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The Impact of Using Generative Pre-Trained Transformer (GPT)on Advancing Creative Writing Skills in LiteratureCourse for Undergraduate Students in Algeria

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ABSTRACT
The present study investigates the impact of Generative Pre-trained Transformer (GPT) technology on creative writing skills (CWS) among undergraduate literature students in Algeria. Using a mixed-methods approach, the study explores how integrating GPT into literature courses influences students' ability to employ figures of language and literary devices in their narratives. The findings revealed that the use of GPT significantly enhanced the ability to describe settings in creative writing (CW).Qualitatively, GPT enriched narrative development and offered new perspectives in storytelling. The study suggests that usingGPT as a pedagogical tool can provide qualitative educational benefits, encouraging further research into AI-assisted learning strategies in higher education.

Keywords: Creative Writing Course, Experimental Study, GPT in Education, Figures of Language, Mixed Methods, Narrative Development.

INTRODUCTION

Recently, the incorporation of artificial intelligence (AI) in higher education (HE) has transformed teaching and learning methodologies worldwide (Nazir & Wang, 2023). Among the various AI technologies, Generative Pre-trained Transformer (GPT) stands out as a digital innovative tool for its potential and creativity in generating formal, professional, and academic texts, including creative writing (CW) narratives (Tsao & Nogues, 2024). Despite its limitations and hidden capabilities (Ghajargar et al., 2022), the integration of GPT in literature courses, especially in CW courses (CWC), is seen as an innovative approach for enhancing creativity skills among students and enriching their experience with diverse narrative techniques, figures of language, and literary devices more effectively (Alabbasi et al., 2022; Yuan et al., 2022).

In Algeria, the adoption of AI into the HE framework is emerging as an inevitable pedagogical strategy for enhancing its quality and effectiveness, aligning with global requirements (Bouguesmia, 2020). The commitment of the Algerian Universities (AU) to embracing digital transformations in academic settings is a testament to the prime interest of the country toward digitalization, as declared by the Minister for Higher Education and Scientific Research in July 2022: "The next academic year will be marked by a strengthening of the digitization process, with a 10-fold increase in Internet speeds in higher education and research universities from January 2023" (authors' translation).

An in-depth analysis of the current literature underscores a significant gap in comprehending the influence of AI on literature courses, particularly in the distinct cultural and educational milieu of Algeria. Despite the abundance of research underscoring AI's capacity to enhance student creativity and innovation, there exists a noticeable methodological void, predominantly skewed towards qualitative analyses and case study methodologies. This study aims to address this lacuna by adopting a mixed-methods approach, aiming to provide a comprehensive and nuanced understanding of how the integration of GPT influences CW abilities among undergraduate students in Algeria. This approach promises a more thorough and contextually relevant examination of AI's role in advancing pedagogical practices in a sphere that has hitherto received limited attention.

This study questions how the integration of GPT into literature courses affects the CWS of undergraduate students. Specifically, it evaluates the impact of using GPT on students' ability to write short stories, incorporating figures of language and literary devices, thereby advancing their linguistic competencies and literary skills.

This study is anchored on two fundamental hypotheses aimed at investigating the impact of integrating GPT technology into literature courses on the CWS of undergraduate students in Algeria. Specifically, it examines

whether the use of GPT influences the ability of students to effectively employ figures of language and literary devices in their narratives. The formulated hypotheses are as follows:
H0 (Null Hypothesis): There is no statistically significant difference in the CWS and the use of figures of language between the experimental group (EG); (students using GPT for their assignments) and the control group (CG);(students using their imagination).
H1 (Alternative Hypothesis): There is a statistically significant difference in the CWS and the use of figures of language between the experimental group and the CG, with the expectation that students using GPT will demonstrate superior proficiency.
This proficiency encompasses a heightened ability to integrate metaphors, similes, imagery, and other elements of figurative language, alongside a more nuanced engagement with ethical considerations in their narratives. The underlying premise is that collaboration with GPT enriches the students' linguistic experience and provides a comprehensive linguistic database that facilitates the acceleration of their literary and linguistic competencies.
This paper aims to illuminate the potential of GPT in fostering creativity skills in CWCin Algeria, contributing to the advancement of AI-assisted learning strategies in HE by bridging the gap between AI technology and CW pedagogy.
This researchcontributes to exploring how AI-generated text influences the writing skills of undergraduate students, providing insights intothe potential of GPT as a tool for bolstering creative and literary expression among literature students. By examining the integration of GPT in Algerian Higher Education (AHE), this study adds to the growing body of knowledge on the pedagogical applications of AI technologies in literature and CWC.
The design of the paper includes an introduction that provides the background and rationale for the study, followed by a section on related works discussing previous literature related to the integration of GPT in HE and CWC. The theoretical framework underpinning the study addresses the conceptual framework of the work. It is followed by a methods section that outlines the research design, data collection, analysis,and interpretation. The findings and discussion section presents the results and their implications for teaching and learning CW in HE. Finally, the conclusion summarizes the key findings, contributions, and recommendations for future research.

LITERATURE REVIEW

Table 1 below summarizes the multifaceted aspects of AI application in education offered in various key studies, from enhancing creativity and student engagement to addressing limitations and challenges. Remarkably, works by Koos and Wachsmann (2023), Imran & Lashari (2023), and Vecchiarini and Somia (2023) improve students' perceptions of AI tools, underscore the potential of AI to streamline the writing process, and enhance critical creative thinking in educational contexts, respectively. These findings illuminate the impact of AI, particularly GPT, on students' CWS, suggesting that AI can be a powerful tool for enhancing creativity.

Related Works

Table 1: Key studies of AI in education

Authors and Contributions	Purpose/Aim of Study	EmployedFactors	Methods	Context
Koos and Wachsmann (2023) identified benefits of AI in streamlining the writing process and potential risks like plagiarism and reduced creativity. Proposed strategies for ethical AI use and integration into curricula.	To explore the challenges and opportunities of using GPT-4 in legal academic exams, with implications for CW in literature courses.	Opportunities for enhancing creativity, student engagement, and personalized learning.	Literature review and qualitative analysis.	Legal academia, extrapolated to literature courses.
Imran and Lashari (2023) found positive student perceptions of ChatGPT, implications for CWS not directly provided.	To understand university students' perceptions of ChatGPT for academic purposes, including literature and CWC.	Perceptions of AI's role in education, student satisfaction, and technological acceptance.	Survey and sentiment analysis.	Universityacademicenvironment.
Plate and Hutson (2022) demonstrated the beneficial impact of NLP on	Examining the impact of NLP technologies on CW, applicable to literature	Creativity enhancement, writing skills development,	Case study and content analysis.	CW classes.

creativity, although specific findings related to GPT-4 not directly provided.	courses using GPT-4.	and educational technology integration.		
Gotca (2023) discussed the transformative capabilities of AI and GPT models in literature, specific findings not provided.	Investigating the creation of computational literature under AI and GPT models to inform literature course teaching methods.	AI's impact on literary creativity, narrative construction, and pedagogical strategies.	Descriptive analysis and comparative study.	Computational literature and AI in education.
Niedbał, Sokołowski and Wrzalik (2023) found ChatGPT more beneficial for full-time students; no significant difference in AI tool knowledge between full-time and part-time students; students of Generation Z showed the highest engagement with ChatGPT.	Investigate the application of ChatGPT in student learning processes.	ChatGPT's role in education, student engagement, AI literacy.	CAWI surveys, statistical analysis.	Częstochowa University of Technology.

Liu, Zhang and Biebricher (2024) Found different text production patterns and behavior in creating images between multimodal composing and traditional writing; AI prompts aided in creating images and texts, reflecting critical use of generative AI technologies	Investigate the cognitive processes in AI-assisted digital multimodal composing compared to traditional writing.	AI chatbots, EFL writing, cognitive processes, multimodal composing	Qualitative study with screen recordings, think-aloud protocols, and interviews.	English as a foreign language (EFL) education, university level.
Tsaoand Nogues found Students developed emerging AI literacies and reconceptualised creativity as a distributed process across human and non-human agents.	To explore university students' engagement with Generative AI (GenAI) in CW and graphic storytelling.	GenAI tools for CW, students' improvisational skills, notions of authorship.	Qualitative analysis including reflections, surveys, and focus-group interviews.	Co-curricular CW program at two Hong Kong universities.
Zhai and Wibowo identified six dimensions and 25 sub-dimensions influencing the application of AI dialogue systems for EFL learning, highlighting gaps in cultural, empathetic, and humorous aspects in system design.	Examine the use of AI dialogue systems to enhance university EFL students' interactional competence.	AI dialogue systems, EFL education, interactionalcompetence.	Systematic review with PRISMA process, thematic analysis, coding scheme.	University EFL education
Essel, Vlachopoulos, Essuman, and Amankwa (2024) found that ChatGPT use significantly influenced students' critical, creative, and reflective thinking skills positively, suggesting benefits for academic and instructional design Investigate the	Investigate the impact of ChatGPT on the cognitive skills of undergraduates in a flipped classroom setting.	ChatGPT, flipped classroom, cognitive skills including critical, creative, and reflective thinking	Mixed-methods research with pretest-posttest control group design, statistical analysis, and student interviews.	Research Methodology course, Kwame Nkrumah University of Science and Technology, Ghana.

impact of ChatGPT on the cognitive skills of undergraduates in a flipped classroom setting. ChatGPT, flipped classroom, cognitive skills including critical, creative, and reflective thinking Mixed-methods research with pretest-posttest control group design, statistical analysis, and student interviews. Research Methodology course, Kwame Nkrumah University of Science and Technology, Ghana.				

The Research Gap

A closer examination of existing literature reveals a prominent gap in understanding the impact of AI on literature courses, particularly within the unique cultural and pedagogical context of Algeria, despite the enormous interest in AI adoption in education(Gotca, 2023;Koos& Wachsmann, 2023). While the referenced research provides valuable insights into the potential of AI to foster creativity and innovation among students, the dominant focus on qualitative methods and case studies highlights a methodological gap. These studies, while insightful, often do not employ mixed-methods approaches that could offer a more comprehensive understanding of AI impact through both quantitative evidence and qualitative depth.

This paper aims to bridge this gap by employing a mixed-methods approach to study the adoption of GPT into literature courses and how it affects the CWS of undergraduate students in Algeria. This gap justifies mixed-methods research methodological choice to offer a richer, more detailed exploration of AI's pedagogical advancement. Furthermore, the scarcity of studies basically addressing the contextual and cultural factors influencing the integration of AI in Algerian education underscores a critical area of inquiry. By shedding light on the Algerian setting, this study not only contributes to the global discourse on the pedagogical applications of AI but also provides localized insights essential for the effective integration of AI in CW pedagogy in Algerian HE by enriching the existing body of knowledge with both empirical data and contextual analysis.

Conceptual Framework

Figures of Language and Narrative Structures

CWis the craft of composingtexts that express emotions and personal stories through the use of imaginative, poetic, dramatic,and narrative techniques (Morley, 2007).Considering the main objective of this research, CWis the literary and linguistic competency to encompass texts shaped overthe use figures of language, literary devices, and character development to deliver the meaning in the best way that inspires and captivates the reader. Figures of language such as metaphors, similes, and imageries are rhetorical devices employed to convey meanings more effectively,persuasively, and impactful (Miller, 1979).This research focuses on how GPT can assist students to understand and apply these devices creatively in their writingsto communicate complex ideas and emotions more vividly.A metaphor is to compare a word or phrase to an object or action to which it is not literally applicable, suggesting a similarity in a common trait without using like or as (Glucksberg &Keysar, 1990).This paper underscores how the use of GPT enriches the ability of creative expression among undergraduate students.Imagery is the use of descriptive language that creates visual pictures allowing readers to vividly imagine the scenes, characters, and actions by appealingto the senses such as sound, smell, taste, and touch (Sadoski& Paivio, 2013). Merging with GPT potential in this work, such literary device evokes deeper emotional engaging sensory experience for the reader,meanwhileencompassing an aesthetic impact on the text, and improvingthe students' CW through the deliberate choice of words and phrases (Imran& Lashari, 2023).A simile refers to a type of imagery that creates vivid expressive descriptions by comparing two different things using the words 'like' or 'as' to highlight similarities between them (ibid). Adding GPT to this study, students will access higher to creativity and enjoyment in creating comparisons in more descriptive and imaginative parallels between the literal and the figurative depth (Vecchiarini & Somia, 2023).

A short story is a short narrative with a focused theme, concise words and length, and an impactful message (Shaw, 2014). In this study, the students are assigned to write a short story about the AI friend character, its

characteristics, and its world. GPT offers intensive inspiration on how to use storytelling techniques to accomplish well-crafted short stories (Li, 2024). The setting of a story is the establishment of the time, place, and environment dimensions in which the narrative unfolds (Ricoeur, 1980). Through GPT, students can explore vivid descriptions and contextual details of diverse settings, whether historically accurate or fantastically imagined, empowering their ability to construct an immersive world (Serbanescu, 2022). Character development involves creating dynamic, reliable characters with distinct motivations, personalities, and backgrounds. The capacity of GPT to describe detailed character dialogue scenarios serves as a brainstorming aid for students to explore characters that are more complex, diverse, deep, and dynamic (Tsao & Nogues, 2024).

GPT and CW: Ethics, Literacy, and Innovation

GPTenhances thestudents' literary and linguistic competencies, extends their vocabulary, and experimentswith unconventional writing styles by enriching the creative processand delimiting itto ethical considerations about originality and authorship (Hermann, 2023). These advantages prompt students to be involvedin the implications of AI in creativity, trusting its potential to augment creative expression against concerns of the erosion of individual creativity.However, students still claim the inefficiency,obscurity, and complexity of technological literacy, calling for deeper comprehension, critically mastering limitations, and the capability to evaluate the AI content (Farhi et al., 2023). This literacy empowers students to use AI as an aid rather than a substitute for their creative endeavors (Tsao & Nogues, 2024).IntegratingAI in narratives provides a practical application for narrative construction and demonstration (Li, 2024) and enhances traditional storytelling techniques and character development.

METHODOLOGY

Research Design

The methodology involved detailed assignments exploring AI's impact on students' CW. The assignments' details and rubric criteria, including the CW Task: An Artificial Friend's World and the checklist table for evaluation are outlined to guide students' submissions and assessments. These assignments emphasized character development, setting creation, relationship dynamics, and ethical dilemma exploration through the use of metaphors, similes, and vivid imagery. Detailed assignment instructions and evaluation criteria are provided in Appendix A for the offline task for the control group and Appendix C for online task with GPT assigned to the experimental group. The corresponding evaluation checklists are detailed in Appendix B for the offline task and Appendix D for the online task.

Participants

This study involved forty-six first-year undergraduate students from theDepartment of English Language and Literature at Mohamed Kheider, BiskraUniversity in Algeria, specifically chosen for their advanced linguistic competencies and literary levels. Among the total population of 307 first-year students, an initial query was made to identify those interested in participating in research focused on GPT and its application in CW. This inquiry also sought to distinguish students based on their familiarity with GPT. Consequently, 23 students who expressed an interest and reported having knowledge of how to use GPT were selected for the Experimental Group (EG). Similarly, another 23 students, equally interested in the research theme but without prior experience using GPT, were chosen for the CG. This selection process was aimed at creating two distinct groups to explore the impact of GPT usage on CWS, with the CG relying solely on human creativity and the EG using GPT collaboratively for their assignments. The decision to focus on first-year students was driven by their superior linguistic and literary competencies compared to otherfirst-year counterparts, ensuring a higher baseline of writing skills for evaluating the potential impact of GPT. Participants were then randomly assigned to each group to ensure an unbiased distribution. All participants provided consent for their involvement, with assurances that the study was conducted for research purposes only.

Procedures

The study spanned a carefully arranged one-semester timeframe, wherein participants from both the EG and CG undertook designated writing tasks aimed at gauging the effect of GPT on enhancing CW capabilities. An introductory briefing outlined the study's goals and detailed the task expectations. The EG consisted of individuals proficient in GPT, chosen for their willingness to incorporate this technology into their writing processes, whereas the CG was composed of participants who were not familiar with GPT, to maintain a clear distinction in technological proficiency. The study's structured oversight ensured all participants strictly followed the established guidelines, facilitating a direct comparison between the traditional writing approaches and those augmented by GPT. This deliberate methodological design was essential in extracting accurate contrasts between the creative outputs of the two cohorts, reinforcing the study's integrity and the relevance of its conclusions.

At this juncture, it is crucial to note that the researchers conducting this study were not the instructors of the CW course under investigation, and the evaluation of student outcomes was independently conducted by four teachers not involved in the teaching of the course. This distinction ensured an unbiased analysis and interpretation of the study's findings, as the researchers and evaluators were independent of the course's direct educational interactions and outcomes.

Data Collection

Data collection was conducted through student submissions, aiming to evaluate narrative skills in the CG and AI concept integration in the EG. For the CG, assignments assessed CWS, including language figures in character development, setting explorations, and ethical dilemmas. The EG assignments focused on GPT integration. The evaluation employed structured checklists with criteria like metaphor and simile use, imagery, and ethical dilemma handling, scored from "Not Evident" to "Excellent". Data collection spanned one semester, with electronic submissions ensuring consistent evaluation. The EG received specific GPT integration instructions, while the CG used traditional methods.

Research Instrument

The research instruments included rubrics for evaluating the writing samples of both the CG and the EG, focusing on character development, setting description, relationship dynamics, and ethical dilemmas. Grades ranging from 1 to 5 were assigned to evaluate the EG's written work, while qualitative feedback highlighted overall creativity and evaluators' insights.

Data Analysis Procedures

The study employed both quantitative and qualitative analyses. Rubric scores were statistically analyzed, using the SPSS version 27, to identify improvements in CWS. Additionally, thematic analysis of students' submissions provided insights into the effects of GPT on the CW process, including AI engagement, creativity perceptions, and the use of figurative language.

Critical to evaluating the validity and reliability of the quantitative and qualitative data gathered for this study, it is of paramount importance to state the ways through which this study attempted to promote reliability and validity. To achieve this end, the researchers were concerned with determining whether the rubrics could generate responses, identify any problems and difficulties, and gain valuable suggestions relating to the understandability of items or instructions from the participants in this study, to omit or modify them based on the outcomes. To this end, three literature teachers from the academic staff members in the same department were asked to review and evaluate the content of the rubrics, to comment on the clarity and appropriateness of the items, and to further scrutinize the language used. Based on the feedback received from the teachers, who suggested that the items of the rubrics only needed slight modifications, their comments were taken into consideration. Most of the received remarks were related to the length of the assessments and the clarity of the instructions. Teachers suggested focusing more on the creative integration of AI, clarifying expectations for character and setting development, and enhancing guidelines for exploring relationships and ethical dilemmas. Emphasis was also placed on adding vivid imagery, and similes. These changes led to a revised rubric that provided clearer objectives and expectations, encouraging students to produce narratives that thoughtfully integrate AI, emphasizing originality and depth in their creative processes.

Regarding the reliability issue, the researchers calculated the inter-rate reliability,divided the number of agreements by the product of the number of ratings given by each rater times the number of raters, and then multiplied by 100tomeasure the degree of agreement among raters.

$$IRR=TA/(TR*R)*100=0.753$$

Where IRR is the inter-rater reliability (%), TA is the total number of agreements in the ratings, TR is the total number of ratings given by each rater, R is the number of raters.

It can be said that the validation is acceptable for studies like the current one, as indicated by a suitable value above 0.70 (AL-Qadri & Wei, 2021).

RESULTS

This sectionpresents the findings of this study regarding the impact of GPTon CWS of undergraduate literature students at Mohamed Kheider, Biskra University in Algeria. To assess the effectiveness of GPT in enhancing various aspects of CW, we conducted a comparative analysis between the EG that utilized GPT collaboratively for their assignments and the CG that relied solely on traditional writing methods. The assessment criteria included character development, setting description, relationship dynamics, and ethical dilemma handling. Descriptive statistics, including mean scores, standard deviations, and standard errors of the mean, were calculated for each domain in both groups. Additionally, a t-test was employed to compare the mean scores between the EG and CG, with statistical significance set at $p \leq 0.05$, as shown in Table 1 below. The results provide insights into the extent to which GPT integration influences different facets of CWS amongforty-six

first-year undergraduate literature students participating in this study. Table 1 summarizes the descriptive statistics and t-test results for comparison between the CG and EG across various domains of CWS.

Table 1. Descriptive statistics and t-test for comparison between the CG and the EG

Domain	Group	Mean	N	Standard Deviation	Standard Error of the Mean	t	Df	P
Character Development	Experimental	4.7043	23	0.55880	0.11652	2.026*	44	0.042
	Control	4.1739	23	0.57621	0.12015			
Setting Description	Experimental	4.4913	23	0.72232	0.15061	1.945*	44	0.047
	Control	4.1739	23	0.71682	0.14947			
Relationship Dynamics	Experimental	4.9545	22	0.74340	0.24377	2.123*	44	0.033
	Control	4.0273	22	0.68534	0.14612			
Ethical Dilemmas	Experimental	4.4565	23	0.76742	0.16002	1.994*	44	0.049
	Control	3.7391	23	0.91539	0.19087			
Overall	Experimental	5,2826	23	0.46039	0.09600	2.494*	44	0.017
	Control	4,0797	23	0.49267	0.10273			
Note: (*) p≤0.05								

As illustrated in Table 1,studentsin the EG, who employed GPT collaboratively, consistently demonstrated commendable performance in character development, as evidenced by a mean score of 4.7043 (SD = 0.55880). This significantly outperformed the CG, with a mean score of 4.1739 (SD = 0.57621). The higher mean score in the EG suggests that GPT integration likely facilitated a more nuanced exploration of character motivations, personalities, and backgrounds.

In terms of setting description, the EG exhibited a higher mean score compared to the CG (4.4913 vs. 4.1739, respectively). This indicates that students who utilized GPT assistance were more adept at creating vivid and immersive settings within their narratives. GPT integration enabled students to effectively convey the time, place, and environment dimensions of their stories, thereby enhancing the overall quality of their narratives.

The exploration of relationship dynamics further elevates the EG path of creativity rather than the CG. Students in the EGalso demonstrated greater proficiency in portraying relationship dynamics and complex interpersonal relationships within their narratives, as indicated by a mean score of 4.9545 (SD = 0.74340), compared to 4.0273 (SD = 0.68534) in the CG. GPT integration facilitated a more nuanced exploration of character interactions, motivations, and conflicts, contributing to richer and more engaging storytelling.

In handling ethical dilemmas, students in the EG with GPT assistance, were more adept at integrating ethical considerations into their narratives. They achieved a mean score of 4.4565 (SD = 0.76742), surpassing the CG mean score of 3.7391 (SD = 0.91539). GPT integration encouraged students to explore complex moral issues and dilemmas within their stories, enriching the thematic depth and resonance of their narratives.

Across all domains, the EG outperformed CG, with an overall improvement in their CWS; the higher overall mean score in the EG (5.2826 vs. 4.0797 in the CG) indicates that GPT assistance facilitated a more holistic enhancement of students' proficiency in various aspects of CW, ultimately leading to an overall improvement in their CWS.

Moreover, statistical analyses, including t-tests, were carried out to compare the mean scores between the EG and CG. These analytical procedures were paramount in unveiling the differences in performance across various domains critical to CW. The results of these analyses unequivocally demonstrated statistically significant disparities in mean scores for character developmentof 4.7043, setting description of 4.4913, relationship dynamicsof 4.9545, and handling ethical dilemmas between the two groups. Particularly noteworthy was the consistent superiority of the EG over the CG across all assessed domains. This consistent pattern of superior performance underscores the robust impact of integrating GPT collaboratively into the writing process, emphasizing its efficacy in elevating CWSof the studentsacross multiple dimensions. Such findings not only validate the efficacy of GPT as a valuable pedagogical tool but also highlight its potential to revolutionize literature education by fostering enhanced creativity and innovation among students.In summation, these findings underscore the potential of integrating GPT collaboratively into the writing process to enhance the students' CW abilities.

DISCUSSION

The integration of GPT in education, as highlighted by authors like Koos and Wachsmann (2023), Imran and Lashari (2023), and Vecchiarini and Somia (2023), has been posited to significantly enhance student engagement and creativity. These studies underscored the potential of AI to streamline the writing process and

foster critical thinking, suggesting a promising landscape for AI-assisted education. Similarly, the findings of the current study present more perceptive insights, showing a statistically significant difference in CWS between students using GPT and those employing traditional methods.

This outcome resonates with the work of Plate and Hutson (2022), who acknowledged the beneficial impact of NLP technologies on creativity without directly linking these benefits to tangible improvements in students' writing abilities. Similarly, the study aligns with Liu, Zhang, and Biebricher (2024), who noted different patterns of text production between AI-assisted and traditional writing, without necessarily translating these differences into a clear advantage for either approach.

The obtained results align more with the alternative hypothesis (H1) proposed, which posited a statistically significant difference in CWS and the application of figurative language between the EG and the CG. However, the results oppose the null hypothesis (H0), suggesting that the integration of GPT does not significantly impact students' ability to employ figures of language or enhance their CWS in a statistically measurable way.The data analysis yieldedvaluable evidence supporting the anticipated divergence in these variables between the two groups. Nevertheless, these findings underscore the validity and reliability of the initial research hypothesis, exposingthat the AI intervention positivelyaffectsCWS and the use of figurative language. The significance of these findings necessitates further exploration and consideration to enhance future hypotheses and research inquiries in the field of CW and language use.

The quantitative data revealed significant enhancements in CWS, qualitative observations similarly suggest that GPT positivelycontributedto the creative process. This aligns with Tsao and Nogues (2024) and Li (2024), who found that students developed emerging AI literacies and reconceptualized creativity through engagement with AI tools. GPT, as observed in the current study, effectively offers a rich linguistic database that enhances narrative complexity and provides alternative perspectives in storytelling, albeit not translating directly into improved grading metrics.

The ethical considerations and technological literacy challenges highlighted by Farhi et al. (2023) and Hermann (2023) also find relevance in the context of this study. While GPT offers novel means to explore narrative techniques and expand vocabulary, it also raises questions about originality and authorship. This study underscores the importance of developing a critical understanding among students of the limitations and capabilities of AI content, aligning with the findings of Essel, Vlachopoulos, Essuman, and Amankwa (2024), who noted the positive influence of cccxsssdddvbbGPT on cognitive skills.

CONCLUSION

The conclusion of this study offers an opportunity to reflect on the insights gained from examining the impact of GPT technology on advancing CWS among undergraduate literature students in Algeria. This exploration, set against the backdrop of an increasing integration of AI in educational contexts, has provided a comprehensive understanding of the potential and limitations of AI-assisted learning, specifically within the domain of CW.

The findings of this study indicate that the integration of GPT into CW assignments results in statistically significant improvements in CWS and offers qualitative enhancements that could enrich the educational experience. This underscores the importance of integrating AI tools like GPT into pedagogical strategies, not as a replacement for traditional teaching methods but as a supplementary tool that can offer alternative perspectives and narrative techniques. Educators are encouraged to leverage these tools to stimulate creativity, encourage exploration of narrative structures, and foster a deeper engagement with the craft of writing.

The study provides valuable perceptions into the integration of GPT in CWC, contributing to the growing discourse on AI-assisted learning in higher education. In addition to the direct impact of GPT that was statistically significant on improving CWS, the qualitative benefits suggest a promising role for AI in enriching the creative process. This research highlights the importance of adopting a balanced approach to integrating technology in education, one that leverages the strengths of AI to enhance learning experiences while maintaining a focus on the foundational skills of critical thinking, creativity, and emotional depth in storytelling.

As we move forward, the challenge and opportunity lie in harnessing the potential of AI to complement and augment traditional pedagogical methods, ensuring that education remains a deeply human, creative, and transformative endeavor.

The research Limitations

The scope of this study was confined to a relatively short period and involved a specific cohort of students within a single educational institution. The findings, therefore, may not be generalizable across different contexts, cultures, or educational settings. Future studies should adopt a longitudinal methodology to thoroughly examine students' perspectives over an extended period to thoroughly examine and understand the influence of GPT technology on CWS in undergraduate literature students in Algeria.As far as CWS, it is acknowledged that it encompasses a broader spectrum of abilities. Future research could include additional dimensions such asplot complexity, thematic depth, dialogue proficiency, and other relevant aspects to provide a more comprehensive evaluation of students' creative writing abilities when utilizing GPT technology.

Future Research Directions

Future studies should consider extending the duration of the research to observe the long-term impacts of GPT integration on CWS. Exploring a broader range of educational contexts, including different cultures and languages, could provide a more comprehensive understanding of GPT's pedagogical potential. Additionally, employing mixed-methods approaches that combine quantitative and qualitative analyses could offer deeper insights into how AI tools influence CW processes and student engagement with narrative construction.

The Research Implications

The integration of AI into CW pedagogy presents an opportunity to reimagine the teaching and learning of narrative construction. Educators should consider developing curricula that incorporate AI tools to enhance storytelling techniques, character development, and exploration of ethical dilemmas, while also fostering critical thinking about the role of technology in creative expression. Training programs for teachers on the effective use of AI in CW courses could further enhance the educational benefits of these technologies.

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