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Benefits and Challenges of Using Digital Tools in Academic Research and Writing: A Systematic Review

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Abstract

Writing academic papers seems a challenging task for many scholars, particularly when organizing ideas, finding appropriate references, and following academic writing styles. This systematic review examines articles (n=16) based on the integration of digital tools in the research writing process and explores applications that support content generation, literature review, data analysis, editing, and citation management. While these tools offer substantial benefits for enhancing academic writing, the review emphasizes the critical role of scholars in ensuring responsible and ethical use. A systematic literature review in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines was conducted to identify and review relevant studies on the uses of digital tools in academic research and writing. Articles were retrieved from Scopus and Google Scholar using Boolean keywords. Studies were screened based on the predefined inclusion and exclusion criteria and research objectives; duplicate records were removed, and the selected articles were reviewed. The findings highlight that although digital tools are valuable assets in research writing, scholars' role remains essential in using these technologies critically and effectively. The findings suggest that digital tools can be used productively at different stages of writing, such as brainstorming, drafting, refining, managing references, ensuring originality, and analyzing data.

Keywords: *digital tools, academic research, writing, systematic literature review, artificial intelligence*

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Introduction

In general, writing is a cognitive skill for producing information (Amin, 2023). Developing strong academic writing skills is essential for academic accomplishment. Academic writing reflects formal work done for academic purposes. On the other hand, academic research is systematic and critical work aimed at discovering new knowledge, testing theories, and/or solving problems in a particular area (Dostal, 2015; Fisher & Fisher, 2025). Academic writing and research are factually structured and accurate forms of expressing ideas, arguments, and logic. Both academic writing and research are done through scholarly means to generate evidence and validate existing knowledge. Knowledge, ideas, and theories are shared through publications based on in-depth research analysis (Herber et al., 2025; Yeboah, 2023). Clear and effective writing helps readers understand results more easily. Huang (2024)

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highlighted that research is carried out to create new knowledge, to solve practical problems, and to contribute to policy formation.

Earlier studies have shown that academic writing and research are essential but challenging tasks (Floris & Renandya, 2025). Academic research and writing are complex tasks that require extensive engagement with the writing process and academic communities. However, they also present challenges that can make even experienced writers struggle. Traditional writing training often fails to address the rapidly evolving landscape shaped by digital writing tools. Fu (2025) highlighted five key dimensions: fundamentals of academic writing, AI-integrated research skills, AI-driven writing, professional publishing techniques, and collaborative work. This approach addresses fundamental skill gaps and competencies, ethical contributions, and essential tools for success. These elements are essential not only for achieving success in the subject matter but also for helping the reader by simplifying the ideas. That's why academic writing remains a vital pillar of scholarly growth for scholars, cultivating critical thinking, analytical reasoning, and structured argumentation (Jaffe, 2014). As academic writing and research remain fundamental to scholarly knowledge creation and dissemination, the effective use of digital tools in the digital era can enhance the quality, efficiency, and accessibility of academic research and writing work. These tools can also support scholars in addressing increasingly complex research and writing tasks.

From paper and pen for taking notes to interacting with experts, academic research has always been shaped by the tools we choose to use. In this digital age, cloud computing, digital devices, and social media are constantly changing the relationship between technology and writers. Digital tools can help writers in all stages of the writing process, including brainstorming, note-taking, outlining ideas, citing, rewriting and revising, editing, sharing with others, and finally submitting manuscripts for publication (Schcolnik, 2018). We acknowledge that digital tools in academic research and writing are not a new concept and have not been without controversy. Ramadhan et al. (2024) and Schcolnik (2018) provided a comprehensive overview of the history of technology in academic research and writing, highlighting the uneasiness between digital tools and academic research and writing. A particular concern has been the use of digital tools from planning ideas to citation and referencing. The use of digital tools in scholarly careers has begun to fundamentally reshape academic writing among a new generation. As network and internet technologies entered the field, the quality of writing became important. The interactivity of writing environments increased, allowing for more collaboration among writers. Novice writers do not take much time to develop a plan before writing. For novice writers, if revisions are required, they should follow relevant writing and revision guidelines (Kibbe, 2017). In this regard, Shrestha et al. (2025) stated that various types of writing technologies have been developed to address time and cost constraints, provide instruction and training, and leverage resources, such as GenAI technologies.

Digital tools for research and writing streamline the academic workflow by facilitating literature discovery, note-taking, citation management, and drafting. Essential tools include Zotero and Mendeley for references, Google Scholar for searching, and Grammarly or Paperpal for refining text. AI-powered platforms like Elicit and SciSpace further assist in analyzing literature and drafting content efficiently. Khalifa and Albadawy (2024) have provided one of the most comprehensive reviews on using artificial intelligence in academic research and writing on essential tools covering on facilitation idea generation, content development and structuring, literature review and synthesis, data management and analysis, editing, review, and publishing support, communication, outreach and ethical compliance based on AI academic functions. Similarly, Ramadhan et al. (2024) adopted a systematic literature review to integrate digital tools in academic writing and assess their impact on writing ability. They listed different types of digital tools: ChatGPT, Grammar checkers, plagiarism detectors, digital multimodal

composition, social media for academic writing, and automated assessment applications, based on impacts, benefits, risks, and challenges. Likewise, Aich et al. (2025) also explored AI usage in academic writing in relation to researchers' attitudes, practices, and awareness towards AI in thesis writing. Nguyen et al. (2024) examined human-AI collaboration patterns in AI-assisted academic writing, identifying opportunities and challenges in micro-processes among doctoral students. The majority of the studies have examined the use of digital tools for general writing purposes, whereas limited research has investigated their application in academic research and writing.

The writing process has become easier and faster due to innovative digital tools, including Artificial Intelligence (AI) powered platforms, reference managers, and collaborative editors (Floris & Renandya, 2025). AI facilitates the writing process by providing diverse information and resources, offering real-time suggestions, analyzing results, and addressing diverse gaps (Ferdousi, 2022). In writing, AI tools like ChatGPT, Napkin.ai, ResearchRabbit, Grammarly, and Quillbot makes easy in generating writing. These tools support idea generation, visualization, grammar checking, finding relevant literature, paraphrasing text, and summarizing (Ajmal et al., 2025). Similarly, reference manager tools like Zotero and Mendeley support organizing literature and automating citation generation. Likewise, collaborative tools support real-time process-based writing, facilitating teamwork. However, these tools in academic writing and research have generated significant issues and challenges in relation to academic integrity, creativity, and technical skills.

Digital tools in academic writing have significantly enhanced writing skills across various levels by improving accuracy, structure, and efficiency throughout the academic process. Non-native English researchers face significant challenges in academic writing due to linguistic barriers. Digital tools such as ChatGPT, Gemini, and Copilot can perform many activities in a single application, such as editing, paraphrasing, and formatting. Garlinska et al. (2023) highlight the effective use of AI-powered writing tools like QuillBot, WordTune, Jenni, copy.ai, Essay writer, Grammarly, and Paperpal in refining grammar, clarifying ideas, and refining style, thereby strengthening writing quality, particularly enhancing the quality of academic content and organization (Marzuki et al., 2023).

Writing platforms such as Bard, OpenOffice, and LaTeX further support drafting and organization, maintain coherence among complex ideas, and offer real-time collaboration and accessibility features (Mondal et al., 2023). In addition, 91.2% of respondents using technologies such as plagiarism checkers like Turnitin uphold academic integrity by ensuring originality (Shimray & Subaveerapandiyan, 2025). Research discovery and visualization platforms such as Elicit and Research Rabbit are new literature mapping tools that help to access scholarly sources and recommended literature (Sharma et al., 2022). For quantitative data analysis, specialized digital tools such as SPSS, R, Python, Stata, MATLAB, and Microsoft Excel are used in research to provide accurate interpretation and visualization of data and findings (Rahman & Muktadir, 2021). Collaboration platforms are digital tools like Google Workspace, Trello, Slack, Microsoft Teams, and Asana that allow individuals to encourage teamwork and timely completion of writing tasks in different geographic locations (Sadhana, 2024). While these technologies significantly increase productivity and proficiency, scholars caution against over-reliance, emphasizing the importance of combining digital tools with critical thinking and independent writing skills (Pervaiz et al., 2025). These tools should be used ethically. Their benefits are greatest when combined with researchers' writing and critical thinking skills.

This systematic literature review (SLR) aims to investigate the role of digital tools in academic research and writing by synthesizing and evaluating evidence from relevant studies.

Through a rigorous review process, the study identifies current trends, research gaps, and areas of impact in this field. Although previous studies have explored writing ethics and qualitative, quantitative, and mixed methods approaches, few systematic literature reviews have examined the integration of digital tools in academic writing. The research questions guiding this study are: Which digital tools are used in academic research and writing? For what purposes are these tools used? How do they support researchers in achieving their academic goals? By systematically assessing the existing literature, this review contributes to a deeper understanding of how digital tools can support academic writing and research. It also provides insights to inform future practices and research directions. This paper offers insights for scholars on integrating digital tools into the academic research and writing process. It helps to understand how digital tools can assist at various stages of academic writing and research and provides suggestions for incorporating them into these activities effectively.

Methodology

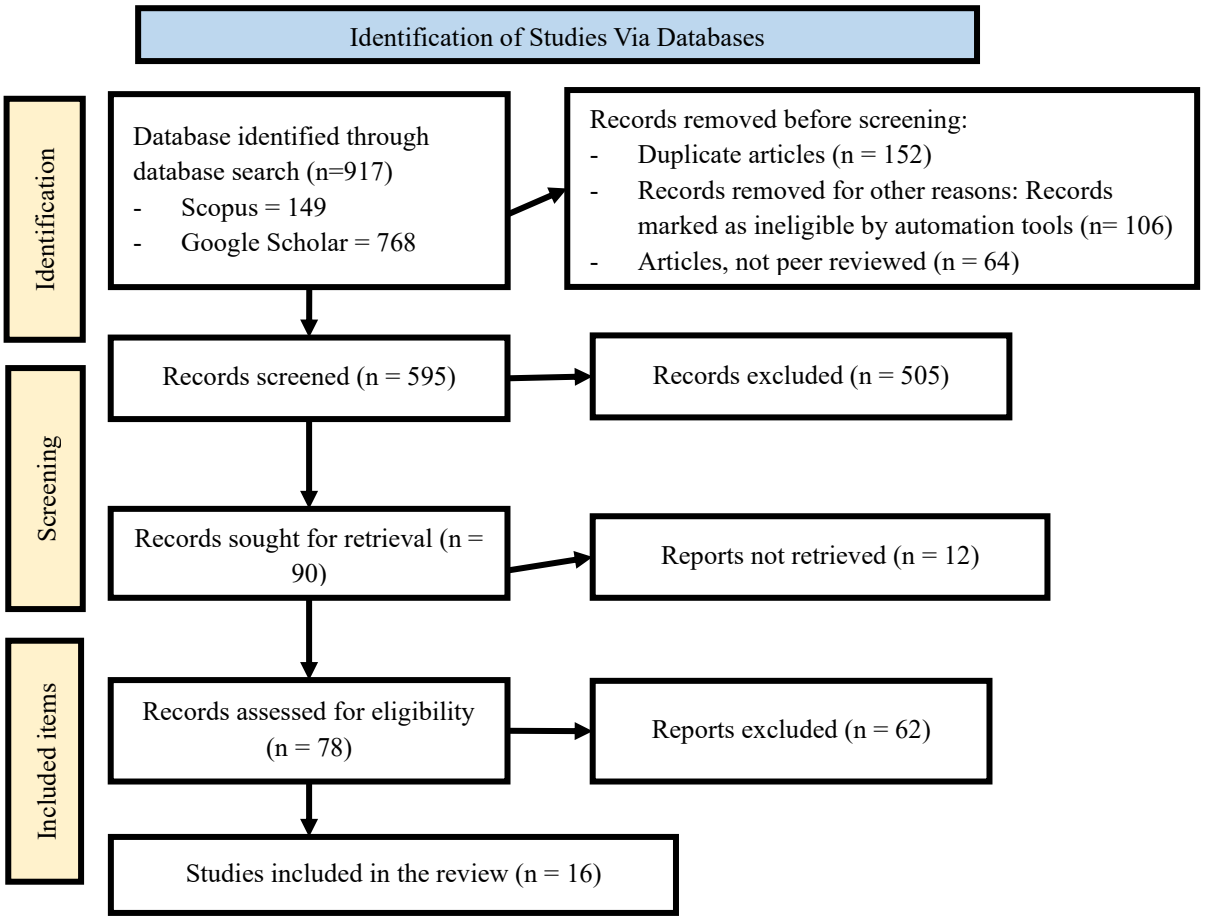
This study was conducted as a systematic literature review in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The research design commenced with the development of a comprehensive review protocol. The flow of information in the PRISMA approach to systematic review has distinct phases. There is no minimum or maximum number of studies required by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. It maps out the number of records identified, screened, assessed for eligibility, included, and excluded, and the reasons for exclusion. The review protocol was developed by explaining the article selection criteria, search strategy, eligibility criteria, selection process, and extraction across the prominent academic databases.

Initially, essential academic databases for systematic literature review were identified based on a multidisciplinary foundation. A systematic search was conducted in Scopus and Google Scholar databases to identify relevant studies for review. These reviews were limited to recently published studies, with publications from 2020 to 2025. Similarly, all studies were screened and filtered for eligibility criteria based on predefined criteria of inclusion and exclusion, such as duplicate or multiple publications, systematic review articles, and conference papers. Moreover, article titles, abstracts, study designs, and outcomes were also screened, and eligibility was ensured. Moreover, articles that could not be fully accessed were excluded from this study. Studies were selected based on the entered search keywords and the research objectives, selecting the title, abstract, and keywords eligibility criteria. Additionally, the inclusion criteria were as follows: all original and peer-reviewed literature written in English; clearly stated research aims to find out the incorporation of digital tools in writing; the use of tools in academic research and writing; and the study following quantitative, qualitative, or mixed methods.

Data were extracted manually from the selected articles, using a content analysis approach. Information on the author and the year of publication, title, research focus, digital tools used in academic writing, key findings, and limitations was recorded and analyzed. The extracted data were then synthesized to identify common themes, applications, and the influence of digital tools in academic research and writing. Detailed information on the reviewed articles and the systematic literature review process is presented in Figure 1.

Figure 1

PRISMA Diagram for Systematic Literature Review



Source: Haddaway et al. (2022)

Results and Discussion

Digital tools play a crucial role in academic research and writing. Digital tools such as ChatGPT, Copilot, Gemini, Grammarly, Zotero, Mendeley, EndNote, NVivo, SPSS, and Google Scholar assist researchers in drafting, editing, citation management, data analysis, and literature searching throughout the academic research and writing process. These digital tools can be categorized according to their primary functions, such as writing support, reference management, data analysis and literature retrieval, and research collaboration.

Based on the review matrix (Annex I), digital tools were categorized according to their functions in research and writing. The findings show that digital tools, including those powered by AI, have become indispensable in supporting academic research and writing (Lehnen & Insua, 2022). For instance, Google Scholar serves as a primary platform for literature search, providing access to peer-reviewed sources that strengthen the theoretical foundation of scholarly work (Beel et al., 2010). Similarly, social media platforms such as Twitter (X) enable real-time collaboration, allowing researchers to engage in synchronous writing and discussions during the process of producing manuscripts for publication (Sugimoto et al., 2017). Tools for storage and sharing like Dropbox, OneDrive, and Google Drive, alongside citation management systems such as EndNote, Mendeley, RefWorks, and Zotero, reduce manual work

by streamlining the writing process and facilitating the organization of research materials (Muchmore & Dilly, 2020; Sarkar, 2025). Moreover, writing support tools, including Grammarly, ChatGPT, and QuillBot, can enhance grammar, ensure originality, and address challenges related to writing quality and authorship through text generation, proofreading, and translation functions (Dwivedi et al., 2023). Collectively, these digital tools have the potential to transform academic practices by improving efficiency, collaboration, and integrity in scholarly communication. Drawing on the review of the literature, various digital tools used in academic writing were identified and categorized, as shown in Figure 2.

Figure 2

Academic Writing Toolkit

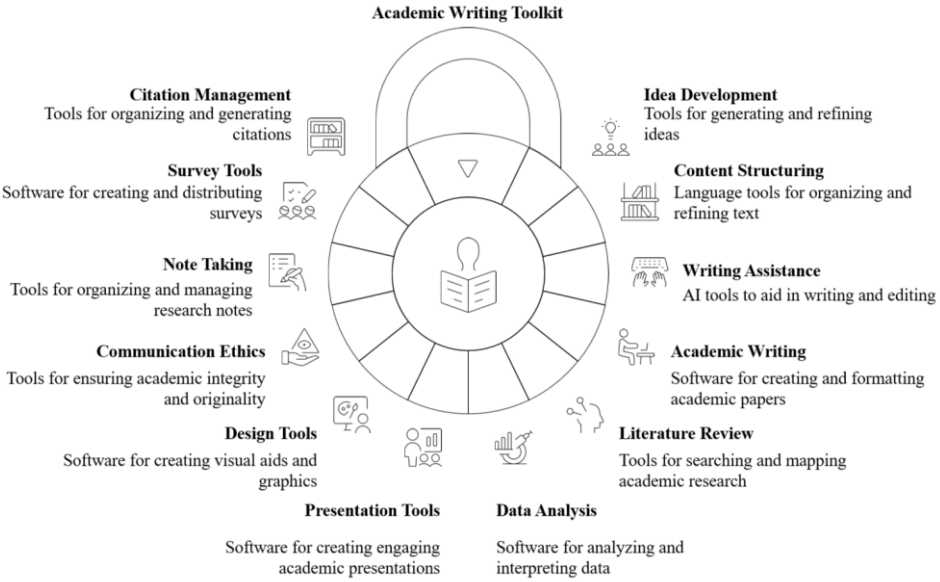


Table 1

Process of Collection

Area	Purpose	Tools
Idea development and Planning	Tools for Idea Generation	Mind Mapping, Idea Journals, Brainwriting, SCAMPER Technique, Case Study
Content structuring	Language Tools	Grammarly, QuillBot, ChatGPT
	Writing Assistant Tools	Bard, Gemini, SciSpace, Grok, WordTune, ChatGPT
	Writing and Editing Tools	Grammarly, QuillBot, ProWritingAid
	Academic writing Tools	LaTex, LibreOffice, MikTex, Microsoft Word
	Knowledge Mapping Tools	Research Rabbit, Connected Papers
Literature review and searching	Literature Review	Citation Gecko, open Knowledge maps
	Literature Search	PubMed, Google Scholar, Web of Science, Scopus, JSTOR, Scite
	Academic Search	Google Scholar, BASE, CORE, SSACSE
	Academic Network	ResearchGate, Academia.edu, LinkedIn

Area	Purpose	Tools
Data analysis	Journal Finder	Enago's open access journal finder, Elsevier Journal Finder
	Data Analysis Tools	SPSS, Python, RStudio, MATLAB, Stata, RStudio
Manuscript writing and refinement	Grammar and Paraphrasing Tool	Trinka AI, Grammarly
	Presentation Tools	Tome, Prezi, Gamma, Canva, Designs.ai, Mind the Graph
	Design, Visualization and Graphic Tools	Tableau, Adobe Illustrator, app Diagrams
	Illustration Tools	Napkin AI, SlideEgg, Miro
Communication and ethics	Plagiarism Detector/Checker Tools	Turnitin, Viper, PlagScan, iThenticate, Duplichecker, Enago's
	AI Detector/Checker Tools	GPTZero, QuillBot
	Reading Paper Tools	Scholarly, Petal, Scribe AI
	Note Taking	Evernote, OneNote
	Online Survey Tools	SurveyMonkey, Google Forms
Citation and referencing	Citation Generators	EasyBib, BibMe
	Reference Management Tools	Zotero, Mendeley, EndNote
	Data Cleaning Tools	OpenRefine, Trifacta, Statistical Software

The findings reveal that the landscape of contemporary scholarship has undergone a fundamental transformation through the integration of diverse sophisticated digital tools. In the 21st century, academic practice and digital tools are more than just optional utilities; they play an important role throughout the research maturation process, from the early stages of idea expansion to the final stages of manuscript modification. We can see a substantial shift from the time-consuming mechanics of research to the high-level synthesis of information. This change can be understood as a step towards a more *digitally empowered* research process.

The process of academic writing begins with ideation and planning, where the challenge is often to think outside the box to generate original, high-quality ideas (Julius & Gracious Kaazara, 2025). Scholars benefit from advanced digital tools for brainwriting, mind mapping, idea journals, and the SCAMPER (Substitute, Combine, Adapt, Modify, Put to Other Use, Eliminate, and Rearrange) to organize and develop their research concepts (Xia et al., 2025). As Fearnley (2022) demonstrates, the visual and associative mapping techniques allow researchers to map out the intimate reading and thinking patterns of the human brain, enabling the researcher to make sense of complex connections between variables. The abstract concepts are further connected to real-world contexts, which serve as a bridge between theoretical inquiry and practical application.

Language tools such as Grammarly, ProWritingAid, QuillBot, and ChatGPT offer researchers real-time support in enhancing clarity, coherence, and originality of writing (Samantaray & Azeez, 2024). Dwivedi et al. (2023) note that GenAI technology can provide massive support in drafting and refining content. However, integration of GenAI into writing requires a "human-in-the-loop" approach to maintain intellectual consistency for self-regulated writing (Lourenco & Valente, 2026). In particular, writing assistant tools such as Gemini,

SciSpace, Grok, and WordTune act as remarkable empowerers for drafting, refining, and formatting manuscripts (Biondi-Zoccai et al., 2025). In addition, Chen and Gong (2025) noted that discussion boards can help scholars summarize and paraphrase complex arguments, identify grammatical errors, and improve awkward or unclear composition.

The findings demonstrate that the literature search and review process is a significant digital transformation. The traditional "linear search" has been replaced by knowledge mapping (Lourenco & Valente, 2026). Platforms like Research Rabbit and Connected Papers, alongside citation tools such as Citation Gecko and Open Knowledge Maps, facilitate the visualization of scholarly networks (Basavaraja & Rajashekara, 2024; Sharma et al., 2022). Instead of manually identifying publication lists of titles, researchers can identify fitting keywords and see the papers "cluster" around specific concepts. Widely used databases, including PubMed, Google Scholar, Web of Science, Scopus, JSTOR, and Scite, have visualization capabilities that are complemented by robust literature searches (Gusenbauer, 2024). These platforms ensure access to peer-reviewed sources while filtering out low-quality information. Furthermore, academic networks like ResearchGate, Academia.edu, and LinkedIn can foster collaboration across geographical boundaries, turning writing space into a global, interconnected laboratory.

During the empirical phase, data analysis tools can support researchers in organizing, modeling, and interpreting the data. Applications such as SPSS, Stata, and MATLAB enable complex statistical modeling, while open-source environments like Python and RStudio have become the backbone of modern data science (Alem, 2020; Rahman & Muktadir, 2021). As Bennett et al. (2025) note, the user-friendly design of tools reduces many of the barriers associated with quantitative data analysis. Notably, newer technologies allow researchers to perform desired tests on statistical datasets, which would have required a broad range of statistical procedures to process. Furthermore, to ensure the quality of this data, cleaning platforms like OpenRefine and Trifacta support researchers in identifying and correcting errors (duplicates, missing values, and outliers) in datasets, ensuring that the "garbage in, garbage out" and “data disaster” pitfalls are avoided (Guo et al., 2023).

Wasli et al. (2022) noted that Trinka AI and Grammarly can help with complex grammar errors and language refinement to meet the stringent standards of top journals. Data visualization and presentation platforms such as Trees, Scatter Plots, Charts, Diagram, Graphics and Tableau support the effective dissemination of findings, transforming raw data into compelling descriptions (Li, 2020). Moreover, tools such as Turnitin and iThenticate, along with AI-detection platforms such as GPTZero, can help address ethical misconduct that may affect the quality and integrity of academic writing (Shimray & Subaveerapandiyan, 2025). Another important finding is that citation and referencing remain challenging aspects of academic writing. However, reference management tools such as Zotero, Mendeley, and EndNote are helpful for researchers in managing references efficiently and improving the accuracy of reference lists. Collectively, these review findings highlight that advanced digital tools can enhance research proficiency, collaboration, and academic integrity, enabling researchers to address the challenges and complexities associated with the academic research and writing process.

Conclusion

The study reviewed recent literature to explore the role and significance of digital tools in academic research and writing. The findings show that digital tools, particularly those powered by AI, have become increasingly integral to academic research and writing, shaping multiple phases of the process, from ideation to document formatting. The findings suggest that these tools are valued for their potential to enhance the quality of writing alongside

maintaining academic integrity. Digital tools such as Turnitin, SafeAssign, and Grammarly are designed to ensure academic originality and improve the language quality of written work. Similarly, reference management applications such as Mendeley, EndNote, Zotero, BibDesk, and RefWorks can support scholars by organizing, automating, and information, as well as reducing errors in references. Likewise, digital tools enhance qualitative data analysis by facilitating the coding, organization, analysis, and interpretation of non-numerical data. For example, tools such as NVivo, Atlas. ti, webQDA, and MAXQDA support researchers in systematically analyzing interview, text, and multimedia data. Moreover, design tools in quantitative research such as Excel, Tableau, and Power BI support users in creating interactive visualizations of analyzed datasets. Python with Pandas, Matplotlib, and RStudio offer advanced statistical and visual analysis capabilities. Additionally, specialized tools such as SPSS, R Commander, and Jamovi provide users with statistical computation. Moreover, literature synthesis and digital search tool platforms, including SciSpace, Elicit, Scholarcy, and Semantic Scholar, assist in identifying relevant studies, summarizing findings, and accelerating the review process. Cloud-based services such as Dropbox, OneDrive, and Google Drive facilitate collaborative research and writing through file sharing and joint work, while communication platforms like WhatsApp, Telegram, and Facebook support interaction and coordination among researchers. The findings further highlight that emerging LLM-powered AI tools, such as ChatGPT, Google Gemini, and Microsoft Copilot, can improve research productivity by supporting manuscript drafting, paraphrasing, and critical analysis. While such AI-powered tools are transforming the way academic research and writing are conducted, the review findings also point to ethical concerns surrounding the use of these tools in academic research and writing, particularly in relation to authorship, originality, and academic integrity.

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AI Declaration

We used artificial intelligence (AI) tools for editorial assistance to enhance language clarity. Authors take full responsibility for the originality, accuracy, and integrity of the content.

Annex I

Table 1

Overview of Reviewed Studies

S.N.	Authors and Year	Title	Research Focus	Key Findings	Digital Tools in Academic Writing	Limitations
1.	Adewojo et al. (2026)	Effects of AI-driven tools on reference services and staff roles in academic libraries	Effects of AI-driven tools on reference services and roles in academic libraries	AI tools improve efficiency by automating routine tasks, reducing librarian workload.	Turnitin, Grammarly, WhatsApp	Handling complex inquiries, data privacy, and library oversight
2.	Apdillah et al. (2022)	Optimizing communication ethics in the digital age	Ethical communication in the digital era	Ethics and politeness norms are essential in digital communication	WhatsApp, Telegram, Facebook, Twitter, Instagram	Not exploring the broader impact of digital media on society
3.	Bista & Bista (2025)	Leveraging AI tools in academic writing: Insights from doctoral students on benefits and challenges	Investigate the application of AI tools in enhancing academic writing	Benefits in improved clarity and efficiency in writing	ChatGPT, Google Gemini, Microsoft Copilot	Methodological case studies; only doctoral students, not including master's-level students
4.	Bryda & Costa (2023)	Qualitative Research in Digital Era: Innovations, Methodologies and Collaborations	Reflect on the data analysis process in qualitative research	Enhance networking capacities and revolutionize collaborative work and computer data analysis	NVivo, Atlas. ti, webQDA, MAXQDA	Need knowledge on utilizing these tools aligned with computer-assisted analysis.
5.	Cheng et al. (2025)	Artificial Intelligence-assisted academic writing: recommendations for ethical use	How AI tools help in the academic writing process and principles for producing high-quality research	Positioning AI use, potential risks, ethical use, and ensuring high-quality in writing	LLM-powered AI tools: ChatGPT	Lack of clear, standardized guidance, risks of plagiarism, and universally accepted frameworks.

S.N.	Authors and Year	Title	Research Focus	Key Findings	Digital Tools in Academic Writing	Limitations
6.	Kobets et al. (2025)	The Effectiveness of Data Analytics Tools in the Implementation of Human Resource Management Strategies	Influence of analytical technologies on the improvement of the decision-making process	Effective implementation of analytical technology increases the accuracy of forecasts regarding processes.	Excel, Tableau, Power BI, Python with Pandas and Matplotlib, RStudio	Training innovative tools for integration with existing systems
7.	Lehnen & Insua (2022)	Search tools and scholarly citation practices in literacy studies	Examine the usefulness of traditional subject index and reliability of a primary literature database with common search tools	Google Scholar retrieved the most citations, but the diversity of sources indicates that scholars benefit from using multiple search tools.	Google Scholar	Limited to a random sample of citations from articles in PMLA, coverage of different search tools in subject areas and search tools is required.
8.	Martins et al. (2025)	Performance and scalability of data cleaning and preprocessing tools: A benchmark on large real-world datasets	Comprehensive evaluation of data cleaning tools	No single solution excels across all metrics; choice of tools ultimately depends on domain-specific requirements.	OpenRefine, Dedupe, Great Expectations, TidyData (PyJanitor), Baseline Pandas	Domain-specific results (healthcare, finance, and industrial), limiting generalizability to other fields
9.	Paltridge (2020)	Writing for Academic Journals in the Digital Era	How digital technologies changed writing for academic journals from submission to review of articles	Digital technologies have had a measurable impact on publication, including plagiarism detection, publishing, and citation management.	Stored and shared: Dropbox, OneDrive, Google Drive Citation management: EndNote, Mendeley, RefWorks, Zotero	
10.	Sardareh et al. (2021)	Comparing four contemporary statistical software tools for introductory data science and statistics in the social sciences	Identifies key human-computer interaction factors across statistical software systems	Key focuses on user interface design, available statistical features, visualization, data handling, preparation and manipulation, and usage properties, ease of use, and efficiency.	SPSS, R within RStudio, R Commander, and Jamovi	How basic statistics domain knowledge is evaluated to analyze data in a research project
11.	Shanker (2025)	Enhancing scientific writing with AI: tools,	Exploration of AI application in scientific writing	Significantly enhance the efficiency, clarity, and	Grammarly, Zotero, elicit, scholarcy	Potential issues on contextual academic integrity,

S.N.	Authors and Year	Title	Research Focus	Key Findings	Digital Tools in Academic Writing	Limitations
		techniques, and ethical practices		workflow of scientific writing: from writing to formatting		human creativity, risks to sensitive research data
12.	Singh (2020)	Managing research data with reference management tools: A changing research landscape	Organizing and sharing all types of research data on a single platform	Managing references and enhancing the quality of research work in an academic social networking environment	Mendeley, EndNote, Zotero, BibDesk, RefWorks	Conduct awareness programs for new researchers regularly
13.	Subaveerapandiyan (2024)	Academic Research Tools' Adoption and Impact on Scholarly Practices	Adoption and impact of academic research tools among academicians	High awareness and utilization of research tools for research quality and productivity	SciSpace, Elicit, and Semantic Scholar	Challenges in integrating emerging technologies to enhance scholarly workflows through longitudinal studies
14.	Wigtil (2022)	Is there a place for “plagiarism detection software” in an academic library?	Examine how plagiarism detection software is used to detect academic dishonesty.	Turnitin is effective for identifying blatant plagiarism in essay writing	Turnitin, SafeAssign	Despite detecting plagiarism, it can create anxiety about overreliance on citations.
15.	Wittenberg (2024)	Turn-It-Off: Reflections on Technology, the Knowledge Commons and the Academic Plagiarism Industry	Critically examines the key tools against plagiarism and examines the practices of literacy plagiarism.	Excessive plagiarism policing risks undermining the knowledge commons essential to a good university, given the close connection between copying and creativity.	Turnitin	Turnitin may undermine common knowledge and authentic educational practices by framing plagiarism.
16.	Ziar (2024)	Impact of AI-based tools on writing skills	Insights into how tools can be integrated into writing instruction	These tools significantly improve surface-level writing skills such as grammar & coherence	Grammarly, QuillBot, GPT-based tools	Quantitative research and limited tools regarding writing enhancement, but not capturing the theme