A SURVEY ON ANALYZING THE EFFECTIVENESS OF AI TOOLS AMONG RESEARCH SCHOLARS IN ACADEMIC WRITING AND PUBLISHING

M. Monika[1], V. Divyavarsini[2], Dr C. Suganthan[3]

[1] *PhD Research Scholar, Vellore Institute of Technology, Vellore*
[2] *PhD Research Scholar, Vellore Institute of Technology, Vellore*
[3] *Assistant Professor, Vellore Institute of Technology, Vellore*

ABSTRACT

AI tools are applications or software that specifically perform tasks that encompass a wide range of functions. Artificial intelligence plays a pivotal role in scholarly publication as it provides insights, helps in refining the article language, and grammar checking, and suggests improvement thus enhancing the efficiency, quality, and depth of the content of the research paper. The new educational paradigm has both benefits and drawbacks. The present study employs a cross-sectional online survey method. The study aims to analyze the role of AI tools among research scholars in the Vellore district. The study focuses on identifying the AI tools used by the researcher for effective writing. The study employs a self-designed questionnaire (Likert scale) with 40 items concerning variables like content creation, grammar and spelling, detection of plagiarism, paraphrasing and summarizing, citation generator, translation, assistance in outlining and structure, data visualization, editing and proofreading, sentiment analysis, collaborative writing, and its ethical considerations. The questionnaire was circulated to research scholars in Vellore District through Google Forms. The consent was obtained from the scholars on the initial page of the forms. The data collected were analyzed using Statistical Package for Social Sciences. The tests like descriptive statistics, frequency, reliability, validity, normality, ANOVA, and regression were performed to analyze the data. The proposed research questions of the study aim to find the different AI tools used in content generation and the effectiveness of these tools when employed in research paper writing. The respondents also use Grammarly Go for grammar checking, tone, and clarity. In the preliminary survey, most of them accepted that AI tools help scholars ease the writing process. After Zotero, they found it easier to change the referencing style to the journal requirement. Most of the researchers accepted that they would use AI tools in writing, and many have also confirmed that they do not completely rely on AI tools as they use them based on requirements like paraphrasing, grammar checking, and citation. Hence, they conclude that AI tools are an advantage for scholars in research writing.

Keyword: - *AI Tools, ChatGPT, Zotero, Academic writing, Publication*

1. INTRODUCTION

Artificial Intelligence (AI) refers to computer systems that can perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation[17]. In 1950, Alan Turning proposed the idea of machine learning, he also conducted a test to assess if the machine could exhibit behaviour equivalent to human intelligence. Since the concept of AI started to evolve[20]. The evolution of AI can be classified into several key stages. In the 1950s-60s, during the early AI evolution period, to achieve human-level intelligence focus was given to general problem-solving algorithms. During the 1970s and 1980s, this evolved into domain-specific expert systems and knowledge representation targeting narrow tasks like medical diagnosis[14]. AI entered a new phase in the 1990s and 2000s with robust computation power and intensified data focused on data-driven machine learning. The contemporary era is marked by a surge in machine learning using statistical and neural networks, which is producing amazing results in fields like robotics, computer vision, and natural language processing[13]. Across different fields, AI has steadily progressed and demonstrated increasing capabilities. In

Healthcare, AI has evolved from rules-driven expert systems to analyze medical pictures like x-rays, diagnose diseases, suggest possible and better treatment options and operations, and forecast the outcome of the treatments Since the arrival of AI is the departure from conventional medical practices to modern computational medical practices[9]. Business & Manufacturing: AI has progressed from early production rule systems to advanced predictive analytics, inventory optimization algorithms, and end-to-end automation technology[10]. Transportation: From early goal-based navigation research to present-day self-driving technologies, AI makes it more convenient for the government and people by working efficiently through dynamic routing, and controlling the traffic signals, AI is powered by neural networks that perceive environments and make driving decisions[4]. Finance: AI was very useful in Finance sectors, especially in banks. The finance sector has evolved from statistical analysis to sophisticated deep learning algorithms that model markets, detect fraud, predict stock markets, make investment decisions, and enable personalized banking through a mobile app[22]. As computational capabilities continue to grow, AI across domains is poised for increasing integration into industrial and consumer applications and processes to augment and enhance human intelligence. Across different fields, AI was used by professionals and AI usage has steadily progressed.

AI also assists academicians, researchers, and students with content generation, analytical calculation, and writing, including thesis preparation and publishing research articles in academic journals. AI assists academicians and students in developing better content, illustrations, grammar, and spelling and refines the word choice and style of the research paper. AI uses Natural language to analyze texts and provides recommendations to strengthen the arguments in the research papers.AI tools help to search the relevant research areas, and topics, identify key concepts and research gaps, generate literature review, and generate citations and bibliographies in the desired citation style. AI aids in research and knowledge management. AI helps in analyzing complex data. Algorithms can rapidly process immense datasets, surface meaningful patterns and insights for analysis, and even suggest potential new hypotheses or research questions from data that merit human investigation. AI aids in evaluating and reviewing the thesis. AI models can review draft theses and provide feedback on literature gaps, evaluate if research questions and claims are properly supported by evidence, ensure logical flow and transitions, and highlight areas needing revision or lacking citation [2]. In the educational field, such AI capacities transform how students can obtain assistance at all stages of the academic research and writing process. AI enables students to conduct rigorous and flourishing research, independently and effectively with accurate data. Several ESL learners are facing tremendous issues with academic writing. Many challenges were faced by ESL learners while writing in English. Unexposed to Vocabulary and grammar [6]. Unfamiliarity with English academic styles [22]. Lack of reading exposure to English academic literature and Ambiguous conceptual clarity in the English language [12]. AI plays a vital role in helping ESL learners to elevate their writing skills. AI models and develops English academic style and conventions [1]. AI provides personalized feedback and practice opportunities [2]. AI helps in adaptive scaffolding appropriate to the learner's zone of proximal development [5]. Some of the Popular AI tools that were widely used for writing assistance are Grammarly and QuillBot. Grammarly is an American cloud-based AI typing assistant, that helps in reviewing spelling, analyzing the syntax of the text, correcting punctuation errors, etc. Quillbot is an artificial power-based writing and paraphrasing tool designed to rewrite text-based content in a very formal and refined language.

The article by Miyuki Sasaki[16] discusses the contradictions of using AI writing assistance tools for non-native English speakers in academics. Sasaki argues for the importance of an emic perspective and leveraging L1 literacy in the debate. The study compared machine translation (MT) and teacher corrective feedback for improving 23 Japanese EFL students' L2 writing. She frames this within theoretical models of L1/L2 language production. Rather than viewing AI writing tools as plagiarism risks for L2 writers, Sasaki argues we should view them as empowering devices to allow non-native scholars to participate equitably in English-dominant academic publishing. She calls for focus on how to leverage AI technology to assist L2 writers in developing autonomy comparable to native English counterparts.

Basic et al [3] investigated the use of ChatGPT to assist students in writing argumentative essays. The goal was to see if ChatGPT improves essay quality, reduces writing time, or impacts text authenticity. Malik et al. [11] explored Indonesian higher education students' perspectives on using artificial intelligence (AI) tools to assist with academic essay writing. A survey of 245 students examined their attitudes towards and experiences with AI writing technologies. Students have a positive view of AI writing tools and appreciate its characteristics which involve grammar checking, reviewing spellings, analyzing grammar and syntax of the text, translation of the language of the text, and essay outlines. The article also talks about the curtailment of the ability of creative writing and critical thinking. This article by Ibrahim[8] discusses how to explore using AI-based text classifiers to detect AI-generated essays and control AI-assisted plagiarism. With the release of chatbots like ChatGPT, there are growing fears students could misuse the technology's text-generation abilities to plagiarize on assignments. However, traditional plagiarism software often fails to identify AI-generated content. RoBERTa-based classifiers offer reasonably viable

resources for detecting AI texts. However, accuracy limitations indicate that AI-assisted plagiarism decisions shouldn't rely solely on automated detectors. Continued detector innovation and training are needed for optimal AI text discrimination. The study contributes to emerging conversations on maintaining academic integrity amidst disruptive AI advancements. It aligns with previous indications that fine-tuned classifiers can effectively identify AI writing. The discussion situates the analysis within wider NLP research on generative models and text classifiers. The review by Muhammad Imran Et, al [8] suggests ChatGPT has the potential to assist with academic writing but should augment rather than replace human effort and oversight. The technology's rapid pace requires ongoing assessment. This article by Talaue [19] reports on a qualitative case study exploring the use of AI writing assistants, specifically ChatGPT, among students in an English for Academic Purposes course at a university in Indonesia. This research provides evidence from an Indonesian higher education context about emerging student behaviors of over-dependence on AI writing assistants, highlighting the need for greater support and accountability structures. The issues warrant continued investigation considering ChatGPT's rapid global proliferation. Guleria et al. [7] examine ethical issues and accuracy challenges with using the AI chatbot ChatGPT to generate content for academic writing and research publications. The authors highlight the need for greater transparency and ethical guidelines regarding ChatGPT and similar AI. Relying naively on the tool risks propagating misinformation in scholarly literature and policy. Critical evaluation is crucial. Salas-Pilco, Xiao, and Hu[15] provide an updated systematic review of the applications of artificial intelligence (AI) and learning analytics (LA) in teacher education. The article highlights the potential for AI and LA to positively impact teacher education through automated scoring, personalized feedback, predicting at-risk students, informing the design of learning activities, and more. However, the authors note ethical considerations and teachers' data literacy must be addressed.

2. RESEARCH QUESTION AND OBJECTIVES

The main purpose of the research is to obtain the role and influence of AI tools such as ChatGPT, Claude AI, Zotero, Mendeley, Grammarly Go, notes, and Quilbot in research writing and publication. The primary objective of the study is to analyse the most used AI tools in content generation and paraphrasing. The research also aims to understand the techniques used by the researchers while incorporating AI tools in paper writing. The purpose of this survey is to examine research scholars' awareness, use, and perception of the usefulness of AI writing and publishing tools for scholarly work. This study specifically attempts to determine the extent to which research academics are aware that artificial intelligence (AI) has tools that can help with citation management, writing support, plagiarism detection, grammar correction, and literature reviews. The questionnaire also aims to identify the AI writing and publishing tools that academic researchers are now using to assist with their job and to analyze research researchers' opinions about the value of various AI tool categories for helping with drafting, editing, proofreading, literature searches, and other parts of academic writing and publishing. The research aims to identify the areas where the current AI tools for academic writing and publication might be improved to address more effectively Based on the objectives following research questions were framed.

RQ1: How effective is AI tools in research paper writing? What are the SI tools prominently used by the researchers?

3. METHODS AND INSTRUMENT

The study employs a cross-sectional survey method to analyze the role of AI tools in academic writing and publication among PhD research scholars. This quantitative study will use a cross-sectional survey design to evaluate the awareness, usage, and perceived effectiveness of AI writing and publishing tools among research scholars across various disciplines and academic positions. The study employs a self-designed closed-ended Artificial Intelligence in Academic Writing and Publication (AIWQ-40) questionnaire with a Likert scale. The questionnaire has 40 items with components like writing (9 items), content generation (12 items), paraphrasing (8 items), citation (3 items), and proofreading (8 Items). The questionnaire was circulated to the participants through Google Forms. The participants of the study are PhD research scholars from Vellore District pursuing in various institutions. A statistical package for social sciences was used to analyze the quantitative data. Tests like frequency tests and descriptive statistics were performed in SPSS to determine the range, total, percentage, standard deviation, and variance were conducted. Internal consistency was examined using Cronbach's alpha test in SPSS to assess reliability. The Cronbach alpha test result for 40 items was 0.868>0.7, hence the questionnaire is considered reliable. Table 1 represents the reliability of the AIWQ questionnaire.

Table-1: Reliability of the Artificial Intelligence in Writing Questionnaire (AIWQ-40, N=161)

Questionnaire	Items	Cronbach Alpha Coefficient
Artificial Intelligence in Writing Questionnaire (AIWQ-40)	40	0.868

Bivariate analysis was performed in SPSS to analyze the validity of the questionnaire using the pearson correlation method. Table 2 represents the validity of the questionnaire. The Pearson Correlation value ranges from -0.432-0.978 for the AIWQ-40 items. The Pearson correlation value indicates that there is a good correlation among the questions and the significant value (p-value), which ranges from 0.027-0.000 for 40 items, is lesser than 0.05 hence the data analysis has shown that the questionnaire of the survey is reliable and valid.

Table-2: Validity of the ChatGPT in English Acquisition Questionnaire (AIWQ-40, N=161)

Questionnaire	Items	Pearson Correlation	Sig 2-Tailed
Artificial Intelligence in Writing Questionnaire (AIWQ-40)	30	-0.432-0.978	0.027-0.000

4. ANALYSIS AND INTERPRETATION

4.1 Role of AI Tools in Academic Writing

The first component of the questionnaire is to analyze the imperative role of AI tools in Academic writing. The component of academic writing has nine items. 64.59% of participants have affirmed that AI tools have improved their efficiency in conducting literature reviews. Nearly 56.98% of participants' AI tools have improved the quality of their academic writing. 68.32% of the participants have confirmed that using AI tools has sped up data analysis in their research 50.93% of the participants strongly agreed that AI tools have increased the creativity in their academic research work.
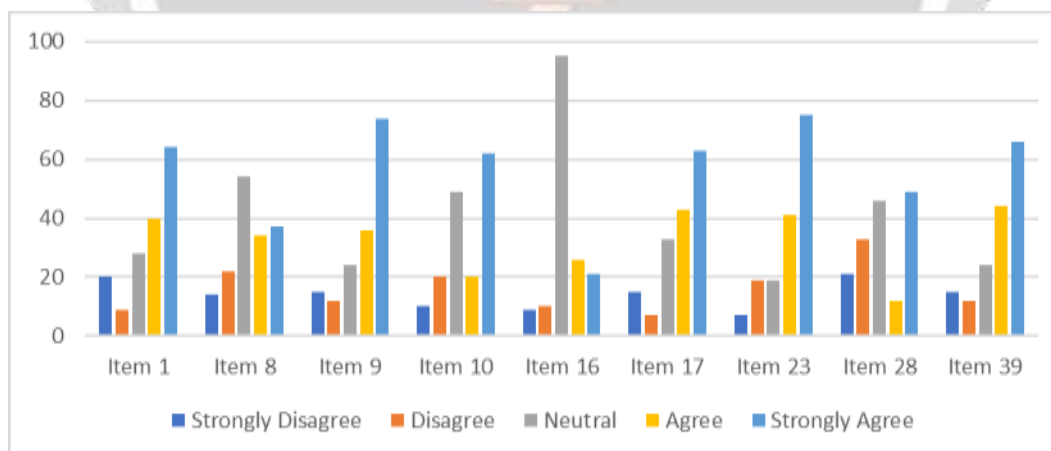
Chart-1: Role of AI Tools in Academic Writing

59% of the participants have remained neutral to the statement that AI tools have assisted in identifying potential journals for publication. 65.83% of the participants have agreed using AI tools has expanded the scope of their research ideas. 72.04% of the participants agreed that AI tools have increased their confidence in meeting publication requirements. 37.88% of the participants feel more confident in conducting statistical analyses with AI-

powered tools. 68.32% of the participants have confirmed that AI tools have contributed to improving the overall academic rigor of my work.

Table-3: Role of AI Tools in Academic Writing

AIWQ Items	Mean	Standard Deviation	Standard Error Mean	Frequency				
				1	2	3	4	5
Item 1	3.7391	1.36254	.10738	20	9	28	40	64
Item 8	3.3602	1.22246	.09634	14	22	54	34	37
Item 9	3.8820	1.31994	.10403	15	12	24	36	74
Item 10	3.6460	1.27676	.10062	10	20	49	20	62
Item 16	3.2484	.95545	.07530	9	10	95	26	21
Item 17	3.8199	1.25941	.09926	15	7	33	43	63
Item 23	3.9814	1.20661	.09509	7	19	19	41	75
Item 28	3.2174	1.40844	.11100	21	33	46	12	49
Item 39	3.8323	1.29536	.10209	15	12	24	44	66

4.2 Effectiveness of AI Tools in Content Generation

The second component in the questionnaire is the effectiveness of AI tools in Content Generation. 31% of the participants remained neutral to the statement Using AI tools has increased the accuracy of their research findings in comparison to findings of other studies especially tools like ChatGPT and Claude AI as they were the most prominent used tools among research scholars. Using AI tools for ideas and collaboration of ideas seems non-time consuming and helps the researcher to identify the research area and related topic quickly. 60.24% of the participants disagreed with the statements AI tools have helped in generating better research findings as they were not reliable enough to identify the findings through them. The findings were reliable based on the quantitative or qualitative data of the study. 57.76% of the participants agreed that AI tools like ChatGPT have facilitated the identification of relevant research sources. Over 50.93% of the participants affirmed that AI tools have increased the creativity in their research work.
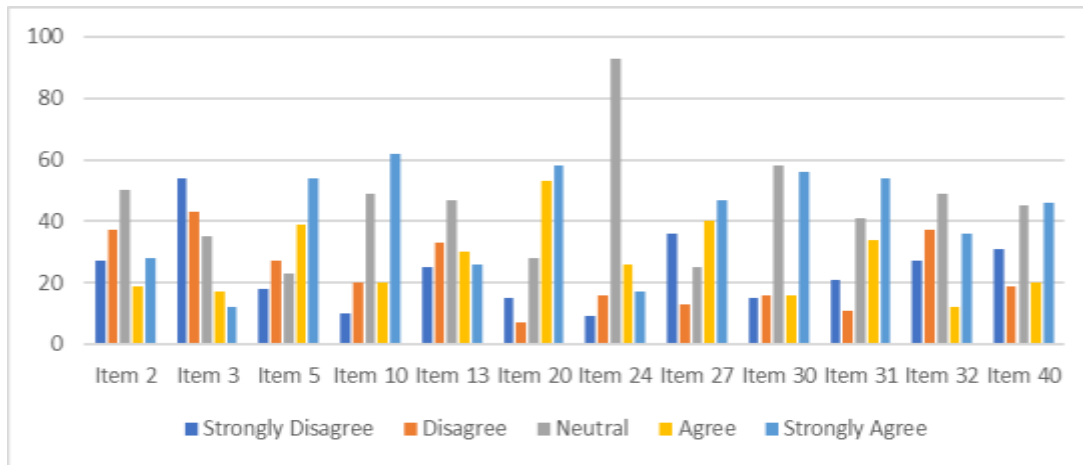
Chart-2: AI tools in Content generation

Almost 32.91% of the participants agreed that they find AI tools user-friendly and easy to navigate. Over 68.94% trust the suggestions and recommendations provided by AI tools. 57.76% stayed neutral to the statement AI tools have facilitated the integration of diverse research perspectives 44.72% of AI tools have helped in avoid plagiarism in my academic work. 54.65% have avowed that AI tools have contributed to increasing the impact of their research. 29.81% of the respondents have acknowledged that AI tools have simplified the process of formatting manuscripts using latex, and Grammarly. Almost 40.99% of the participants believed that AI tools have positively influenced their decision-making in research

Table-4: AI tools in the Content generation

AIWQ Items	Mean	Standard Deviation	Standard Error Mean	Frequency				
				1	2	3	4	5
Item 2	2.9006	1.30960	.10321	27	37	50	19	28
Item 3	2.3168	1.24711	.09829	54	43	35	17	12
Item 5	3.5217	1.39233	.10973	18	27	23	39	54
Item 10	3.6460	1.297676	.10062	10	20	49	20	62
Item 13	2.9938	1.29179	.10181	25	33	47	30	26
Item 20	3.8199	1.23434	.09728	15	7	28	53	58
Item 24	3.1615	.94141	.07419	9	16	93	26	17
Item 27	3.3043	1.52087	.11986	36	13	25	40	47
Item 30	3.5093	1.30919	.10318	15	16	58	16	56
Item 31	3.5528	1.35969	.10716	21	11	41	34	54

Item 32	2.9565	1.37089	.10804	27	37	49	12	36
Item 40	3.1925	1.45995	.11506	31	19	45	20	46

**4.3 Significance of AI Tools in Paraphrasing**

The majority of the participants have affirmed that AI tools play a major role in paraphrasing. Survey respondents also affirmed that 77.01 % of the learners agreed that AI tools like Grammarly and Quilbot have enhanced the organization and structure of my research papers. (Item 4, Mean=4.01). Almost 46.58% of the learners assented that AI tools have positively impacted my research productivity (Item 11, Mean=3.75). 54.65% of the respondents disagreed to the statement that AI tools have made collaboration with co-authors more efficient (Item 19, Mean=2.6708). 59.62% of the participants have asserted that they feel AI tools have enhanced the overall quality of their research output (Item 21, Mean=3.61).

Table-5: AI Tools in Paraphrasing

AIWQ Items	Mean	Standard Deviation	Standard Error Mean	Frequency				
				1	2	3	4	5
Item 4	4.0124	1.24994	0.09851	15	6	16	49	75
Item 11	3.7578	1.33124	0.10492	17	13	25	43	63
Item 19	2.6708	1.4653	0.11548	42	46	31	7	35
Item 21	3.6149	1.2066	0.09509	18	19	28	38	58
Item 22	3.1491	1.2904	0.10170	24	19	59	27	32
Item 29	2.8882	1.0954	0.08633	19	30	81	12	19
Item 33	2.1553	1.2326	0.09715	62	50	22	16	11
Item 34	3.7143	1.4423	0.11367	23	12	22	35	69

Nearly 36.64% of the participants remained neutral to the statement AI tools have helped in paraphrasing and summarizing research content effectively (Item 22, Mean=3.14). Almost 50% of the participants selected the neutral option to the statement AI tools have improved their ability to present complex data effectively (Item 29, Mean=2.88). 69.56% of the participants disagreed with the statement that they find AI tools helpful in suggesting relevant keywords for their research(Item 33, mean=2.155). 64.59% of the participants have affirmed that AI tools have increased the speed of initial draft creation in their research.

Chart-3: AI Tools in Paraphrasing
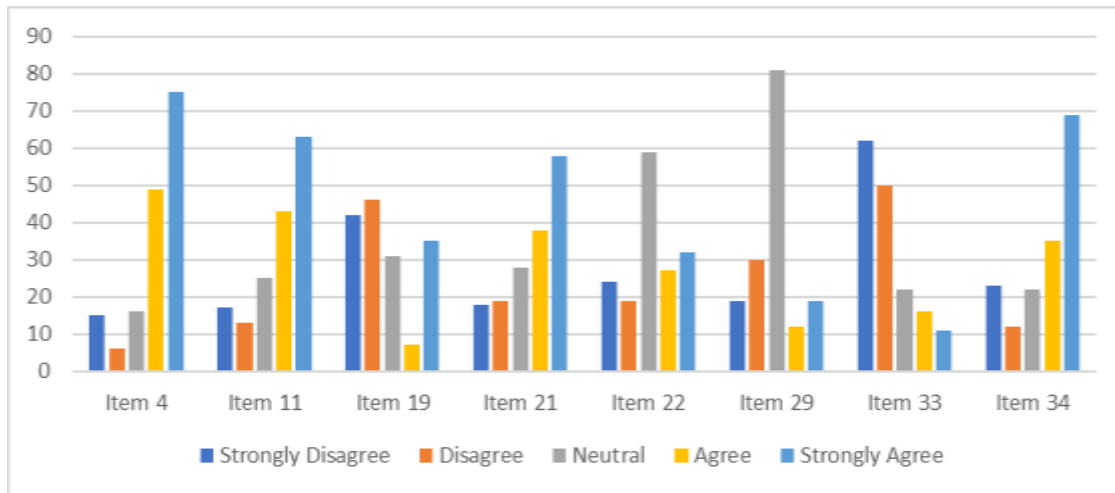
4.4 Importance of AI tools in academic reference and citation

It's important to format academic references and cite them correctly, but learning the nuances of styles like APA or MLA can be challenging. AI citation technologies generate prepared citations automatically, making the procedure much simpler. All you need to do is enter the information about the source, and the AI will precisely produce a correctly formatted citation that can be included in a bibliography. Researchers can write flawlessly styled citations instantly without having to memorize complex guides, saving them hours of work and minimizing errors that could compromise their academic integrity. Artificial Intelligence frees up time for academics to focus on the important aspects of their study by automating the time-consuming process of citing sources. 40.99% of the participants agreed that they cite sources accurately due to AI tools like Mendeley and Zotero. Nearly 75% of the respondents feel more confident in citing sources accurately due to AI tools. 27% of the participants felt that AI tools like Zotero have helped in managing references and citations effectively.

Table-6: AI tools in Citation

AIWQ Items	Mean	Standard Deviation	Standard Error Mean	Frequency				
				1	2	3	4	5
Item 6	3.4037	1.23176	0.09708	13	19	63	22	44
Item 7	4.0437	1.07704	0.08488	7	7	26	52	69
Item 18	2.9130	1.34346	0.10588	27	38	51	12	33

4.5 Significance of AI Tools in Proof Reading and Grammar Correction

Error identification in written text was an intensive and time-consuming process that is now automated by AI-powered proofreading solutions. Thanks to machine learning, current algorithms can quickly and accurately detect spelling and grammar issues. This reduces missed problems, improves quality, and saves writers a significant amount of time. To further enhance material, AI writing aids even offer rephrasing suggestions and evaluate elements like vocabulary diversity. The potential for AI proofreading to meaningfully enhance rather than replace

human writing is great as natural language processing continues to progress. Writing professionals can concentrate their efforts on developing advanced writing abilities, where humans are still the best, by automating basic proofreading duties. Almost 42.85% of the participants agreed that AI tools like Grammarly Go have reduced errors in their academic writing (Item 14, Mean=2.975). 60.86% of the students agreed that AI tools have improved the clarity and coherence of their research papers using Grammarly Go (Item 15, Mean=3.732). Nearly 57.76% of the participants believed that AI tools have reduced the time required for proofreading and editing (Item 25, 3.633). However, 55.90% of the participants disagreed that using AI tools has improved the overall structure of their research manuscripts (Item 26, Mean=2,683). Over 58.38% of the participants affirmed that using AI tools has improved the citation style consistency in their papers (Item 35, Mean=3.534). Nevertheless, 44.72% of the respondents stayed neutral to the statement that AI tools have helped in enhancing the readability of their research papers (Item 36, Mean=3.279). Almost 72.67% of the participants trusted the accuracy of grammar and spell check features in AI tools (Item 37, Mean=4.018). Nearly, 45.34% of the respondents stated that AI tools have facilitated better communication of their research findings(Item 38, Mean=3.397).

Table-7: AI Tools in Proof Reading and Grammar Correction

AIWQ Items	Mean	Standard Deviation	Standard Error Mean	Frequency				
				1	2	3	4	5
Item 14	2.9752	1.1829	0.0932	23	24	69	24	21
Item 15	3.7329	1.2882	0.1015	13	16	34	36	62
Item 25	3.6335	0.9414	0.0741	15	11	42	43	50
Item 26	2.6832	1.2484	0.0983	14	76	37	15	19
Item 35	3.5342	1.3956	0.1100	18	27	22	39	55
Item 36	3.2795	1.1576	0.0912	13	19	72	24	33
Item 37	4.0186	1.1644	0.0917	9	9	26	43	74
Item 38	3.3975	1.2210	0.9623	13	22	53	34	39

4.6 Limitation

1. The questionnaire was circulated only to the Vellore district in Tamil Nadu and focused only on PhD Research Scholars.

2. The questionnaire was circulated to engineering learners and focused only on the usage of AI tools in academic writing.

3. The study solely analyses the role of AI tools in Academic writing practices and publication.

4.7 Future Scope

1. To address the problems and difficulties associated with using AI in English language research, extensive research should be conducted throughout all of Tamil Nadu's districts and all of India.

2. Research could be done to find out what scholars think about applying AI to other subjects like arithmetic, science, online learning, and higher education.

5. CONCLUSION

The results of this survey offer insightful information about how academic researchers use and are affected by AI-powered writing tools. The majority of academics—89%—reported having used AI technology at some point, suggesting that it is widely used to improve academic writing. The most popular uses of AI were in citation management, plagiarism detection, and proofreading. According to our findings, the vast majority of respondents believe that these tools are helpful because they save a significant amount of time, which boosts research productivity. "Accurately generating and formatting citations allows me to focus my efforts on developing the key hypotheses rather than administrative tasks," stated a scholar who participated in the survey. To sum up, the purpose of this survey was to evaluate the usefulness of AI writing tools for researchers and determine how these new technologies are influencing academic publishing. According to the poll, 91% of academics already use AI-powered software to improve their academic writing and productivity. The results show that the use of these technologies to supplement the research process is common and increasing. Even though there are still worries about possible abuse, 83% of academics said AI technology had improved the effectiveness of their study. "AI writing assistants allow me to allocate more time for rigorous methodology rather than routine formatting tasks," a professor who responded to the poll said . Advanced artificial intelligence (AI) appears ready to transform academic writing by automating labor-intensive processes like editing and citation management, especially given the rapid advancement of natural language processing. This will enable scholars to advance quality research while upholding integrity. More broadly, adopting AI technology emerges as a promising path to accelerate knowledge production across the sciences.

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Appendix

A Survey on Analyzing the Effectiveness of AI Tools among Research Scholars in Academic Writing and Publication

Instructions:

Please rate your level of agreement with the following statements regarding AI tools in academic writing and publication on a scale from 1 to 5, where:

1: Strongly Disagree

2: Disagree

3: Neutral

4: Agree

5: Strongly Agree

Items	Questionnaire	1	2	3	4	5
1	AI tools have improved my efficiency in conducting literature reviews.					
2	Using AI tools has increased the accuracy of my research findings in comparison to findings of other studies.					
3	AI tools have helped in generating better research findings.					
4	AI tools like Grammarly and Quilbot have enhanced the organization and structure of my research papers.					
5	AI tools like ChatGPT have facilitated the identification of relevant research sources.					

6	I feel more confident in citing sources accurately due to AI tools like Mendeley and Zotero.					
7	I feel more confident in citing sources accurately due to AI tools.					
8	AI tools have improved the quality of my academic writing.					
9	Using AI tools has expedited the process of data analysis in my research.					
10	AI tools have increased the creativity in my research work.					
11	I believe AI tools have positively impacted my research productivity.					
12	AI tools have aided in identifying potential research gaps.					
13	I find AI tools user-friendly and easy to navigate.					
14	AI tools like Grammarly Go have reduced errors in my academic writing.					
15	AI tools have improved the clarity and coherence of my research papers using Grammarly Go					
16	AI tools have assisted in identifying potential journals for publication.					
17	Using AI tools has expanded the scope of my research ideas.					
18	AI tools like Zotero have helped in managing references and citations effectively.					
19	AI tools have made collaboration with co-authors more efficient.					
20	I trust the suggestions and recommendations provided by AI tools.					
21	I feel AI tools have enhanced the overall quality of my research output.					
22	AI tools have helped in paraphrasing and summarizing research content effectively.					
23	AI tools have increased my confidence in meeting publication requirements.					
24	AI tools have facilitated the integration of diverse research perspectives.					
25	I believe AI tools have reduced the time required for proofreading and editing.					
26	Using AI tools has improved the overall structure of my research manuscripts.					
27	AI tools have helped in avoiding plagiarism in my academic work.					
28	I feel more confident in conducting statistical analyses with AI-powered tools.					
29	AI tools have improved my ability to present complex data effectively.					
30	AI tools have contributed to increasing the impact of my research.					

31	I believe AI tools have simplified the process of formatting manuscripts.					
32	AI tools have helped in generating insightful visual representations of data.					
33	I find AI tools helpful in suggesting relevant keywords for my research.					
34	AI tools have increased the speed of initial draft creation in my research.					
35	Using AI tools has improved the citation style consistency in my papers.					
36	AI tools have helped in enhancing the readability of my research papers.					
37	I trust the accuracy of grammar and spell check features in AI tools.					
38	AI tools have facilitated better communication of my research findings.					
39	AI tools have contributed to improving the overall academic rigor of my work.					
40	I believe AI tools have positively influenced my decision-making in research.					