ChatGPT-Generated Rhetoric: Developing Pedagogical Uses for L2 Instructors

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Abstract

The recent proliferation of generative AI tools has forced L2 educators to adapt their pedagogy at an unprecedented pace. While the debate on whether or not to utilize AI tools in curricula continues, an unexamined facet of these tools is how proficient they are with 'human-like' rhetorical writing skills. Therefore, this qualitative study is framed by the research question: Does ChatGPT exhibit the ability to use persuasive rhetoric in various genres of persuasive writing? By analyzing the unprompted rhetorical techniques generated by ChatGPT, this study seeks to proffer conclusions with potential pedagogical implications for rhetoric and L2 instructors in higher education. Specifically, the study aims to determine if ChatGPT can produce and appropriately use micro-rhetorical language techniques (e.g., tricolons, alliteration, or metaphors). To address this question, six written texts from different writing formats were generated and then analyzed using MAXQDA 2020 software: an academic essay, a job application letter, an editorial, an advertisement, a political campaign speech, and a love letter. Findings indicate that ChatGPT can replicate certain repetitive rhetorical language techniques in an appropriate manner. The more complex and personal rhetorical techniques were less evident. This study then provides pedagogical suggestions on how L2 instructors can use ChatGPT to help foster and develop better usage of deliberative rhetoric by learners of English. Given that AI tools will likely become integrated into the curricula of most educational institutions in the near future, understanding more about their capabilities to use rhetoric is extremely necessary.

Keywords: AI, Higher Education, L2, Rhetoric

Introduction

Artificial intelligence (AI) is a form of computer science that can replicate human intelligence. Long the source of science fiction movies and novels, AI became a reality in 1950 with the publication of Alan Turing's (1950) groundbreaking work, *Computer Machinery and Intelligence*. In it, he detailed a method of testing machine intelligence known as *The Imitation Game*. A steady increase in research and technological developments led to an "AI boom" in the 1980s (tableau.com, n.d.) and a subsequent watershed moment in 1997 when the IBM-developed program *Deep Blue* beat the human chess champion, Gary Kasparov. Since then, the emergence of smartphones and the proliferation of the Internet have sparked a surge in online platforms and apps.

One such prominent app, ChatGPT, was launched by OpenAI on November 30, 2022, and attracted more than one million users in its first five days (Marr, 2023). It is essentially an updated and advanced version of InstructGPT with a greater capacity to generate texts from a wider range of genres. The tool has since had an unprecedented impact on the field of education. By the summer of 2023, 32.4% of college students in Japan were using it (Masutani, 2023). Educators, institutions, and even government bodies have struggled to deal with its impact and to discern how it should be used. As Marr (2023) noted, ChatGPT's profound ability to understand and generate language has spurred a host of imitation tools, collectively known as Large Language Models (LLM). These tools can provide constant feedback, corrections and support for learners working on their written assignments (Barrot, 2023). For higher education institutions, ChatGPT has brought to the forefront discussions of academic integrity (Derakhshan & Ghiasvand, 2024). What constitutes student work and what constitutes plagiarism remains unsettled and has been the focus of great discussion, leading to resignation among many teachers, with the belief that "even if we could ban it, we shouldn't" (Warschauer et al., 2023, p. 5). As such, the 'human-in-the-loop' approach (Ranade & Eyman, 2024), whereby learners are encouraged to take ownership of using and working with AI instead of just relying on it, has taken hold.

Despite its relatively recent appearance, quite a substantial body of research already exists on various perspectives of ChatGPT and how it can be integrated with language teaching. Significant linguistic differences have been found between human-written and ChatGPT-generated essays, which are easily identifiable (Mizumoto et al., 2024; Berber Sardinha, 2024). Others have found the opposite to be true and that reviewers could not distinguish between AI- and human-generated texts (Casal & Kesler, 2023), nor could teachers (Fleckenstein et al., 2024). Ironically, the solution to detecting AI-generated texts might lie in technological systems. Berriche and Larabi-Marie-Sainte (2024) have developed a technique that proved 100% accurate in distinguishing between the two by analyzing lexical, grammatical, and structural features.

In Japan, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has urged a proactive approach to utilizing ChatGPT in English language classrooms and has stressed the importance for instructors to develop AI literacy (Sakai, n.d.). However, without decisive policies and guidelines to clearly specify approaches to dealing with the use of ChatGPT, instructors are left to make ad-hoc rules in the classroom. Still, there have already been explorative studies on how teachers can utilize such platforms for language learning. Sakai (2023) pointed out that while ChatGTP (and other platforms) offer learners many opportunities to enhance their language skills, they still need critical discernment when putting together their ideas. Schmidt-Fajlik (2023) compared the effectiveness of ChatGPT as

a grammar checker with two other platforms (Grammarly and ProWritingAid) and found it to be superior. Hayashi and Sato (2023) also showed that ChatGPT helps to reduce second language anxiety among learners. In terms of speaking, Wang, Iwata, and Okamoto (2024) demonstrated that ChatGPT could be used to foster improvements in students' presentation skills.

While there has been great interest in exploring the linguistic capabilities of ChatGPT in second-language learning contexts, there has been no research to date related to the use of rhetoric by AI-generated platforms. Rhetoric is likely one of the oldest academic disciplines and can be loosely defined as the use of language for persuasive purposes (Toye, 2013). Deliberative rhetoric, as explained by Aristotle, is the use of rhetoric to persuade audiences (and readers) (Lucas, 2015), as opposed to other forms of rhetoric, which are mainly used for structuring and organizing written texts.

Methodology

With ChatGPT developing at a rapid pace, it is important to explore whether it can implement advanced human writing techniques, such as the use of rhetorical techniques for persuasive purposes. If it can replicate human persuasiveness, this will have a significant impact on all aspects of our lives. This study is framed by the following research question: Does ChatGPT exhibit the ability to use rhetoric in various genres of persuasive writing? The purpose is to learn if or how ChatGPT employs rhetoric and then incorporate these findings into suggestions for second language (L2) learning pedagogy.

To address the research question, a qualitative approach was adopted, with an abridged form of the University of Kentucky's glossary of rhetorical terms (n.d.) serving as the framework for analysis. Slight modifications and additions were made to this model based on work by Rowland (2019), Fairhurst (2011), and Gough (2018) and the list is by no means an exhaustive list of such terms. Table 1 provides a list of the rhetorical techniques coded in this study.

Table 1: Rhetorical Techniques

Rhetorical technique	Definition
Alliteration	repetition of the same sound beginning several words in sequence
Allusion	an indirect reference to existing history, rhetoric, or norms
Anaphora	repetition of a word or phrase at the beginning of successive phrases, clauses, or lines
Antithesis	opposition or contrast of ideas or words in a balanced or parallel construction
Asyndeton	lack of conjunctions between coordinate phrases, clauses, or words
Doubling	use of language in a pattern of two
Euphemism	use of a less offensive expression for a harsher meaning
Hyperbole	exaggeration for emphasis
Irony	expression of something which is contrary to the intended meaning
Knock-down	building up opposing points to then refute
Metaphor	implied comparison achieved through a figurative use of words
Oxymoron	the juxtaposition of words which contradict common sense
Paradox	an assertion that goes against common sense

Personification	attribution of personality to an impersonal thing
Rhetorical question	a question that does not need to be answered
Simile	an explicit comparison between two things
Tricolon	the use of words, phrases, or clauses, in a pattern of three

The data were collected from the ChatGPT-3.5 model (free version) in the form of six different genres of writing to provide a wider scope of inquiry. No rhetorical prompts were given as the study seeks to analyze naturally occurring rhetoric in the texts. Table 2 provides a list of the six genres, the prompt given to generate the written text, and a word count.

Table 2: Written Texts Analyzed

Form of writing	Prompt
Academic essay	Write an academic essay on the benefits of using ChatGPT in student essays. (455 words)
Job application letter	Write a job application letter. (291 words)
Editorial	Write an editorial on the crucial importance of voting in an election. (553 words)
Advertisement	Write an advertisement about why to choose craft beer. (197 words)
Political speech	Write a speech to persuade voters to support a candidate. (407 words)
Love letter	Write a love letter to my wife. (293 words)

Once collected, the data were analyzed to determine if ChatGPT can utilize rhetorical techniques. The texts were coded through the use of MAXQDA software (2020 version) using the framework for analysis outlined in Table 1.

Findings

The findings from this study reveal that ChatGPT can utilize certain rhetorical techniques. However, there are certain techniques which it employs frequently and others that it appears unable to utilize (without being prompted to do so). Three key findings can be garnered from the analysis of the data.

Firstly, rhetorical techniques were apparent in all genres of the ChatGPT texts analyzed in this study. Table 3 provides a quick overview of the frequency counts.

Table 3: Frequency Counts for Rhetorical Techniques

Technique	Essay	J.A. Letter	Editorial	Advertisement	Speech	L. Letter
Alliteration	2	0	1	2	0	0
Allusion	0	0	1	0	0	0
Anaphora	0	0	0	0	6	1
Antithesis	1	0	1	1	1	0
Asyndeton	0	0	0	0	0	1
Doubling	21	7	14	6	4	6
Euphemism	0	0	0	0	0	0
Hyperbole	0	0	0	1	0	5
Irony	0	0	0	0	0	0
Knock-down	2	0	0	0	2	0
Metaphor	4	0	3	6	2	5
Oxymoron	0	0	0	0	0	0

Paradox	0	1	0	0	1	0
Personification	0	0	0	1	0	0
Rhetorical Q.	0	0	0	1	0	0
Simile	0	0	0	0	0	0
Tricolon	3	3	6	1	9	8
Totals	33	11	26	19	25	26

The texts varied in length, so direct comparisons cannot be made, but the overall totals indicate the prevalence of rhetoric in all six forms of writing. The word counts for the Job Application Letter, and the Advertisement were fewer than for the other four texts, so it is not surprising that the overall frequency of rhetorical techniques coded in both is also lower. The Love Letter was also relatively shorter in length but had a higher frequency of rhetorical techniques. Given that essays typically exhibit a higher frequency of rhetorical techniques (structural and persuasive), it is not surprising to find it featured more than the other forms of written text.

In terms of specific techniques, the findings reveal that repetitive language techniques such as doubling and tricolons were the most frequently employed. Two examples of doubling can be found in one sentence from the essay: "… concerns about authenticity or over-reliance on technology, the benefits of integrating ChatGPT into student essays are numerous and substantial." (AEL4-5). This example also serves as an antithesis as the two negative concerns are contrasted against the two positive descriptions. An example of a tricolon is drawn from the job application letter: "I facilitated classroom discussions, provided individualized support to students, and collaborated with colleagues" (JALL12-13). The list of three positive attributes and experiences possessed by the applicant are displayed here to reinforce the idea that they are qualified for the position of being a teacher. Doubling and tricolons are simple to construct and serve an emphatic purpose, so they tend to be employed in deliberative rhetorical situations, such as these written genres. As they are shorter than some of the other more elongated techniques, it is also easier to use them more liberally in a text without aggravating the reader.

Complicated rhetorical techniques such as oxymoron, simile, irony, and euphemism were not used at all. This is not surprising as using such techniques depends on an understanding of language that goes beyond the lexical and semantic levels. Cultural and historical knowledge determines the use of such techniques, which is also likely why only one example of an allusion was found across the six texts, a quote by US President Franklin D. Roosevelt: "Nobody will ever deprive the American people of the right to vote except the American people themselves—and the only way they could do this is by not voting." (EL48-50) which ended the editorial. Although the prompt did not specify any particular cultural references to be made, ChatGPT employed a reference to US politics, even though the author is not American, and the tool was accessed outside the US. Similarly, hyperbole was also only used once across the texts and was employed at the beginning of the advertisement: "Unleash your taste buds with our exquisite range of craft beers, meticulously brewed for the discerning palate." (AL1-2). Finally, an asyndeton was also only coded once, as it likely registers as 'ungrammatical' for generative AI tools. The occurrence was found in the love letter: "My wife; you are my best friend, my confidant, my soulmate." (LLL5).

In terms of unexpected findings, metaphors were used (the third most frequently used technique) across five of the six written genres. The more poetic use of language is traditionally not attributed to AI-generative tools, but ChatGPT proved adept at employing

them. Perhaps, not surprisingly, the love letter features a series of rather overly dramatic metaphors, such as: "…my anchor through life's storms and my beacon of hope in times of darkness. Your laughter is music to my ears, and your smile lights up my soul." (LLL8-9).

The other unexpected finding is that a rhetorical question is featured only once in the texts, contradicting findings in most rhetorical studies, where it is one of the more predominant techniques employed. The following simple question was posed in the advertisement: "Why choose craft beer?" (AL4). This could be indicative of a lack of interpersonal skills on the part of ChatGPT, whereby it is unable to identify the need to establish a connection with the audience (reader) it is communicating with (the typical purpose for employing rhetorical techniques). The same rationale applies to the absence of anecdotes that were not coded in this study, but which were notably absent from the generated texts.

Ultimately, the answer to the research question in this study is that ChatGPT-3.5 can utilize certain rhetorical techniques that mirror the use by human writers. Nevertheless, such usage is largely restricted to simplistic and emphatic techniques. Techniques that promote interaction with the reader and that portray cultural and historical contexts by the writer under the assumption that they will be comprehended by the reader were rarely found in this study. This finding must be prefaced by the understanding that only the free version of ChatGPT was used in this study and that newer and more advanced versions are being released, which are more likely to be able to use rhetorical techniques as humans do. It should also be noted that the texts generated in this study did not contain any prompts to produce rhetorical techniques, as the intention was to examine if such techniques were employed naturally. The use of such prompts would have undoubtedly produced very different findings.

Discussion

ChatGPT-3.5 (the free version) exhibits structural and repetitive rhetorical language techniques but fewer content-related ones in a pattern that stresses emphasis over evidence or cultural references. The texts also have what some instructors like to label 'a mechanical feel' about them. There is little attempt to interact with the reader through anecdotes, rhetorical questions, or personalizing. Despite these weaknesses, ChatGPT can be used for pedagogical purposes. In this discussion, it will be assumed that instructors (and learners) only have access to the more limited free version of the platform due to financial restraints. In general, there are four potential pedagogical implications and practical uses for instructors who are teaching L2 courses in higher education or those engaged in specific rhetoric-based courses.

Firstly, through ChatGPT, rhetorical texts can be quickly mass-produced for use in classrooms. The six texts analyzed in this study were generated in mere seconds after the prompts were made. A lack of readily available resources is a problem for many instructors. Textbooks rarely fully meet the needs of courses, and instructors are frequently required to produce their own supplemental materials in time-consuming work. For a subject such as rhetoric, materials typically focus on historical discussions from Ancient Greece or deal with political examples. Both can seem abstract and unrelated to the real-world usage of today's university students. Topics and modern forms of written texts (e.g., blogs or online posts) that are suitable for learners can be instantly created and still incorporate classic rhetorical techniques.

Secondly, these texts can be crafted with prompts or left in their simple form, depending on the prompts given. While the texts in this study were generated without prompts to include

rhetorical techniques, they still featured a wide range of them. It can be assumed that with more specific prompts, texts with prompts to include certain techniques can instantly be generated. Such materials can be used to promote noticing and learners can identify, not just the usage of specific rhetorical techniques, but the context they are used in, and how certain techniques are intertwined to make a stronger persuasive message.

Thirdly, textbooks (focusing on specific forms of language) often showcase examples of how to implement certain language features but seldom provide language texts which are devoid of the target feature. This is another effective way of learning (by noticing what is not included and discussing how it could be added to enhance the emphatic message intended). The more complex techniques analyzed in this study (e.g., allusion, irony, or oxymoron) were notably absent from the texts and could be the focus of a lesson. Discussions on how to craft these techniques and where to add them to the existing texts would be a productive endeavor.

Finally, a discussion on rhetoric can be conducted to cover the appropriacy of certain techniques. Blatantly inappropriate texts could be generated but would likely be counterproductive. Instead, examples of texts could be generated featuring certain techniques which may be appropriate in certain cultural contexts but less so in others. An example of this could be the use of hyperbole (not apparent in the texts analyzed in this study) in job application letters. While in certain cultures it is necessary to promote yourself explicitly when applying for a job position, in others it is counterproductive to do so.

The ultimate takeaway from this study is that it is possible to use technology to create more learner awareness regarding what rhetoric is and how it can be used effectively. ChatGPT offers instructors an array of options for materials development. Such materials can help facilitate learners' better understanding of how to use rhetoric more appropriately and more effectively.

Conclusion

From this study, it can be ascertained that generative AI platforms like ChatGPT can already employ the use of certain rhetorical language techniques across a broad range of written forms. While they cannot yet completely emulate human use of rhetoric, it is likely only a matter of time before they can. Instead of shunning such technological progress, instructors should embrace the new opportunities these generative AI platforms provide. Assistance with materials development would appear to be one possibility that is certainly worth exploring, especially for subjects such as rhetoric.

Acknowledgements

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