



INVESTIGATING THE IMPACT OF ARTIFICIAL INTELLIGENCE ON CREATIVE WRITING SKILLS AMONG UNDERGRADUATE STUDENTS IN SIALKOT

Malik Kinza Iman

*MS Scholar, Department of English, University of Sialkot, Punjab,
Pakistan. Email ID: imannawaz186@gmail.com*

Seerat Yaqoob

*MS Scholar, Department of English, University of Sialkot, Punjab, Pakistan
Email ID: Seeratyaqoob33@gmail.com*

Dr. Ayesha Zafar

*Associate Professor, Department of English, University of Sialkot, Punjab,
Pakistan. Email ID: dr.ayeshazafar@uskt.edu.pk*

Abstract

This research examines the impact of AI tools such as ChatGPT, Grammarly, and QuillBot on undergraduate students' English creative writing skills in Sialkot, Pakistan. As AI technology is increasingly incorporated into educational settings, it is essential to investigate its influence on students' creative writing abilities, including content creation, content organisation, editing, and coherence. This research adopts a quantitative, descriptive approach based on Davis's Technology Acceptance Model to examine students' perceptions of the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of AI-integrated tools in creative writing processes. Data were collected through a structured questionnaire administered to 80 undergraduate students selected from 4 universities in Sialkot. The sample was selected through a combination of random and purposive sampling methods. We used SPSS software to analyze descriptive statistics. The findings demonstrate that ChatGPT is the most commonly used AI tool among students, followed by Grammarly and QuillBots, which are used for content creation, editing, or paraphrasing. Many students reported that AI tools improved their creative writing skills and made them feel more confident in their writing. In contrast to the higher perceived usefulness and perceived ease of use in the Technology Acceptance Model, some students expressed concerns, stating that overreliance on these tools can hinder creativity or impede creative writing skills. This research concludes that AI tools are beneficial for students when used ethically, provided students remain aware of the risks of plagiarism. Ultimately, this research recommends balancing the use of AI tools with brainstorming and having students create final content themselves, while following ethical guidelines to prevent plagiarism in creative writing processes.

Keywords: Artificial Intelligence; Creative Writing; ChatGPT; AI Impact; Grammarly; QuillBot.

INTRODUCTION

Artificial intelligence (AI) is a computer system that can perform tasks that require human intelligence, such as learning, problem-solving, understanding language, and critical thinking (IBM, 2023). The emergence of AI across different aspects of human life has had a profound impact on our education sector as well. The growing integration of AI tools in educational settings has raised debate about their impact on students' cognitive and creative abilities. AI tools like Grammarly, ChatGPT, and QuillBot are becoming more widespread among students for various creative writing tasks.



Creative writing is a form of writing that prioritizes originality, creativity, voice, and innovation. It involves genres like fiction, poetry, and narrative essays that allow writers to convey ideas and emotions in artistic ways (Oxford Summer Courses, 2023). The incorporation of AI into the creative writing process has sparked debate over its impact on students' critical and creative thinking skills. This research specifically aims to investigate the impact of AI tools on the English creative writing skills of BS-level students in Sialkot, Pakistan.

1.1 Background of the Study

Educational settings are witnessing a tremendous deployment of AI-powered tools to enhance students' learning. In Pakistan, the Higher Education Commission HEC has emphasized the use of technology in education to enhance the learning process for students. The integration of artificial intelligence into education has transformed existing learning methodologies, particularly in writing. Some AI-integrated tools, such as ChatGPT, Grammarly, and QuillBot, are becoming the most widely used by students to improve their writing experience. These tools offer features ranging from grammar correction and content generation to organisation and stylistic improvements (Francis & Bacon, 2024).

AI tools can provide significant support during the drafting and revision stages of writing by offering instant responses and suggestions to improve text quality (Dobrin, 2023). Despite all this, concerns have been raised about the consequences of AI on students' creative and critical thinking skills. The uncritical use of AI-generated content can also lead to issues such as plagiarism and a decline in innovative ideas (Umarova et al., 2025).

Students' opinions on the use of AI applications also vary. A study on students' attitudes towards AI technologies such as ChatGPT found that students acknowledge the benefits of AI in facilitating writing tasks. However, the study also highlighted the need for teachers to guide students in making effective use of these technologies to improve learning outcomes (Warschauer et al., 2023).

In Sialkot, English is mostly a second language, so BS-level students often use AI tools for creative writing. Despite this rising trend, there is a need for regional research examining the impact of AI on students' creative writing skills.

1.2 Significance of the Study

This research is meaningful because it explores the influence of artificial intelligence (AI) tools on undergraduate students' creative writing skills, specifically in the context of higher education in Pakistan. With the increasing incorporation of AI tools like Grammarly, ChatGPT, and QuillBot, it is important to understand their role in helping or limiting a student's ability to think creatively and present ideas in an innovative way in writing. Creative writing skills are not only about grammar correction but also about content organisation, students' critical thinking, and content editing. Therefore, this research examines how these tools are shaping students' skills.

1.3 Statement of the Problem

In the present age of the integration of artificial intelligence-based tools in educational settings, concerns about their impact on students' creative writing skills at the undergraduate level are also rising. The incorporation of these tools has changed the way



students approach their writing tasks. Although AI-powered tools like Grammarly, ChatGPT, and QuillBot offer potential advantages such as improved writing support and feedback, content generation and organisation, and editing, there is a knowledge gap about how these technologies can impact students' creative writing skills. There is also concern that excessive reliance on AI may compromise students' clear thinking, creative writing skills, and originality. This research aims to examine the effects of AI tools on the creative writing skills of undergraduate students in Sialkot, and to explore the relationship between AI, creativity, and critical thinking in the context of English language learning.

1.4 Research objectives

1. To explore the impact of Artificial Intelligence on creative writing skills in English among students at the BS level in Sialkot.
2. To analyze the perceptions of students about the effectiveness of AI in improving their creative writing skills.
3. To explore the potential of AI-powered tools in promoting critical thinking skills in creative writing in English among students at the BS level in Sialkot.

1.5 Research Questions

- 1) What is the impact of Artificial Intelligence on creative writing skills among students at the BS level in Sialkot?
- 2) What are the perceptions of students about the effectiveness of AI in improving their creative writing skills?
- 3) To what extent can AI-powered tools promote critical thinking skills in creative writing in English among BS-level students in Sialkot?

2 LITERATURE REVIEW

In the present age of technology, Artificial Intelligence (AI) has brought significant changes in almost every aspect of life. It has also had a strong impact on the education sector. The existing studies mostly focus on the impact of these tools on students' writing skills in general. However, this literature review will focus on studies on the impact of AI-integrated tools such as ChatGPT, QuillBOT, and Grammarly on students' writing skills in Pakistan.

Artificial Intelligence has a significant impact on society, particularly in education. The integration of AI into education can offer both opportunities and drawbacks for students. AI-integrated language processing can become more advanced in different aspects of human life, including education (Raheem, 2023). AI-based writing tools can provide valuable assistance to students in grammar and structure, allowing them to focus on writing tasks such as content development, organisation, and creative expression. AI tools help students organise their thoughts and suggest similar Ideas for improvement, along with clarity. Educational platforms based on AI can have a positive impact on education and learning (Shidiq, 2023). The role of tools like Grammarly cannot be neglected for students, as they help improve grammar and suggest writing styles to enhance writing quality (Raheem, 2023). This indicates that AI tools can be beneficial for supporting the technical aspects of writing. However, they should not diminish the importance of evaluating information and other foundational skills, such as creativity. The



use of AI technology presents both opportunities and obstacles for students (Khup et al., 2024). AI-incorporated tools can also be used to enhance students' creative writing skills. AI-integrated tools can provide feedback and suggestions to support students and to encourage creativity in paraphrasing (Salman et al., 2024).

With time, as students interact with AI tools and receive regular feedback, they improve their writing skills. They can reduce their reliance on those tools and perform tasks spontaneously (Gizem, 2024, p. 6). AI-assisted tools like Grammarly can fine-tune writing skills by providing indicators of grammar and punctuation errors (Stojanovic, 2023).

Li et al. (2020) also reported significant growth in students' writing when they used AI tools for feedback and to refine their work, compared with those who did not receive AI feedback. Bateman et al. (2023) observed in a study that students who used AI-integrated tools to generate unique content were more creative in their writing. The incorporation of AI tools like ChatGPT is transforming educational practices. AI-powered tools are revolutionizing how students learn and write (Wu, 2023).

Shidiq (2023) states that ChatGPT can understand human language, making it easy to write formal, informal, and creative texts, but it can also affect students' own creativity in academic writing. Raad et al. (2023) state that a study was conducted on students who use tools such as ChatGPT, QuillBot, and Grammarly to develop creative writing skills, including content creation and organisation. Prasteya et al. (2023) conducted a study on the effectiveness of the AI-powered tool Grammarly in teaching English-language writing skills. They used a mixed-methods approach, and in the quantitative analysis, the experimental group's writing skills improved through the effective use of AI-assisted tools. It also showed that the participants recognised the value of Grammarly for its real-time feedback and ease of use. In the study by Marzuki et al. (2023), the authors found that AI-integrated tools are beneficial for content generation and articulation. Using ChatGPT can facilitate students by providing suggestions for their assignments and research papers, thereby improving their creative writing skills (Chatti, 2024).

However, using ChatGPT may influence a student's original voice and creativity in writing (Sudrajad et al., 2024). However, ChatGPT is widely used by students to generate ideas and organize content (Sudrajad et al., 2024). Marzuki et al. (2023) investigated the influence of AI-incorporated tools such as ChatGPT, Jenni, and QuillBot on students' English-language creative writing skills. They used a qualitative approach for this study, and the results indicated that the teachers agreed that AI writing tools had a positive impact on students' writing quality, specifically the quality and organisation of their content in academic writing. QuillBot is another AI-powered tool for paraphrasing, a creative writing skill in English. QuillBot offers features such as paraphrasing and grammar improvement, which are beneficial for non-native English learners (Junaedi, 2025).

Research conducted by Junaedi (2025) revealed that 85% of lecturers recognise QuillBot as useful for optimising paraphrasing and rewriting skills, and 70% of teachers firmly believe it improves students' sentence structure in writing. Additionally, 30% of teachers raised concerns about students' over-reliance on this tool, which can undermine students' creative writing abilities. Research by Anis & Khalid (2024) found that 64% of students regularly use AI tools such as ChatGPT, QuillBot, and Grammarly in their creative writing. Another sample shows that 25% of students use these tools very often, and 11%



use them rarely. However, they also state that these AI assistants may obstruct creative writing abilities if used without clear instructions.

Despite the enhanced utilisation of AI in academic institutions in Pakistan, there are still a few gaps regarding the leverage of AI technology on creative writing skills, specifically among students at the BS level. Previous studies on the role of AI in education are mostly conducted in the USA, the UK, and China. In the context of Pakistan, most existing studies focus on academic writing and grammar correction at the postgraduate level rather than on creative writing skills. However, BS-level students are often underrepresented. In Pakistan, there is a lack of localised research, particularly in cities like Sialkot, on students' opinions regarding the impact of AI-powered tools on creative writing skills.

There is also a significant omission of quantitative studies that can accurately assess the genuine impact of AI on creative writing. Most existing research is based on teachers' perceptions rather than students' perceptions.

3 RESEARCH METHODOLOGY

This research uses a quantitative method to systematically analyse the role of AI tools in enhancing students' creative writing skills. The quantitative method is appropriate for this study because it enables the collection of quantitative data for statistical analysis. The research approach is descriptive because the study aims to measure and examine students' perceptions, experiences, and viewpoints.

The investigation about the impact of AI incorporated technology on creative writing skills of students, and their perceptions about its impact, can be better understood by applying Davis's Technology Acceptance Model (TAM, 1989), which explains different variables that can redirect the students' acceptance and the use of AI.

Through the lens of TAM, we can view that there are basically two factors that have a significant influence on the use of technology:

Perceived Usefulness (PU)

To what extent do users believe that using significant technology will enhance their performance? In our case, how will the use of AI enhance students' creative writing skills?

Perceived Ease of Use (PEOU)

To what extent does the user believe that using technology is effortless and free?

In relation to this study TAM serves as a helpful model for understanding the perceptions of students towards the AI tools like Grammarly, ChatGPT and QuillBot and their viewpoints about usefulness and ease of use of these tools can shape their intentions about incorporation of AI tools in their writings, if students find AI tools both beneficial and convenient to use they are more inclined to utilize them to enhance their creative writing skills.

This research adopts a descriptive research design, appropriate for understanding current trends in students' perspectives and their use of AI tools. The purpose of a descriptive research design is to gather data in a structured way that allows for the explanation of the attributes of the population under study.

This study uses a descriptive approach to provide a detailed overview of students' viewpoints on the use of AI tools in creative writing, without intervening variables or causal analysis.

3.1 Population

The population of this research comprises students in undergraduate programs pursuing BS-level studies at 4 universities in Sialkot, Pakistan.

These universities are following;

- i. University of Sialkot
- ii. Grand Asian University Sialkot
- iii. University of Management and Technology Sialkot
- iv. Government College Women's University Sialkot

The leading focus of this research is on those students who are actively engaged in creative writing projects within their academic programs. These students constitute an ideal sample to examine the Influence of AI tools on creative writing skills. The sample comprised 80 students, with equal representation from each university. This facilitates a diverse and balanced sample that represents each institution equally and offers a range of perspectives. The sampling procedure used a combination of two sampling techniques.

3.2 Data Collection Procedure

Students were randomly selected from each university based on specific eligibility criteria for using AI tools, yielding a representative, bias-free sample. The main means of data collection utilized in this research incorporates a systematic questionnaire. The survey tool was designed to document students' experiences with AI-powered tools and their perceptions of the impact of AI-integrated tools on their creative writing skills.

The gathered data from the questionnaires will be analyzed using SPSS software for descriptive statistics. It will help to summarize and present an interpretation of students' perceptions.

In accordance with research ethics guidelines, participants will receive detailed information about the research's aim, and their participation is strictly optional; they have the right to stop participating at any time without penalty. All participants will be informed about the goal and nature of this research. They will be given full details on how and why the study is conducted and the possible risks of participating in this study.

Participants in this research will be given the right to privacy. Their names will not be disclosed, and the data will be kept confidential.

4 DATA ANALYSIS

This section presents the analysis of data collected from 80 BS-level students across four universities in Sialkot. SPSS software was used to analyse the collected data, focusing on descriptive statistics such as mean, median, mode, frequencies, standard deviation, and percentages. The analyzed data provides an in-depth view of students' usage patterns of AI tools and their perceptions of the tools.

Table 1
Statistics of Frequencies

Statements	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
What is your gender?	80	0	1.85	2.00	2	.424
What is your age group	80	0	1.91	2.00	2	.620
In which year of the BS programme are you studying?	80	0	3.35	4.00	4	.901
What is the name of your university?	80	0	2.50	2.50	1 ^a	1.147
Do you know about creative writing?	80	0	1.04	1.00	1	.191
Which of these tools have you used?	80	0	1.54	1.00	1	.899
How many times do you use AI tools for writing?	80	0	3.93	4.00	4	.911
What motivates you to use AI tools?	80	0	2.71	2.00	2	1.214
I use AI tools for creative writing.	80	0	3.70	4.00	4	.892
AI tools help me to generate new ideas and improve critical thinking.	80	0	3.78	4.00	4	1.018
Grammarly helps to identify grammar errors in my writing.	80	0	3.73	4.00	4	.856
ChatGPT helps me in content generation and its organization.	80	0	3.89	4.00	4	.928
QuillBot helps me to rephrase sentences efficiently.	80	0	3.24	3.00	3	.984
I can complete my work faster with the help of these tools.	80	0	4.14	4.00	4	.791
AI tools help me write with proper structure and greater coherence.	80	0	3.91	4.00	4	.930

I feel more confident with my writing after using AI tools.	80	0	3.56	4.00	4	.939
Relying on AI tools can kill my own creativity.	80	0	3.13	3.00	4	1.335
AI tools can enhance the quality of my academic assignments.	80	0	3.85	4.00	4	.797
AI-created content is plagiarized content.	80	0	3.44	4.00	4	1.004
Do you consider the use of AI tools ethical?	80	0	3.29	3.00	3	.903
I would recommend these AI tools to my friends.	80	0	4.40	4.00	4	4.356

This table presents the statistical summary of the data collected from students. The valid number of participants is 80, including 20 students from 4 universities. The highest standard deviation is 4.356, and the lowest standard deviation is 0.424. The lowest mean value is 1.04, and the highest is 4.40.

Table 2

What is your gender?

Statement 1	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	14	17.5	17.5	17.5
Valid Female	64	80.0	80.0	97.5
Valid Prefer not say	2	2.5	2.5	100.0
Total	80	100.0	100.0	

This table indicates that most respondents were female (80%), while males accounted for only 17.5%, and 2.5% chose not to reveal their gender. This indicates a higher number of female students participating due to the Government's inclusion. College Women University Sialkot in sample.

Table 3

What is your age group?

Statement 2	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-20	18	22.5	22.5	22.5
20-24	52	65.0	65.0	87.5
24-26	9	11.3	11.3	98.8
26and above	1	1.3	1.3	100.0
Total	80	100.0	100.0	

This table indicates that the age group of 18 students was 18-20, 52 students belonged to the age group 20-24, 9 students were in their the age group 24-26, and 1 student was in the age group 26 and above.

Table 4

In which year of the BS programme are you studying?

Statement 3	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1st	2	2.5	2.5	2.5
2nd	17	21.3	21.3	23.8
3rd	12	15.0	15.0	38.8
4th	49	61.3	61.3	100.0
Total	80	100.0	100.0	

This table shows that 2 students (2.5%) were from the first year, 17 students (21.3%) were from the 2nd year, 12 students (15%) were from the 3rd year, and 49 students (61.3%) were from the 4th year. The higher percentage of 61.3% students in the 4th year is because students in the final year had more experience with AI tools.

Table 5

What is the name of your university?

Statement 4	Frequency	Percent	Valid Percent	Cumulative Percent
University of Sialkot	20	25.0	25.0	25.0
Grand Asian University Sialkot	20	25.0	25.0	50.0

Valid	University of Management and Technology Sialkot	20	25.0	25.0	75.0
	Government College Women University Sialkot	20	25.0	25.0	100.0
	Total	80	100.0	100.0	

This table shows that 20 students were selected from each university, resulting in an equal 25% representation from each, to ensure that the 4 universities in Sialkot were represented equally.

Table 6

Do you know about creative writing?

Statement 5		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	77	96.3	96.3	96.3
	no	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

This table shows that 77 students (96.3%) responded affirmatively that they know about creative writing, and 3 students responded 'no,' indicating they are not aware of it. This shows that 96.3% of the students in the sample for this study were familiar with creative writing.

Table 7

Which of these tools have you used?

Statement 6		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ChatGPT	54	67.5	67.5	67.5
	Grammarly	13	16.3	16.3	83.8
	QuillBot	10	12.5	12.5	96.3
	Others	2	2.5	2.5	98.8
a	I have never used	1	1.3	1.3	100.0

Total	80	100.0	100.0	
-------	----	-------	-------	--

This table shows that ChatGPT was the most commonly used AI tool among students, with 67.5% reporting its use. 13 students reported using Grammarly, and 10 students reported using QuillBot. In contrast, 2 students reported using other tools, and only 1.3% reported never using AI tools for creative writing.

Table 8

How many times do you use AI tools for writing?

Statement 7	Frequency	Percent	Valid Percent	Cumulative Percent
never	2	2.5	2.5	2.5
rarely	2	2.5	2.5	5.0
sometimes	18	22.5	22.5	27.5
often	36	45.0	45.0	72.5
always	22	27.5	27.5	100.0
Total	80	100.0	100.0	

As presented in Table 8, 45% of students often use AI tools, 27.5% always use them, and 22.5% use them sometimes. Only 5% of students reported never using AI tools for creative writing.

Table 9

What motivates you to use AI tools?

Statement 8	Frequency	Percent	Valid Percent	Cumulative Percent
To fix grammar errors	10	12.5	12.5	12.5
To generate content	35	43.8	43.8	56.3
To rephrase a writing	11	13.8	13.8	70.0
To organize content in sound form	16	20.0	20.0	90.0

To get inspiration for writing	8	10.0	10.0	100.0
Total	80	100.0	100.0	

It is shown in this table that a higher percentage, 43.8% (35 students), use AI tools to generate content, followed by organizing content 20% for rephrasing the writing, 13.8%, and the students who use AI tools for fixing grammar errors are 12.5% and a lower percentage of 10% of students use AI tools to get inspiration for writing. This table reflects how students use AI tools in different writing processes.

Table 10

I use AI tools for creative writing.

Statement 9	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	2	2.5	2.5	2.5
Disagree	6	7.5	7.5	10.0
Neutral	17	21.3	21.3	31.3
Agree	44	55.0	55.0	86.3
Strongly Agree	11	13.8	13.8	100.0
Total	80	100.0	100.0	

This table indicates that 55% of students agree and 13.8% students strongly agree that they use AI tools for creative writing.

21.3% of students stayed neutral about their use of AI tools for creative writing, while 7.5% disagreed and 2.5% strongly disagreed, meaning they do not use AI tools for creative writing. This table shows that the majority of students view AI tools as helpful for generating or improving their creative writing.

Table 11

AI tools help me to generate new ideas and improve critical thinking.

Statement 10	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	8	10.0	10.0	13.8
Neutral	10	12.5	12.5	26.3
Agree	42	52.5	52.5	78.8
Strongly Agree	17	21.3	21.3	100.0
Total	80	100.0	100.0	

This table shows that 52.5% of students agree and 21.3% strongly agree that AI tools help them generate new ideas and improve critical thinking. 12.5% of students stayed neutral, 10% disagreed, and only 3.8% strongly disagreed that AI tools help them generate new ideas. The findings indicate that AI tools help students generate new ideas, as a higher percentage of students agree with this statement.

Table 12

Grammarly helps to identify grammar errors in my writing.

Statement 11	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	2.5	2.5	2.5
Disagree	3	3.8	3.8	6.3
Neutral	22	27.5	27.5	33.8
Agree	41	51.2	51.2	85.0
Strongly Agree	12	15.0	15.0	100.0
Total	80	100.0	100.0	

This table shows that 51.2% of students agree and 15% strongly agree that the AI tool Grammarly helps them identify grammar errors in their writing. In comparison, 27.5% of students stayed neutral, showing neither agreement nor disagreement with the given statement. A very low 3.8% disagree, and 2.5% strongly disagree with the statement. The results show that Grammarly helps students identify grammar errors in their writing, as a higher percentage of students agree with the statement.

Table 13

ChatGPT helps me in content generation and its organization.

Statement 12	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	1	1.3	1.3	1.3
Disagree	7	8.8	8.8	10.0
Neutral	12	15.0	15.0	25.0
Agree	40	50.0	50.0	75.0
Strongly Agree	20	25.0	25.0	100.0
Total	80	100.0	100.0	

This table shows that 50% of students agree and 25% strongly agree, for a total of 75% who agree that ChatGPT helps them with content generation and organization. In comparison, only 8.8% disagree, 1.3% strongly disagree, and 15% remain neutral; none show agreement or disagreement. These results indicate that students believe ChatGPT helps them generate and organize content.

Table 14

QuillBot helps me to rephrase sentences efficiently.

Statement 13	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	5.0	5.0	5.0



Valid	Disagree	12	15.0	15.0	20.0
	Neutral	31	38.8	38.8	58.8
	Agree	28	35.0	35.0	93.8
	Strongly Agree	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

This table shows that 35% of students agree and 5% strongly agree that QuillBot helps them rephrase sentences. 38.8% of students remained neutral, showing neither agreement nor disagreement with this statement, while 15% disagreed and 5% strongly disagreed. This result indicates mixed perceptions among students regarding the use of QuillBot for sentence rephrasing.

Table 15

I can complete my work faster with the help of these tools.

Statement 14	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	1	1.3	1.3	1.3
Disagree	2	2.5	2.5	3.8
Neutral	8	10.0	10.0	13.8
Agree	43	53.8	53.8	67.5
Strongly Agree	26	32.5	32.5	100.0
Total	80	100.0	100.0	

In this table, we see that 53.8% of students agree and 32.5% strongly agree that they can complete their work faster with these tools, while only 3.8% disagree. 10% of students stayed neutral. This table shows that the majority of students agree that AI tools help them complete their work faster.

Table 16

AI tools help me write with proper structure and greater coherence.

Statement 15	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	4	5.0	5.0	8.8
Neutral	8	10.0	10.0	18.8
Agree	47	58.8	58.8	77.5
Strongly Agree	18	22.5	22.5	100.0
Total	80	100.0	100.0	

According to this table, 58.8% of respondents agree, 22.5% strongly agree, and 10% remain neutral. A very low cumulative percent of 8.8% of students disagree with this statement. This indicates that AI tools help students write more structurally and coherently, as evidenced by students' positive feedback.

Table 17

I feel more confident with my writing after using AI tools.

Statement 16	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	3.8	3.8	3.8
Disagree	7	8.8	8.8	12.5
Neutral	21	26.3	26.3	38.8
Agree	40	50.0	50.0	88.8
Strongly Agree	9	11.3	11.3	100.0

Total	80	100.0	100.0	
-------	----	-------	-------	--

As shown in this table, 50% of students agree, and 11.3% strongly agree that they feel more confident after using AI tools. 26.3% of respondents remained neutral. The overall result shows that students feel more confident in their writing after using AI tools.

Table 18

Relying on AI tools can kill my own creativity.

Statement 17	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	12	15.0	15.0	15.0
Disagree	16	20.0	20.0	35.0
Neutral	16	20.0	20.0	55.0
Agree	22	27.5	27.5	82.5
Strongly Agree	14	17.5	17.5	100.0
Total	80	100.0	100.0	

In this table, it is shown that 27.5% of students agree and 17.5% of students strongly agreed, while 20% remained neutral. 20% of students disagreed, and 15% strongly disagreed, that relying on AI tools can kill their creativity. Here is a higher cumulative percentage of 82.5% of students who agree with this statement, indicating that students believe that relying on AI tools can kill their own creativity.

Table 19

AI tools can enhance the quality of my academic assignments.

Statement 18	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	6.3	6.3
	Neutral	17	21.3	27.5
	Agree	43	53.8	81.3
	Strongly Agree	15	18.8	100.0
Total	80	100.0	100.0	

In this table, we can see that 53.8% of students agree and 18.8% of students strongly agree with the statement. 21.3% of students remained neutral, while 6.3% disagreed with the statement. The results indicate that AI tools can enhance students' academic assignments, as perceived by students.

Table 20

AI-created content is plagiarized content.

Statement 19	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.5	2.5
	Disagree	14	17.5	20.0
	Neutral	21	26.3	46.3



Agree	33	41.3	41.3	87.5
Strongly Agree	10	12.5	12.5	100.0
Total	80	100.0	100.0	

As shown in this table, 41.3% of respondents agree, and 12.5% strongly agree that AI-generated content is plagiarized, while 20% disagree and 26.3% remain neutral. These findings indicate that students have realised that AI-generated content is plagiarized content.

Table 21

Do you consider the use of AI tools ethical?

Statement 20	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	1	1.3	1.3	1.3
Disagree	14	17.5	17.5	18.8
Neutral	33	41.3	41.3	60.0
Agree	25	31.3	31.3	91.3
Strongly Agree	7	8.8	8.8	100.0
Total	80	100.0	100.0	

According to this table, 31.3% of respondents agree, and 8.8% strongly agree that the use of AI tools is ethical, while 41.3% of students stayed neutral, 17.5% disagree, and only 1.3% strongly disagree. A higher percentage of neutrality indicates students' uncertainty about the ethical considerations of using AI tools in academic contexts.

Table 22: *I would recommend these AI tools to my friends.*

Statement 21	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	2.5	2.5	2.5
Disagree	4	5.0	5.0	7.5
Neutral	13	16.3	16.3	23.8
Agree	39	48.8	48.8	72.5
Strongly Agree	21	26.3	26.3	100.0
Total	80	100.0	100.0	

In this table, we can see that 48.8% of respondents agree and 26.3% strongly agree that they would recommend these AI tools to their friends. 16.3% of respondents stayed neutral, 5% disagreed, and 2.5% strongly disagreed, indicating they would not recommend these AI tools to their friends. The results indicate overall satisfaction and trust among students, with many recommending these tools to their friends.

5 FINDINGS AND DISCUSSION

The analysis of 80 completed questionnaires from BS-level students at 4 universities in Sialkot highlighted notable findings on the impact and use of AI tools on English creative writing skills. A considerable number of respondents were female (80%), indicating the inclusion of the Government College Women University in the sample. Most respondents (61.3%) were in the 20-24-year-old age group and were in the final year of their BS program, demonstrating greater educational experience and presumably increased exposure to artificial intelligence tools.

A significant number of students (96.3%) reported familiarity with creative writing and the use of AI-assisted tools. Among AI tools used for creative writing, ChatGPT was the most widely used among students, with 67.5%, followed by Grammarly (16.3%) and QuillBot (12.5%). The frequency of use indicated that 72.5% of students often or always used AI tools in their creative writing, verifying a significant pattern in the implementation of AI technology in academic and creative writing.



When asked about the reasons for using AI tools, the most common motivation among students was content generation (43.8%). In comparison, 20% of students used AI tools to organize content effectively; 13.8% reported using AI tools for rephrasing text, 12.5% for grammar error correction, and only 10% for gaining ideas for writing. These findings reveal that students mainly use AI tools to develop and refine ideas and to organize the structure of their written content. In the perception-based section of the questionnaire, it was revealed that a substantial number of students use AI tools to improve their creative writing skills, with 55% agreeing and 13.8% strongly agreeing. In the vicinity of 73.8% of respondents reported using AI tools to generate new ideas and improve critical thinking skills, and 76.3% of students expressed confidence in ChatGPT for generating and organizing content.

Grammarly was deemed beneficial for detecting grammar errors by 66.2% of students. Students had mixed perceptions of QuillBot integration: the majority remained neutral, and 35% agreed it is beneficial for efficiently rephrasing sentences. The results also demonstrate that students consider AI tools efficient for improving their writing proficiency and the quality of their content, as evidenced by the content the 16.3% of respondents who agree that AI tech helps them complete their tasks faster. Similarly, 81.3% of respondents felt that AI tools helped them write coherently.

Most interestingly, it was revealed that a significant number of students 45% agreed and strongly agreed that over-reliance on AI tools can kill their own creativity. In contrast, 72.6% of students stated that AI tools helped them enhance the quality of their academic work. 53.8% of students admitted that AI-generated content is plagiarized, while 41.3% remained neutral regarding the ethical use of AI. Approximately 61.3% of students reported feeling more confident in their writing after incorporating AI tools.

Discussion

The findings of this research are consistent with the existing body of literature and provide deep insight into how BS-level students in Sialkot perceive and incorporate AI tools into their creative writing processes. The results also align with Davis's Technology Acceptance Model (TAM), reflecting the two main points, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), which is the theoretical framework of this study. The higher incorporation of AI tools, especially ChatGPT (67.5%), demonstrates that students find this tool helpful in generating and organizing content. So this significantly validates the perceived usefulness aspect of TAM. This also aligns with the findings of Raad et al. (2023) and Sudrajad et al. (2024), which indicate that students extensively use AI rules for content creation and organization. The results of our research are also consistent with the existing research by Raad et al. (2023), Liu & Kuo (2022), and Bateman et al. (2023), which found that AI tools make a constructive contribution to creative writing and critical thinking skills.

This study also supports the PU aspect of TAM, as a large proportion of students (72.5%) reported using AI tools "often" or "always," indicating that they perceive these tools as easy to use. In our study, 80.3% of students also stated that integrating AI tools such as ChatGPT, Grammarly, and Quill into their writing processes helped them complete tasks more quickly and made them feel more confident in their writing, which validates the PEOU dimension of TAM.

However, we can also see a contradiction in students' perceptions, indicating a balanced awareness of the drawbacks and limitations of integrating AI tools into creative writing. A significant number of students admitted that using AI tools for creative writing has benefited them. At the same time, 45% expressed concern that over-dependence on AI technology could negatively impact their cognitive skills. This aligns with the cautionary perspectives of Shidiq (2023) and Sudrajad et al. (2024), who warned that students might forfeit uniqueness and personal voice in writing due to over-reliance on these tools. As reported by 66.2% of students, Grammarly was recognized as an efficient tool for correcting grammar errors, consistent with findings by Prasteya (2023) and Kusuma & Zohri (2025). While we can see minimal familiarity with QuillBot among students, they showed mixed perceptions: 40% agreed that QuillBot is an efficient paraphrasing tool, while a larger percentage remained neutral, which again aligns with TAM, as it emphasizes the user experience.

6 IMPLICATION and CONCLUSION

This research aimed to investigate the impact of AI tools, especially ChatGPT, QuillBot, and Grammarly, on the creative writing skills of BS-level students in Sialkot. This research was conducted in response to the increasing integration of AI technology in academic settings and the growing student engagement with these tools for content generation and organization. This research aimed to provide deeper insight into students' perceptions of the influence of these tools. This investigation employed a quantitative descriptive approach, in which data were collected using a carefully designed instrument distributed to 80 students from the four universities of Sialkot. The sample was selected by purposive and random sampling to ensure diversity and relevance. The data were analyzed using SPSS software for descriptive statistics. Davis's TAM was used as a theoretical lens to understand students' perceptions of the usefulness and ease of use of AI tools.

The results showed that students widely use AI tools at the undergraduate level in Sialkot. ChatGPT was the widely used tool among students, followed by Grammarly and QuillBot. The majority of students found these tools helpful for enhancing content generation, organization, editing, and critical thinking skills. They also reported a positive shift in their writing confidence and efficiency after using AI, highlighting the perceived usefulness, one of the main aspects of TAM.

Findings also demonstrated that AI is not used solely as automated writing assistance but also as a support for improving cognitive thinking skills and content creation. PEOU is confirmed as students agreed to recommend these tools to their peers. This study also reveals concerns such as the unethical use of AI, plagiarism, and the obstruction of creativity, as overreliance on these tools can kill students' own creativity.

This research fills a gap in the literature by providing the perceptions of BS-level students in Sialkot, Pakistan. The existing literature focuses on the influence of AI on academic writing in a foreign context. This research also expands the debate on the incorporation of technology in academia by validating TAM in the context of AI-integrated writing in Pakistan.



Recommendations

Encourage students to use AI and their own creativity in a balanced way.

Students should use AI tools as drafting aids and create a final solution after brainstorming.

Students should use AI tools to build their foundational skills, like grammar, vocabulary, and writing skills, to incorporate AI tools efficiently in their creative writing processes.

Teachers should be trained to integrate AI tools ethically so they can guide students in their ethical use.

References

- Abubakar, S., Aliyu, M. M., & Nurchalis, N. F. (2024). Impact of artificial intelligence (ChatGPT and Google-Bard) on undergraduates' creative writing skills at a university in Northeastern Nigeria. *Inspiring: English Education Journal*, 7(2), 257–273.
- Agzamxanova, G., & Golovko, Y. (2025). How AI tools can support English writing development. *Educator Insights: A Journal of Teaching Theory and Practice*, 1(3). <https://brightmindpublishing.com>
- Artificial Paintings. (2024, June 14). The transformative role of artificial intelligence in education.
- Assylbekova, N., & Anafinova, M. L. (2024). Exploring an AI-supported approach to creative writing in secondary school English classes. *Pedagogical Sciences*, 47, 47–49.
- Avramenko, A. P., Davydova, M. A., & Burikova, S. A. (2018). Developing creative writing skills in a high school ESL classroom. *Training, Language and Culture*, 2(4), 55–69. <https://doi.org/10.29366/2018tlc.2.4.4>
- Bantugan, B., & Khup, V. K. (2025). Exploring the impact and ethical implications of integrating AI-powered writing tools in junior high school English instruction. *International Journal of Research and Innovation in Social Science*, 9(3SEDU), 361–378.
- Bateman, S., Wild, J., & Sumpter, D. J. T. (2022). The impact of AI-powered tools on creativity in writing: A mixed-methods study. *Computers & Education*, 168, 104163.
- Center for Educational Effectiveness. (n.d.). AI & student writing. University of California, Davis. <https://cee.ucdavis.edu/ai-student-writing>
- Chatti, K. (2023). Investigating the efficiency of using ChatGPT to generate ideas for writing on enhancing the EFL learners' writing creativity: The case of Master One
- Dobrin, S. I. (2023). AI and writing. Broadview Press. <https://archive.org/details/ai-andwriting/AI%20and%20Writing/page/n23/mode/2up>
- English students at the University of Mohammed Khider of Biskra (Master's thesis, University of Mohammed Khider of Biskra).



- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264–75278. <https://doi.org/10.1109/ACCESS.2020.2988510>
- Clausius Scientific Press. (2024, March 21). Article_1711074847.pdf.
- CocoFax. (2024, March 5). The impact of AI on academic writing: Challenges and solutions for students.
- College of Education, University of Illinois Urbana-Champaign. (2024, October 24). AI in schools: Pros and cons.
- Daulay, S. H., Berutu, H., Dalimunte, M. R., Apriani, E., & others. (2024). What AI-based writing assistant actually improved: Writing quality or writing skills? In Proceedings of [Book Title] (Chapter 16). IGI Global. <https://doi.org/10.4018/979-8-3693-2418-9.ch016>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982–1003.
- de Vicente-Yagüe-Jara, M.-I., López-Martínez, O., Navarro-Navarro, V., & Cuéllar-Santiago, F. (2023). Writing, Creativity, and Artificial Intelligence: ChatGPT in the University Context. *Comunicar*, 31(77), 49–59. <https://doi.org/10.3916/C77-2023-04>
- Educreation. (2023, August 4). ChatGPT 4.0, QuillBot, Grammarly, and Sudowrite: Which app is the best for writing? *Medium*.
- Ferchichi, A. (2024). Exploring EFL students' perceptions on the use of Grammarly as an AI writing tool to enhance academic writing proficiency: The case of Master Two English students at Mohammed Kheider University (Master's dissertation, Mohammed Kheider University).
- Fitria, T. N. (2021). "Grammarly" as an AI-powered English writing assistant: Students' alternative for English writing. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 65–78. <https://doi.org/10.31002/metathesis.v5i1.3519>
- Fitria, T. N. (2024). Creative writing skills in English: Developing students' potential and creativity. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*, 4(1), 1–17. <https://doi.org/10.37304/ebony.v4i1.10908>
- Gültekin Talayhan, Ö., & Babayiğit, M. V. (2024). The influence of AI writing tools on the content and organization of students' writing: A focus on EFL instructors' perceptions. *CUDES Journal of Culture and Society*. <http://dx.doi.org/10.29228/cudes.71701>

- Hapsari, A. D. (2025). Descriptive study on AI's role in developing creative writing skills among English education students. *Universitas Islam Darul 'Ulum Lamongan Journal*, 1(1).
- Hassan, S., & Zhou, W. (2025). Generative AI for student learning: A double-edged sword. *arXiv*.
- IBM. (n.d.). Artificial intelligence. <https://www.ibm.com/think/topics/artificial-intelligence>
- Jasim, M. Y., Musa, Z. H., Asim, A. A., & Salman, A. R. (2024). Developing EFL writing with AI: Balancing benefits and challenges. *Technology Assisted Language Education (TALE)*, 2(2), 80–93. <https://doi.org/10.22126/tale.2024.10953.1052>
- Junaedi, S. (2025). English lecturers' perceptions towards the Quillbot app: An alternative for students in paraphrasing and rewriting English writing. *International Journal of Research in Education*, 5(1), 149–156. <https://doi.org/10.26877/ijre.v5i1.1219>
- Jurayeva, Z. (2024). The role of creative writing in developing academic writing skills. *American Journal of Philological Sciences*, 4(11), 90–100. <https://doi.org/10.37547/ajps/Volume04Issue11-17>
- Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update*, 5, 100145. <https://doi.org/10.1016/j.cmpbup.2024.100145>
- Khan, W. M. (2024). Analyzing the AI tools' impact on critical thinking in BS English students at Pakistani universities. *Journal of Applied Linguistics and TESOL (JALT)*, 7(4).
- Khup, V. K., & Bantugan, B. (2025). Exploring the impact and ethical implications of integrating AI-powered writing tools in junior high school English instruction: Enhancing creativity, proficiency, and academic outcomes. *International Journal of Research and Innovation in Social Science*, 9(3SEDU), 361–378. <https://dx.doi.org/10.47772/IJRISS.2025.903SEDU0022>
- Khurshid, S., Khurshid, S., & Toor, H. K. (2024). Learning for an uncertain future: Artificial intelligence is a challenge for the Pakistani education system in the era of digital transformation. *Qualitative Research Journal*. [Advance online publication].
- Kress, G., Jewitt, C., Ogborn, J., & Tsatsarelis, C. (2019). *Multimodal literacy and digital tools: Researching new pedagogies*. Routledge.
- Krstić, L., Aleksić, V., & Krstić, M. (2022). Artificial intelligence in education: A review. *Technics and Informatics in Education – TIE 2022*, 223–230. <https://doi.org/10.46793/TIE22.223K>
- Kulaksız, G. C. (2024). Artificial intelligence-based language model: The effect of ChatGPT application on writing skills in the context of teaching English as a foreign language (Master's thesis, Bursa Uludağ University).



- Kusuma, W. A., & Zuhri, F. (2025). Grammarly as a writing tool: Improving students' performance in essay writing. *ELTIN Journal: Journal of English Language Teaching in Indonesia*. Advance online publication.
- Laksanasut, S. (2024). The pedagogical impact of ChatGPT on high-school students' creative writing skills: An exploration of generative AI-assisted writing tools. [Journal/Publisher Not Specified], 5(1), 17–34.
- Li, Y., Wang, M., Sun, Y., & Wang, W. (2020). Can AI writing assistants improve students' revision and writing quality? A study of middle school students. *Computers & Education*.
- Ma, D., Akram, H., & Chen, I.-H. (2024). Artificial intelligence in higher education: A cross-cultural examination of students' behavioral intentions and attitudes. *International Review of Research in Open and Distributed Learning*, 25(3), 134–157. <https://doi.org/10.19173/irrodl.v25i3.7703>
- Malik, A. R., et al. (2023). Exploring artificial intelligence in academic essays: Higher education students' perspective. *International Journal of Educational Research Open*, 5, 100296. <https://doi.org/10.1016/j.ijedro.2023.100296>
- Mariyanti, P., & Wahyudi, T. N. (2024). Students' perception of the use of artificial intelligence (AI) technology in student creativity completing academic tasks. *Didaktika: Jurnal Kependidikan*, 13(Special Issue), Article 001.
- Marzuki, M., Widiati, U., Rusdin, D., & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education*, 10, 2236469. <https://doi.org/10.1080/2331186X.2023.2236469>
- Minnesota Private Colleges Council. (2023). The use of AI in student writing raises questions.
- Namous, A. (2023–2024). Teachers' and students' perception about the effects of using ChatGPT, Grammarly, and Quillbot on students' writing skills: The case of First Year Master students of English at Abdelhafid Boussouf University Center of Mila (Master's dissertation, Abdelhafid Boussouf University Centre-Mila).
- Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence-powered digital writing assistant in higher education: randomized controlled trial.
- Oxford Summer Courses. (2023, July 11). What is creative writing? <https://oxfordsummercourses.com/articles/what-is-creative-writing>
- Pawliczak, J. (2015). Creative writing is the best way to improve students' writing skills. *Sino-US English Teaching*, 12(5), 347–352. <https://doi.org/10.17265/1539-8072/2015.05.004>



- Qazi, M. H., Munir, T., Zaigham, M. S., & Mughal, U. A. (2025). The impact of AI-assisted self-regulated learning, specifically ChatGPT, on students' engagement and writing skill enhancement. *Journal of Applied Linguistics and TESOL (JALT)*, 8(1).
- QuillBot. (n.d.). How artificial intelligence is transforming the education industry. <https://quillbot.com/blog/writing/how-artificial-intelligence-is-transforming-the-education-industry/>
- Raad, B., Anjum, F., & Ghafar, Z. N. (2023). Exploring the profound impact of artificial intelligence applications (Quillbot, Grammarly, and ChatGPT) on English academic writing: A systematic review. *International Journal of Innovative Research*, 1(10). <https://doi.org/10.59890/ijir.v1i10.366>
- Salman, H., et al. (2024). Artificial intelligence in higher education: Strategies for fostering creativity in writing instruction. *Migration Letters*, 21(S8), 1089–1097.
- Salman, H., Imran, A., Niazi, S., Rahat, A., Arif, A., Buriro, S. A., & Butt, S. M. (2024). Artificial intelligence in higher education: Strategies for fostering creativity in writing instruction. *Migration Letters*, 21(S8), 1089–1097.
- Setyowati, Y., et al. (2024). Students' reflections on Grammarly as a tool for academic writing support. *SCOPE: Journal of English Language Teaching*, 9(1), 577–587.
- Shidiq, M. (2023). The use of ChatGPT, an artificial intelligence-based tool, and its challenges for the world of education. *Proceedings of the International Conference on Education, Society and Humanity*, 1(1), 353–357.
- SpringerOpen. (2023). AI in education: A review. *International Journal of Educational Technology in Higher Education*, 20, Article 54.
- Stojanovic, L., et al. (2023). The influence of artificial intelligence on creative writing. *International Journal of Engineering Inventions*, 12(12), 70–74.
- Sudrajad, W., et al. (2024). Help me ChatGPT! What ways does ChatGPT influence students' productivity and Creativity in English academic writing? *EDUCATUM: Scientific Journal of Education*, 2(2), 48–58.
- Susarla, A. (2023). Impact of ChatGPT on academic integrity in education. arXiv.
- Tawil, H. M. (2024). Using ChatGPT in teaching creative writing to EFL learners. *Education Research International*, 2024, Article ID 5566890. <https://doi.org/10.1155/2024/5566890>
- Thompson, R. J. (2023). Generative AI and the future of student creativity. *Journal of Educational Technology & Society*, 26(2), 112–124.
- Thuy, P. T., & Thao, L. T. (2024). Exploring the impact of artificial intelligence on student creativity. *Jurnal Komunikasi Pendidikan*, 8(2), 116–128.



Tran, M. T., & Nguyen, L. H. (2023). AI and language pedagogy: Teaching writing skills using ChatGPT. *Asian Journal of Educational Research*, 11(3), 145–158.

u/spezified. (2024, April 6). Top AI writing tools for students? Reddit.

Vazir, N., & Ismail, S. (2009). Developing creative writing skills in early childhood: A case study from Pakistan. *Journal of Educational Research*, 12(2). http://ecommons.aku.edu/pakistan_ied_pdck/14

Wang, Y. (2024). ChatGPT as a co-author: Examining the ethical and academic implications. *AI and Ethics*, 5(1), 78–87.

Warschauer, M., Tseng, W., Yim, S., Webster, T., Jacob, S., Du, Q., & Tate, T. (2023). The affordances and contradictions of AI-generated text for writers of English as a second or foreign language. *Journal of Second Language Writing*, 62, Article 101071. <https://doi.org/10.1016/j.jslw.2023.101071>

Wikipedia contributors. (n.d.). Creative writing. Wikipedia.

WittySparks. (2024, March 10). Major benefits of artificial intelligence in education. <https://wittysparks.com/major-benefits-of-artificial-intelligence-in-education/>

Wu, D., Li, H., & Chen, X. (2023). Analysis of the impact of generative artificial intelligence model education applications. *Open Education Research*, 29(2), 19–25. <https://doi.org/10.13966/j.cnki.kfjyyj.2023.02.003> (In Chinese)

Zhang, X., & Li, J. (2023). Bridging the gap between AI and student creativity in writing. *Technology Enhanced Learning Review*, 8(2), 40–55.

Zhou, F. (2024). The effectiveness of AI-generated feedback in improving students' narrative writing. *Computers & Education*, 195, 104800. <https://doi.org/10.1016/j.compedu.2023.104800>

**Appendix 1****Survey: Investigating the Impact of AI on Creative Writing Skills in English; A Case Study of Students at BS Level in Sialkot.**

This survey is part of undergraduate research to investigate the impact of AI on students' creative writing skills, particularly at the BS level, and to analyze students' perceptions of the effectiveness of AI tools in creative writing. Your privacy will be respected, and your answers will be kept confidential.

Section A: Demographic Information

1. What is your gender?

Male Female Prefer not to say

2. What is your age group?

18–20 21–23 24–26 26 or above

3. In which year of the BS programme are you studying?

1st 2nd 3rd 4th

4. What is the name of your university? _____

5. Do you know about creative writing skills? Yes No

Section B: Your Use of AI Tools

6. Which of these tools have you used?

ChatGPT Grammarly QuillBot Other: _____ I've never used any

7. How many times do you use AI tools for writing?

Never Rarely Sometimes Often Always

8. What motivates you to use AI tools

To fix grammar errors

To generate content

To rephrase a writing

To organize content in a sound form

To get inspiration for writing

Section C: Your Perceptions of AI Tools

Please read every statement carefully to demonstrate your level of agreement or disagreement.

1. I use AI tools for creative writing.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. AI tools help me to generate new ideas and improve critical thinking. Strongly Disagree Disagree Neutral Agree Strongly Agree

3. Grammarly helps me identify grammar errors in my writing. Strongly Disagree Disagree Neutral Agree Strongly Agree

4. ChatGPT helps me in content generation and its organization. Strongly Disagree Disagree Neutral Agree Strongly Agree

5. QuillBot helps me to rephrase sentences efficiently.

Strongly Disagree Disagree Neutral Agree Strongly Agree



6. I can complete my work faster with the help of these tools.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
7. AI tools help me to write in proper structure and more coherently. Strongly Disagree
 Disagree Neutral Agree Strongly Agree
8. I feel more confident with my writing after using AI tools.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
9. Relying on AI tools can kill my own creativity.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
10. AI tools enhance the quality of my academic assignments.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
11. AI-created content is plagiarized content.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
12. Do you consider the use of AI tools ethical?
 Strongly Disagree Disagree Neutral Agree Strongly Agree
13. I would recommend these AI tools to my friends.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

Thank You So Much for Your Co-operation