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EXAMINING THE IMPACT OF AI-POWERED WRITING TOOLS ON INDEPENDENT WRITING SKILLS OF HEALTH SCIENCE GRADUATES

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Abstract. *The level of reliance on AI-Powered Writing Tools (AI-PWT) profoundly impacts the independent writing skill of English as Second Language (ESL) learners. The present study explores the familiarity and utility of two different types of AI -Powered Writing Tools (Independent Writing with AI editing assistance; Generative writing with AI assistance) among ESL health science graduates and to understand the role of these tools in shaping their independent writing skills.* ***Method:*** *The study adopted a survey technique to understand the knowledge, attitude and utility of AI-powered writing tools among 309 Health Science graduates from a South Indian private Medical University.* ***Result:*** *The findings showed the overall frequency distribution of the participants' level of knowledge had a higher score range of 14-20 in 213 (68.9%) samples. Although 215 (70%) were familiar on using AI-PWT to improve vocabulary and grammar, around 17-19 % were uncertain about receiving real-time writing feedback to optimize the content. 199 (64%) expressed a positive perspective in using AI-PWT. Around 214 (69.3 %) took assistance from AI-PWT for generative writing purposes than revising the independently written content. In practice, only 64 (20.7 %) received feedback to refine the vocabulary and 60 (19.4%) to revise grammar,*

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indicating an inclination for more generative writing with AI utility than Independent Writing with editing assistance. ***Conclusion:*** *AI-Powered Writing Tools are well-recognised and powerful writing assistance to help students with their academic writing. However, relying on these tools only for generative purposes could significantly affect independent writing. The study insists on the need for teacher-guided assistance to train students to adopt the right tool that could best serve as a collaborative writing assistant adhering to the ethics.*

Keywords: *AI-Powered Writing Tools, Independent Writing, generative writing assistance, editing assistance, health science graduates, English as Second Language*

1. INTRODUCTION

The emerging range of automated academic writing support from AI-Powered Writing Tools (AI-PWT) requires scrutinised facilitation to improve English writing skills among English as a Second Language (ESL) graduates. AI-PWT has been sought for error correction and remediation (Alharbi, Wael, 2023) and better construction of cohesion and coherence, vocabulary, phrases, spelling, organisation of text, etc. (Tran, 2024).

AI-PWT has been regarded as the best support tool for editing assistance, unlike any other traditional writing assistive tool. Mahapatra (2024), examining the impact of AI-PWT on ESL students' academic writing skills, strongly stated that AI-PWT could be regarded as a wonderful facilitator.

Wu (2024) provides a list of AI-PWT like NoRedInk, ArgRewrite, and ChatGPT which would help revise grammar, spelling, punctuation, coherence, and style in one's writing by providing suggestions. A study on integrating AI - PWT usages such as Quillbot, WordTune, Jenni, ChatGPT, Paperpal, Copy.ai, and Essaywriter in teaching English Language skills among ESL learners has proven effective in academic writing by improving the quality of their content and organisation (Marzuki et al., 2023). Improvement in content and cohesive writing skills, along with nurturing critical thinking and creativity through learning to feed the correct prompts, was identified in using DeepL, Elicit, Perplexity, etc, in the English learning classes (Gültekin Talayhan& Babayiğit, 2023).

Considering the type of writing assistance received from AI-PWT, the writing performance of users can be influenced. AI-powered writing Assistance (AI-PWA)can be classified as either *Independent Writing with editing assistance*, where the user takes the primary responsibility of drafting the draft and then receives editing and content refining assistance using AI-PWT. In generative writing with AI, AI-PWT takes the lead in generating the written content, and the user may or may not provide feedback assistance in revising the draft. The choice of independent writing with editing assistance is considered more progressive towards independent writing than generative writing with AI (Li, Liang, et al., 2024).

However, nurturing independent writing requires many attempts of original writing practice rather than generating texts, which would eventually benefit from error correction and improved quality of text contents. Writing independently is a challenge for any ESL learner due to limited language proficiency. Many ESL learners struggle with writer's block, lack of creativity, and grammatical errors that can hinder the quality of their writing. This could lead students to resort to the use of AI-PWT to generate good quality written content but with barely 'originality' (Kurban, Caroline Fell, and Muhammed Şahin, 2024).

Researchers also caution against the long-term dependency of AI-PWT to resort to laziness that hampers the thought process and the ability to think creatively and logically (Tran, 2024). Over-dependence on automated paraphrasing tools could dilute the intended meaning in academic writing (Rogerson & McCarthy, 2017). It can stunt their natural learning process and development of self-editing skills (Marzuki, et al., 2023). Depending completely on AI writing technologies curbs the learners' ability to develop critical thinking and problem-solving skills that are essential for writing (Hsiao, Jo-Chi, and Jason Chang, 2023).

A lack of authorial authenticity and originality of text content generated using AI-PWT has been reported. A study examining the ability of ChatGPT to furnish accurate responses to the questions fed by users found that it could only provide correct or partially correct answers in 57% of cases (Jalil et al., 2023). Generating an initial draft and/or proofreading support of AI-PWT in scientific writing is acknowledged but raises some ethical concerns that demand regulation (Fyfe, 2023). The dependency of AI-PWT could be understood from the type of prompt feed to receive writing support (Stojanovic, Ljubinko, et al., 2023).

All these studies indicate users' need for discrete knowledge, attitude, and understanding of how the AI-PWT tools can be used. Opting for the right AI-PWA that facilitate English learning with the right level of permissible dependency will promote creative writing skills is important. Independent writing is a required skill for health science students. It helps to document the medical observations precisely (Hardy, 2022) However, there are limited studies done on how healthcare graduates have knowledge, attitude, and utility of AI-PWT.

Therefore, the present study has two objectives: first, to measure the degree of Knowledge, Attitude, and Practice (KAP) of AI-powered writing Tools among Health Science graduates; second, to analyse the type of AI-powered Writing Assistance received in order to predict the facilitating behaviour for independent writing.

2. METHODS

The study adopted a survey technique to understand the Knowledge, Attitude and Utility of health science graduates on AI-Powered Writing Tools.

2.1. Tool Description

A survey tool in the form of Google Forms was created based on the reviews on AI-Powered Writing Tools. The tool has a total of 5 aspects covering 48 items needing the participants' self-reported responses. The demographic aspect (12 items) covered name, age, gender, name of the study programme, year of study, previous language mode of learning instruction, self-rating of English language ability, parental education, and family income. The knowledge aspects (14 items) covered the source, name of AI-PWT, awareness of the tool's function, and limitations. The utility aspects (7 items) covered purposes for the usage, frequency, and features opted. While attitude aspects (15 items) studied the reasons for the choice and their benefits and limitations.

2.2. Tool Validity and Reliability

Content validity test helps to understand the accuracy of the tool in measuring the expected domains. The present study received face validity from four experts. Since the study included participants from Health Science streams, an expert at the designation of Assistant Professor of Community Medicine along with two experts at the designation of

Associate Professor of Computer Science and one Associate Professor of ELT were included. The tool was scrutinised for literature evidence, clarity of terminology, chances of ambiguity and fine-tuned.

In order to identify the reliability of the tool, it was subjected to test and retest. Approximately, 20% (60) of the samples were re-administered with the survey tool to check on the consistency in receiving the data collected and also to find the stability and reproduciblity of the tool. The statistical Kappa test showed a better agreement between the response received at two time points with an interval 10 days. All parameters of the tools had a reliable score of 0.78 to 1.

2.3. Participants

The study included Health Science graduates from a South Indian private Medical University. Around 500 students were reached out through email and WhatsApp requesting participation, of which 309 respondents responded.

2.4. Mode of Conduct

The participants received details on the purpose of the study with the survey form link through their emails. On consenting for participation, responses were received.

3. RESULTS

3.1. Demographic Variables

The demographic characteristics of the participants showed that most of them, 67%, were from the age group of 18 -19 years, with almost an equal ratio of females (55 %) and males (44%). All the participants were graduates of both health science streams with 50% (156) from MBBS, 27% (84) from B. Pharmacy, and 23% from various Allied Health Sciences programmes. Regarding their previous English exposure, most of them (99%) have had English as their mode of learning till twelfth grade, pursued under either the board (Samacheer) (52 %) or CBSE (35%), while 86% rated their English proficiency as either good or excellent.

In connection with their family background, 70 % were from rural areas, with almost 80% of the parents being educated, drawing a salary range of 60,000 and above (25 %) or 41-60 thousand (52%). Of the participants, 167 (54%) had gained knowledge about the AI-PWT through web sources, and 34% gained knowledge through their classmates.

3.2. Knowledge, Attitude, and Practice (KAP) about AI-Powered Writing Tools and Assistance

A total of thirteen items were used to assess the participants' knowledge of AI-PWT. Out of these, ten were in the form of questions to assess the knowledge of the functions of AI-PWT. Each of the items had an option of 'Yes,' 'No,' or 'Not Sure' with a score of 2, 1, and 0, respectively. The maximum score was 20 and the minimum was 0. The overall frequency distribution of students' level of knowledge indicated that 213 (69%) fell into the score range of 14-20.

Table 1. Item-wise Analysis of Knowledge about AI-PWT

S. No	Item	Frequency	Percentage
	Various writing assistance that AI-Powered Writing Tools can offer		
	Generate Content	287	73.5
	grammar and spell-checking,	215	69.6
	style suggestions,	103	33.3
	Accuracy checking of content	151	48.9
	content optimising	132	42.7
	Fact-checking	120	38.8
	plagiarism detecting	86	27.8
	Providing up-to-date content	106	34.3
	Who can use AI-Powered Writing Tools?		
	Anyone	238	77.0
	Writer	17	5.5
	Blog writers	12	3.9
	AI professionals	30	9.7
	Journalists	10	3.2
	Technocrats	2	.6
	Can AI-Powered Writing Tools generate texts**?**		
	Yes	238	77.0
	No	14	4.5
	Not sure	57	18.4
	Can AI-Powered Writing Tools provide real-time feedback on your writing?		
	Yes	173	56.0
	No	30	9.7
	Not sure	106	34.3
	Can AI-Powered Writing Tools provide alternative word choices, and context-specific suggestions?		

	Yes	240	77.7
	No	18	5.8
	Not sure	51	16.5
	Can AI-Powered Writing Tools help in academic writing?		
	Yes	238	77.0
	No	16	5.2
	Not sure	55	17.8
	Can AI-Powered Writing Tools help with alternative phrasing word choices?		
	Yes	237	76.7
	No	17	5.5
	Not sure	55	17.8
	Can AI-Powered Writing Tools suggest changes to sentence structure?		
	Yes	230	74.4
	No	19	6.1
	Not sure	60	19.4
	Can AI-Powered Writing Assistance help to convey ideas more precisely?		
	Yes	225	72.8
	No	18	5.8
	Not sure	66	21.4
0	Can AI-Powered Writing Assistance improve the grammar in your writing?		
	Yes	253	81.9
	No	17	5.5
	Not sure	39	12.6
1	Can AI-powered writing assistance analyse the context of your writing and provide more accurate suggestions?		
	Yes	227	73.5
	No	15	4.9
	Not sure	67	21.7

2	Can the use of AI-Powered Writing Tools in writing be detected?		
	Yes	181	58.6
	No	29	9.4
	Not sure	99	32.0
3	To make the AI-Powered Writing Tools do a specific task, the instruction that you give is called as		
	Program	103	33.3
	Command	128	41.4
	Prompt	55	17.8
	Request	23	7.4

A total of thirteen items were used to assess the participants' knowledge of AI PWT. Out of these, ten were in the form of questions, to assess the knowledge on the functions of AI -PWT. Each of the item had an option of 'Yes', 'No', or 'Not Sure' with a score of 2, 1, and 0, respectively. The maximum score was 20 and the minimum was 0. The overall frequency distribution of students' level of knowledge indicated that213 (69%) fell into the score range of 14 - 20.

The remaining three items of knowledge on AI -PWT were on their understanding of the 'type of writing assistance offered by AI -PWT', 'people who will require AI -PWT', and 'terminology of the AI running command', which were structured to receive more than one option. These questions were listed with multiple selection options along with distractors. Most of them, 215 (70%) were familiar with grammar and spell-checking support, whereas detecting plagiarism was the least known (17 %). 42.7% were familiar with AI-PWT for content optimization, and around 17 - 19 % were uncertain about the specific range of performance, such as receiving real-time writing feedback, alternative vocabulary, and change of sentence structures. Only 17.8 % could identify 'prompt' as the term to command AI -PWT to run. 71 (23%) failed to recognise AI-PWT as a layman's help tool rather than associating it with AI professionals.

Table 2. Comparison of Demographic Variables with Knowledge on AI -PWT

S. No	**Variables**	**N (309)**	**Knowledge percentage**		
			Mean	**Std. Dev.**	**P Value**
1	Age				
	17	33	58.8517	16.19301	0.062
	18	105	61.6040	14.72317	
	19	102	62.6935	17.02002	

	20	56	67.1053	14.51820	
	21 and above	13	55.8704	19.75595	
2	Gender				
	Female	135	61.4425	16.55427	.372
	Male	174	63.3118	15.43911	
3	Type of Programme				
	Medical	156	64.54	16.08	0.019
	Paramedical	153	60.27	15.66	
4	Year of Study				
	First	153	60.2683	15.66131	.372
	Second	156	64.5412	16.07675	
5	Name of the board studied in higher secondary school (+2)				
	State Board	162	64.1326	15.37790	0.110
	CBSE	107	59.9606	15.99922	
	ICSE	40	62.1053	17.84625	
6	Mode of instruction till twelfth grade				
	English	307	63.2064	16.37942	0.196
	Tamil	1	62.5980	14.93630	
	Others	1	58.4795	14.85353	
7	Domicile (Place of Residence)				
	Rural	75	62.4425	17.03145	.337
	Urban	192	63.4846	15.80434	
	Semi-urban	38	59.8792	14.51474	
8	Family's Monthly Income				
	Less than 40 thousand	69	61.7849	15.52021	0.010
	41-60 thousand	78	58.1646	16.68453	
	60 thousand and above	162	64.7498	15.48791	

9	Educational background of Father				
	Post-graduate	103	62.4425	17.03145	0.337
	Graduate	145	63.4846	15.80434	
	Non-literate	61	59.8792	14.51474	
10	Educational background of Mother				
	Post-graduate	100	62.8947	16.59938	0.801

Of the 309 participants, the correlation of age with overall knowledge score had a mean score of 62.42 ± 15.9 with no significant difference noted in the p-value (0.062). The knowledge score shows that graduates from medical programmes (153) had better knowledge scores than the paramedics, with a mean value of 64.54 ± 16.08 and a significant p-value of 0.019. Similarly, those who had used the AI-PWT had better knowledge 64.24 ± 15.38 with a p-value of 0.003. No gender disparity in the utility of AI-PWT was traced. However, the least used app, Hemingway, was commonly mentioned by male students, while Grammarly was most reported by female participants.

Table 3. Item Wise Analysis of Attitude towards AI-PWT

S. No	**Variables**	**Frequency (n=309)**	**Percentage**
1.	Of the four English skills which requires the most support		
	Listening	38	12.3
	Speaking	39	12.6
	Reading	35	11.7
	Writing	196	63.4
2	The use of AI-Powered Writing Tools reduce stress in writing assignments.		
	Yes	219	70.9
	No	26	8.4
	Not Sure	64	20.7
3	The use of AI-Powered Writing Tools would save assignment writing time.		
	Yes	237	76.7
	No	25	8.1
	Not Sure	47	15.2

4	The use of AI-Powered Writing Tools can improve vocabulary skills		
	Yes	199	64.4
	No	45	14.6
	Not Sure	65	21.0
5	The use of AI-Powered Writing Tools can improve grammar accuracy.		
	Yes	214	69.3
	No	35	11.3
	Not Sure	60	19.4
6	The use of AI-Powered Writing Tools can generate answers accurately.		
	Yes	150	48.5
	No	40	12.9
	Not Sure	111	38.5
7	The use of AI-Powered Writing Tools can reduce creativity.		
	Yes	202	65.4
	No	37	12.0
	Not Sure	70	22.7
8	AI-Powered Writing Tools offer better support than any other digital tools.		
	Yes	152	49.2
	No	46	14.9
	Not Sure	111	35.9
9	Are AI-Powered Writing Tools much better than any teacher?		
	Yes	100	32.4
	No	118	38.2
	Not Sure	91	29.4
10	Should AI-Powered Writing Tools generate content for your writing?		
	Yes	191	61.8

	No	48	15.5
	Not Sure	70	22.7
11	Should AI Writing Tools revise the content that you feed in?		
	Yes	204	66.0
	No	28	9.1
	Not Sure	77	24.9
12	Using AI-Powered Writing Tools poses a threat to learning.		
	Yes	191	61.8
	No	48	15.5
	Not Sure	70	22.7
13	AI-Powered Writing Tools are accurate in matching one's expectations.		
	Yes	160	51.8
	No	46	14.9
	Not Sure	103	33.3
14	AI-Powered Writing Tools increase one's writing efficiency.		
	Yes	179	57.9
	No	51	16.5
	Not Sure	79	25.6
15	AI-Powered Writing Tools can be empathetic in understanding your needs.		
	Yes	162	52.4
	No	60	19.4
	Not Sure	87	28.2

The attitude of the 309 health science participants towards AI -PWT is presented in Table 3. Among the LSRW English language skills, writing was considered by the majority of them, 196 (63.4 %) to require the most support from the AI tools with 219 (71%) considering AI-PWT to reduce stress and 237 (76.7%) as time-saving. However, a neutral attitude was expressed in consideration of AI -PWT better than any other digital tools and human teachers. Most of the respondents believed that AI -PWT could improve their writing efficiency, 179 (57.9), 199 (64.4%) in the enhancement of vocabulary, and 214 (69.3%) in constructing their grammar usage, though 202 (65 %) considered it to reduce creativity in

writing. When asked to indicate whether the AI-powered writing Tools should generate the answer or revise the answer fed in, a slightly higher percentage of 13 (4%) considered revision of text fed in than generation of text, which could be viewed as a healthy attitude for building ability to write on their own and reduced AI dependency.

162 (52.4%) expressed a view that AI -PWT could be empathetic, which is a misbelief as AI is emotionless and can never respond with empathy as humans. The accuracy of understanding the writing needs the AI-generated answers are claimed to have slipped in no matter how much they are updated; however, nearly half of them, 150 (48.5%), failed to do so.

Table 4. Practice of writing using AI -PWT

S. No	Variables	Frequency	Percentage
1.	Do you use AI-Powered Writing Tools to receive English language support for writing?		
	Yes	214	69.3
	No	95	30.7
2.	Do you have a login account for any of the AI- Powered Writing Tools?		
	Yes	103	48.1
	No	89	41.6
	Not sure	22	10.3
3.	Do you use a paid version of any of the AI-Powered Writing Tools?		
	Yes	42	19.6
	No	153	71.5
	Not sure	19	8.9
4.	Select the AI- Powered Writing Tools you have used/ are using.		
	Google Bard	79	36.9
	ChatGPT	171	79.9
	Textcortex	22	10.3
	Speechtexter	19	8.9
	Hemingway app	9	4.2
	Grammarly	77	36.0

	GPTZero	10	4.7
	Others	79	36.9
5.	Can you mention how often you use these AI-Powered Writing Tools?		
	As often as needed	95	30.7
	Everyday	26	8.4
	Occasionally	137	44.3
	Not at all	51	16.5
6.	Purpose(s) for which you use the AI- Powered Writing Tools		
	To write poems	41	13.3
	To write stories	59	19.1
	To generate answers (…for the assignment questions)	194	62.8
	To generate points for preparing your answers (…for the assignment questions)	141	45.6
	To only edit the answers prepared by you (…for the assignment questions)	68	22.0
	To summarise the answers prepared by you (…for the assignment questions)	87	28.2
	To prepare PPTs	121	39.2
	To write simulated patient encounters	24	7.8
	To write medical histories and document symptoms	31	10.0
	To write case reports	43	13.9
	To write project reports	76	24.6
	To prepare discharge summarizes	23	7.4
	To write medical notes	56	18.1
7.	A common prompt used by you to complete the sample assignment		

	Create… [an outline for my essay 'The benefits of nutritional diet']	109	35.3
	Generate [an essay of 500 words on 'The benefits of nutritional diet']	129	41.7
	Review [my essay 'The benefits of nutritional diet']	71	23.0
	Improve the vocabulary in …[my essay 'The benefits of nutritional diet']	64	20.7
	Improve the grammar in [my essay 'The benefits of nutritional diet']	60	19.4
8.	Do you evaluate the answers/ responses generated by the AI-Powered Writing Tool?		
	Yes	168	78.5
	No	46	21.5
9	If Yes, how frequently do you evaluate the answers/responses generated by the AI-Powered Writing Tool?		
	Always	69	41.1
	Sometimes	77	45.8
	Rarely	22	13.1

The practice of receiving assistance from AI-PWT by the participants is given in Table 4. The utility shows that 214 (69.3%) were using AI-PWT. 103 (48%) had a login account for any of the AI-powered writing Tools, of which 42 (19.6%) had a paid version. ChatGPT 171 (79.9 %) was the most commonly used AI - PWT while Hemmingway was the least used 9 (4.2%). Considering the frequency of usage, 137 (44.3%) had used them only occasionally.

The purposes of the utility of AI-PWT were classified into three broad categories such as academic, clinical, and aesthetic. Regarding academic utility, 194 (62.8 %) used AI -PWT for generating assignment answers, 141 (45.6 %) used AI -PWT for generating points for assignments, and 121 (30.2 %) used the AI -PWT for generating PPTs for class presentations which topped the other purposes of usage. Under clinical utility, AI-Powered Writing Tools were used by 76 (24%) for preparing clinical project reports, 56 (18.1%) for medical notes, and 43 (13.9%) for case reports. Around 59 (20%) used it for writing stories as a pleasurable task.

The most common command prompts used were 'generate' 129 (41.7%) and 'create' 109 (35.3%), while the prompts 'review' and 'improve' were utilised by 23.0 ±19.4. Out of

214 participants who used AI-PWT, only 168 (78%) evaluated the answers received from AI-PWT for their authenticity.

4. DISCUSSION

The findings of this study provide important insights into the influence of AI-Powered Writing Tools on the independent writing skills of health science graduates. The findings show that the majority of them had significant knowledge and favourable attitudes toward AI-PWTs. Most of them perceived AI-PWT to be useful for academic writing. This is in line with the study by Hsiao et al. (2023), which points out the support taken for academic writing using AI-PTW as stress-free and motivating for continued utility. Similarly, all of our participants considered AI-PWT to be beneficial in improving the quality of their writing. This finding is in congruence with the study conducted by Al-Raimi, Mohammed, et al., (2024) among Omani EFL learners' which presented a positive outlook in using AI writing tools to verify spelling and grammar, besides generating ideas for their writing and composition of essays and paragraphs. A similar study conducted among Cambodian English as a Foreign Language (EFL) university students had healthy attitudes toward the use of AI -PWT like ChatGPT, Grammarly, Quillbot, and Google Translate for English Language Learning (Sol et al., 2024).

Although the participants' perceptions are promising, having a clear and appropriate understanding of the use of AI-powered writing tools is crucial for leveraging them effectively to enhance independent writing skills. The quality of independent writing is impacted by individual effort to write independently. Learners of English as a second language should have enough space and opportunity to create independent writing skills (Sangeetha, Valentina, 2020). Writing theories and strategies advocate the practice of attempting many drafts of their independent content with a focus on grammar revision (Al-Inbari & Al-Wasy, 2023). In such cases, a collaborative writing effort of independent writing followed by the utility of AI-PWT for revision of vocabulary and grammar could be more beneficial than generative writing (Jakesch, Maurice, et al., 2023). In other words, considering the utility of AI-PWT for productive efforts, content revision over a generation is viewed as a healthy English acquisition strategy.

Analysing the utility of AI-PWT for revision showed that though nearly two-thirds of the participants had knowledge of using them, only a relatively small proportion received feedback to revise the vocabulary and grammar. This discrepancy in number between knowledge and practice could be viewed as a challenge in facilitating healthy practice. A study by Warschauer et al. (2023) insists on the need for training on feeding effective prompts for revising and aligning contents according to the writer's purpose and flow of thought; unfortunately, most of our participants failed even to identify the term 'prompt' as a command to run the AI-PWT.

Exploring the name of AI - PWT with purpose, we found that ChatGPT and Grammarly were the highly used tools, while the less explored tools were the revision tools such as the Hemmingway app (text editor tool) and GPT Zero (plagiarism checker). The use of ChatGPT and Grammarly tools could imply free accessibility or be available as an embedded tool in Google Docs or Microsoft Word. However, it also shows that students lacked literacy in advanced AI-PWTs. A review points out that Grammarly is well-known and frequently used, yet many studies point to its incapability to flag errors accurately and its

feedback being too technical to understand (Alharbi, 2023). Likewise, the use of ChatGPT in medicine and healthcare showed a lack of evident ability to comprehend complex medical contexts, which could cause medical errors (Younis et al.,2024).

The most common purpose of AI-PWT-based content generation (62.8%) was to complete academic assignments. A study assessing the relationship between ESL professional writing confidence levels and their valuing of AI assistance showed that those who perceived to possess good independent writing ability valued ChatGPT's content generation assistance and editing assistance less. Participants with very high confidence in writing preferred editing assistance better than content-generating assistance but still had a negative value to ChatGPT's editing assistance in writing creative stories (Li et al.,2024). However, in our study, a significant number of participants rated their writing ability to be good, yet more than half of them used it for Content generation. This could be attributed to the time constraints and students perceiving AI-PWT to be a time-saving tool rather than an English language acquisition tool.

Healthcare professionals demand devoted hours of clinical skills training attained through immersive learning in the clinical area. This may result in time constraints and cause pressure in meeting academic requirements such as record writing and assignment completion, making them resort to generating content rather than going through the stages of writing independently and revising with AI-PWT (Chen, 2023). Similar views of increased speed and ease in completing assignments or theses using artificial intelligence have been expressed in the study of Aisyi, and Rahadatul (2024).

5. LIMITATION

The study is limited to samples from a single setting. However, it covers a huge sample size from diverse disciplines under the health sciences. The study is an outcome of short-term observation of AI - tools on independent writing skills. Also, the study is designed as a self-reported survey; there is no direct observation or assessment done on the independent writing skill and AI-PWT usage of participants,

6. CONCLUSION

AI-Powered Writing Tools are well-recognised and powerful writing assistance that helps students with their academic writing. The present study has shown that the most common type of AI-PWT was generative for the purpose of academic assignments. However, relying only upon generative purposes could significantly affect the independent writing skills of students. Similarly, studies warn that premature exposure to AI writing tools could ill-prepare learners by taking away the opportunities to lay good writing foundations (Warschauer et al., 2023). The following are recommendations for integrating AI-PWT into curriculum design to promote healthy independent writing skills. Institutions should find ways to support teachers as well as train students to adopt AI-PWT healthily. Students should be taught how AI tools can best be used as collaborative writing assistants to support content revision and adhere to ethics. Guided assistance from teachers with hands-on training to develop critical awareness on the selection of the right AI-PWT tool would support the process of nurturing writing skills.

ETHICAL CLEARANCE: The study has been approved by the Sri Ramachandra Institutional Ethical Committee (IEC-NI/24/FEB/91/10).

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ДОСЛІДЖЕННЯ ВПЛИВУ ПРОГРАМ ШТУЧНОГО ІНТЕЛЕКТУ НА НАВИЧКИ САМОСТІЙНОГО ПИСЬМА У ВИПУСКНИКІВ МЕДИЧНИХ УНІВЕРСИТЕТІВ

Анотація.
Рівень залежності від інструментів на основі штучного інтелекту (ШІ) значно впливає на розвиток навичок самостійного письма англійською мовою як другої (ESL) серед студентів. У цьому дослідженні розглянуто використання двох типів ШІ-інструментів (самостійне письмо з редагуванням за допомогою ШІ та генеративне письмо із залученням ШІ) серед випускників медичних спеціальностей, які вивчають англійську як другу мову, а також їхній вплив на вдосконалення навичок самостійного письма.
Методи.
Дослідження проведено з використанням методу опитування для оцінки знань, ставлення та частоти використання ШІ-інструментів серед 309 випускників медичних спеціальностей приватного медичного університету в Південній Індії.
Результати.
Отримані результати показали, що загальний рівень знань учасників мав вищий діапазон балів (14–20) у 213 (68,9%) випадках. Хоча 215 (70%) респондентів знали про можливості використання ШІ-інструментів для покращення словникового запасу та граматики, близько 17–19% виявили невпевненість щодо ефективності отримання зворотного зв’язку в режимі реального часу для оптимізації тексту. 199 (64%) учасників позитивно оцінили використання ШІ-інструментів. Близько 214 (69,3%) віддавали перевагу генеративному письму з допомогою ШІ, ніж редагуванню самостійно написаного тексту. Однак на практиці лише 64 (20,7%) учасників використовували зворотний зв’язок для покращення словникового запасу, а 60 (19,4%) — для вдосконалення граматики, що вказує на тенденцію до переважного використання генеративного письма.
Висновок.
ШІ-інструменти для письма є корисними та ефективними засобами створення академічних текстів. Проте їхнє використання переважно для генеративного письма може негативно впливати на розвиток навичок самостійного письма. Дослідження наголошує на необхідності педагогічної підтримки для навчання студентів етичному та оптимальному використанню ШІ-інструментів як засобів спільного письма.

Ключові слова: ШІ-інструменти для письма, самостійне письмо, підтримка у написанні та редагуванні, випускники медичних спеціальностей, англійська як друга мова.