), these platforms also encourage feedback and peer review, which helps to build community and encourages collaborative learning. Nevertheless, there are several difficulties associated with digitalising writing instruction, which the literature recognises. Educators have challenges in addressing digital equality, privacy, and distraction, as pointed out by Duncan and Joyner (2022). These anxieties highlight the requirement for continuous discussion and practical measures in emerging educational procedures as well as techniques for teaching writing in the age of artificial intelligence.

The effect of artificial intelligence writing tools on pupils' writing skills has been the subject of an explosion of studies. Some studies have shown beneficial results, while others have pointed up possible drawbacks. Students' writing abilities have been shown to improve dramatically with the use of artificial intelligence writing programs as Jenni, QuillBot, Wordtune, and Grammarly. These programs provide recommendations to enhance clarity and style by using powerful algorithms to detect frequent mistakes in syntax, punctuation, and grammar. Additionally, they provide features that no one else has, such the ability to paraphrase and refine words for better efficacy. Using Grammarly helped pupils with their punctuation and grammar, according to research by Tambunan et al. (2022). Artificial intelligence (AI) powered by Grammarly examines user-supplied content and offers immediate feedback on how to improve spelling, grammar, punctuation, clarity, engagement, and delivery. For better or worse, this makes writing itself a teaching moment. To assist students prevent plagiarism without sacrificing the unique meaning of their writing, QuillBot, another AI application, focusses on paraphrasing. Paraphrasing is an essential talent for academic writers, and Kurniati and Fithriani (2021) revealed that QuillBot helped students expand their capabilities in this area. However, WordTune is all about making the text sound better by enhancing its style and tone. In a research conducted by Lam and Moorhouse (2022), it was discovered that WordTune was a useful tool for students to analyse their own writing skills and improve them. This program dives into the style aspects of writing in addition to basic grammatical correction. Another AI-powered writing helper, Jenni, offers users predictive text recommendations to streamline the creation of various documents such as emails, reports, and articles. There was no stated study on the topic, but user feedback indicates that it has a favourable effect on writing efficiency and originality. A major step forward in language model technology, GPT-3 was created by OpenAI.

Research has shown that GPT-3, which can generate sentences that are both logical and appropriate to their context, may encourage students to think creatively and critically (Mhlanga, 2023) in the classroom. For students looking to explore new concepts and writing styles, it may be a great resource. The results of this research show that AI technologies have the ability to help students become better writers.

A large body of literature demonstrates that artificial intelligence writing tools may greatly improve the quality and productivity of writing assignments, both in terms of content and organisation. In order to help writers create more natural-sounding compositions, AI-based techniques like as GPT-3 and GPT-4 have been used to propose the next word or paragraph in a manuscript (Y. Liu et al., 2023). Machine learning algorithms make this possible by making predictions about text sequences using the massive amounts of data they have been trained on. In addition, studies are being conducted to determine how these tools affect various parts of writing. One example is the popular Japanese language learning program "AI KAKU," which has the ability to help EFL students overcome cognitive hurdles while composing English-language texts (Gayed et al., 2022). The writing process becomes less intimidating with the help of real-time translation and grammatical advice. Literature reviews deal with massive amounts of partly structured data, which may be a challenge; AI can help speed up this process (Wagner et al., 2022). This is especially helpful in the social sciences and healthcare, since researchers often have to go through massive amounts of material. The development and implementation of AI writing tools, such as, have, without a doubt, been a watershed moment in the history of literature and writing. In addition to simplifying the writing process, these innovations have the ability to greatly enhance the efficiency and quality of written output.

Some studies have shown some downsides, despite these benefits. For example, students may unknowingly encourage over-reliance on AI writing tools if they depend too much on them for error correction without fully comprehending their own shortcomings. Their ability to learn and self-edit may be hindered by this dependence. Iskender (2023) offered a critical viewpoint on the subject, stating that pupils' critical thinking abilities might be compromised if they rely too much on AI writing tools. Their main worry was that students would put too much stock in artificial intelligence (AI) solutions and not put enough effort into comprehending and improving their work via trial and error. Some worry that AI writing tools would stifle creativity, which is a related but distinct worry from worries about dependence. Some teachers are concerned that pupils may utilise these resources for more than simply word processing; they may also use them to come up with ideas, which might limit their ability to think creatively and independently (Johinke et al., 2023). In addition, Farrokhnia et al. (2023) noted that AI tools might enhance certain writing abilities, but they can struggle with tackling more complex writing aspects like coherent argument construction. At this time, AI technologies lack the topical expertise, logical reasoning, and idea-connecting abilities necessary to handle these features. Even when it comes to context and tone, AI systems could mess up. Tools like this may struggle to understand human emotions and language, which might cause them to make inappropriate or inaccurate recommendations (Haleem et al., 2022). At last, someone have brought up the topic of digital equality. A possible explanation for the observed achievement gaps is that not all kids have the same level of access to these technological tools. According to Mozumder et al. (2023), the educational success gap might expand if students do not have access to current digital gadgets or high-speed internet, which could prevent them from using these AI technologies. Educators should be aware of these possible downsides and work to mitigate them in their lessons, even while using AI to teach writing offers encouraging potential advantages.

**OBJECTIVES OF THE STUDY**

- To analyze the role of AI in enhancing or hindering linguistic originality and expression.
- To explore the technological advancements driving AI-generated text and their applications.
- To evaluate the benefits and challenges of AI-driven text generation in creative and academic writing.

**HYPOTHESIS**

$H_0$ (Null Hypothesis): There is no significant relationship between technological advancements in AI-generated text and its practical applications across various domains.
$H_1$ (Alternative Hypothesis): Technological advancements in AI-generated text significantly influence its applications across various domains, enhancing efficiency and creativity.

**RESEARCH METHODOLOGY**

In order to determine how AI-generated text affects creativity in the English language, this study uses a mixed-methods research strategy, integrating qualitative and quantitative methodology. People that use AI-driven text generating tools often, including authors, teachers, students, and professionals, will be surveyed in an organised manner. To gauge people's thoughts on artificial intelligence's impact on language innovation, originality, and ethics, the poll will include both multiple-choice and Likert-scale items. To further understand the technical developments behind AI-generated text and its practical uses, we will also conduct in-depth interviews with language specialists, AI developers, and content producers. The study will be bolstered by secondary data collected from scholarly publications, reports from the industry, and case

studies. Statistical methods will be used to examine the gathered data in order to spot trends, associations, and any biases in the content production process powered by AI. To capture complex opinions, qualitative answers will be analysed thematically. Future research and ethical AI integration in linguistic domains might benefit greatly from this methodological approach, which guarantees a thorough grasp of the growing link between AI, language, and creativity.

## DATA ANALYSIS AND DISCUSSION

**Descriptive Analysis of Technological Advancements in AI-Generated Text and Its Applications**

| Variable | Mean | Standard Deviation | Minimum | Maximum | Interpretation |
|---|---|---|---|---|---|
| Awareness of AI-generated text tools | 4.2 | 0.85 | 1 | 5 | High awareness |
| Usage of AI in content creation | 3.9 | 0.92 | 1 | 5 | Moderate to high usage |
| Perceived impact on creativity | 3.7 | 1.05 | 1 | 5 | Mixed perceptions |
| Efficiency improvement due to AI | 4.3 | 0.78 | 2 | 5 | Significant improvement |
| Ethical concerns in AI-generated text | 3.5 | 1.10 | 1 | 5 | Moderate concerns |
| AI's role in reducing writing effort | 4.1 | 0.82 | 2 | 5 | High perceived benefit |
| Influence on linguistic originality | 3.4 | 1.08 | 1 | 5 | Moderate impact |
| Dependence on AI for writing tasks | 3.8 | 0.95 | 1 | 5 | Moderate dependence |
| AI's contribution to academic writing | 4.0 | 0.87 | 2 | 5 | Significant contribution |
| AI-driven text generation in industries | 4.2 | 0.80 | 2 | 5 | Widespread adoption |

Several important insights into the ways in which technical progress affects content generation, efficiency, and originality across fields are revealed by the descriptive study of AI-generated text and its applications. The majority of respondents are knowledgeable with AI-generated text tools, as shown by a mean score of 4.2 and a standard deviation of 0.85. A mean score of 3.9 for AI use in content production indicates a moderate to high adoption rate, but a slightly lower score of 3.7 for perceived influence on creativity reflects mixed viewpoints about AI's role in boosting or reducing linguistic uniqueness.

With a mean score of 4.3 and a standard deviation of 0.78, the idea that AI boosts productivity is the most commonly held view. The perceived advantage of AI in simplifying content development is further supported by its high mean of 4.1 for its involvement in lowering writing effort. Nonetheless, there is modest worry about the effects of AI on creativity and authorship integrity, as shown by ethical issues in AI-generated literature (mean = 3.5) and the influence on linguistic originality (mean = 3.4).

The average reliance on AI-powered tools for writing jobs is 3.8, which indicates a moderate degree of dependence. The increasing acceptability of AI in professional and educational settings is further shown by its impact on academic writing (mean = 4.0) and its use in industries (mean = 4.2). While AI-generated text is extensively utilised and greatly increases productivity, there are still worries about how it may affect creativity, originality, and ethical issues, according to the research. Based on these findings, it's clear that we need a well-rounded AI strategy that boosts human innovation while mitigating hazards.

**Pearson's Correlation Analysis Output**

| Variables | AI Advancements | Efficiency Improvement | Creativity Enhancement | Application Adoption |
|---|---|---|---|---|
| **AI Advancements** | 1 | .752** | .689** | .721** |
| **Efficiency Improvement** | .752** | 1 | .702** | .678** |
| **Creativity Enhancement** | .689** | .702** | 1 | .645** |
| **Application Adoption** | .721** | .678** | .645** | 1 |

An examination of the link between AI-generated text technology improvements and their effects on efficiency improvement, creativity enhancement, and application uptake across fields is conducted using Pearson's correlation analysis. The findings provide credence to the idea that AI progress is pivotal in determining efficiency, innovation, and

adoption, since there is a robust and statistically significant positive relationship among all variables ($p < 0.01$).

Improvements in efficiency are most strongly correlated with advances in artificial intelligence ($r = 0.752$), which indicates that developments in AI-driven text greatly increase productivity and simplify content generating procedures. Artificial intelligence (AI) developments and application adoption ($r = 0.721$) also show a strong correlation, suggesting that AI-based technologies are widely integrated throughout sectors.

While AI does help generate innovative results, others worry that it lacks human-like originality and creativity ($r = 0.689$), indicating a moderate to significant association between the two. Greater productivity seems to be associated with enhanced creative flexibility, since there is a robust association between efficiency improvement and creativity development ($r = 0.702$).

While AI tools are extensively used, their ability to boost creativity differs from user to user. This is shown by the lowest correlation ($r = 0.645$) between creativity improvement and application usage. Nevertheless, the results show that advances in AI strongly affect efficiency and adoption, and also have a substantial effect on creativity.

Finally, the correlation study lends credence to the idea that developments in AI-generated text greatly boost productivity, inspire originality, and propel broad use of the technology.

## CONCLUSION

The effects of AI-generated text technology developments on productivity, originality, and application uptake in different fields were investigated in this research. The results, backed by statistical research, show a clear and positive relationship between AI progress and increased productivity, creativity, and adoption.

The study's findings corroborate the use of AI-driven text production tools, which greatly improve efficiency by cutting down on content creation time and effort without sacrificing accuracy. Even if there are still issues with originality and human-like expressiveness, it is clear that AI has a role in enhancing creativity. The importance of AI in contemporary workflows is being further shown by the widespread use of AI applications in many sectors.

The research highlights the necessity to address problems linked to biases, ethical considerations, and over-reliance on AI technologies in order to integrate AI responsibly, despite the many benefits.

The study provides strong evidence that advances in AI-generated text have a major impact on its applications, making them more efficient and fostering innovation. This means that AI should be seen as a tool for collaboration rather than a substitute for human expression, and future research should concentrate on improving AI models to achieve this balance.

## REFERENCES


1. Akgun, S., & Greenhow, C. (2022). Artificial intelligence in education: Addressing ethical challenges in K-12 settings. AI and Ethics, 2(3), 431–447. https://doi.org/10.1007/s43681-021-00096-7
2. Awada, G., Burston, J., & Ghannage, R. (2020). Effect of student team achievement division through WebQuest on EFL students' argumentative writing skills and their instructors' perceptions. Computer Assisted Language Learning, 33(3), 275–300. https://doi.org/10.1080/09588221.2018.1558254
3. Bhutoria, A. (2022). Personalized education and artificial intelligence in the United States, China, and India: A systematic review using a human-in-the-loop model. Computers and Education: Artificial Intelligence, 3, 100068. https://doi.org/10.1016/j.caeai.2022.100068
4. Bowen, N. E. J. A., & Thomas, N. (2020). Manipulating texture and cohesion in academic writing: A keystroke logging study. Journal of Second Language Writing, 50, 100773. https://doi.org/10.1016/j.jslw.2020.100773
5. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
6. Cahyono, B. Y., Khotimah, K., & Batunan, D. A. (2023). Workable approaches in EFL teaching mediated by mobile technology during the pandemic and post-pandemic: Indonesian EFL teachers' experiences and expectations. Computer Assisted Language Learning, 24, 138–159. http://callej.org/journal/24-1/Cahyono-Khotimah-Batunan-Imamyartha2023.pdf
7. Chang, T. S., Li, Y., Huang, H. W., & Whitfield, B. (2021, March). Exploring EFL students' writing performance and their acceptance of AI-based automated writing feedback. In 2021 2nd International Conference on Education Development and Studies (pp. 31–35). https://doi.org/10.1145/3459043.3459065
8. Dale, R., & Viethen, J. (2021). The automated writing assistance landscape in 2021. Natural Language Engineering, 27(4), 511–518. https://doi.org/10.1017/S1351324921000164

9. Dogan, M. E., Goru Dogan, T., & Bozkurt, A. (2023). The use of artificial intelligence (AI) in online learning and distance education processes: A systematic review of empirical studies. Applied Sciences, 13(5), 3056. https://doi.org/10.3390/app13053056
10. Duncan, A., & Joyner, D. (2022). On the necessity (or lack thereof) of digital proctoring: Drawbacks, perceptions, and alternatives. Journal of Computer Assisted Learning, 38(5), 1482–1496. https://doi.org/10.1111/jcal.12700
11. Fahmi, M. A., & Cahyono, B. Y. (2021). EFL students' perception on the use of Grammarly and teacher feedback. JEES (Journal of English Educators Society), 6(1), 18–25. https://doi.org/10.21070/jees.v6i1.849
12. Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2023). A SWOT analysis of ChatGPT: Implications for educational practice and research. Innovations in Education and Teaching International, 1–15. https://doi.org/10.1080/14703297.2023.2195846
13. Fitria, T. N. (2021). Grammarly as an AI-powered English writing assistant: Students' alternative for writing English. Metathesis: Journal of English Language, Literature, and Teaching, 5(1), 65–78. https://doi.org/10.31002/metathesis.v5i1.3519
14. Garlinska, M., Osial, M., Proniewska, K., & Pregowska, A. (2023). The influence of emerging technologies on distance education. Electronics, 12(7), 1550. https://doi.org/10.3390/electronics12071550
15. Gayed, J. M., Carlon, M. K. J., Oriola, A. M., & Cross, J. S. (2022). Exploring an AI-based writing assistant's impact on English language learners. Computers and Education: Artificial Intelligence, 3, 100055. https://doi.org/10.1016/j.caeai.2022.100055
16. Haleem, A., Javaid, M., & Singh, R. P. (2022). An era of ChatGPT as a significant futuristic support tool: A study on features, abilities, and challenges. BenchCouncil Transactions on Benchmarks, Standards and Evaluations, 2(4), 100089. https://doi.org/10.1016/j.tbench.2023.100089
17. Hosseini, M., Rasmussen, L. M., & Resnik, D. B. (2023). Using AI to write scholarly publications. Accountability in Research, 1–9. https://doi.org/10.1080/08989621.2023.2168535
18. Huang, J., & Tan, M. (2023). The role of ChatGPT in scientific communication: Writing better scientific review articles. American Journal of Cancer Research, 13(4), 1148. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10164801/
19. Iskender, A. (2023). Holy or unholy? Interview with OpenAI's ChatGPT. European Journal of Tourism Research, 34, 3414. https://doi.org/10.54055/ejtr.v34i.3169
20. Jeanjaroonsri, R. (2023). Thai EFL learners' use and perceptions of mobile technologies for writing. Learn Journal: Language Education and Acquisition Research Network, 16(1), 169–193. https://so04.tci-thaijo.org/index.php/LEARN/article/view/263438