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Abstract

The use of artificial intelligence (AI) for improvement of writing is commonplace with word-processing software and cloud-based writing assistants such as Grammarly and Microsoft Word. However, more and more options are cropping up that move beyond assistance with grammar, spelling, and punctuation to complete essay generation. The free availability of AI essay generators has led to lamenting the coming death of college writing. But AI has been used in the previously noted examples for decades without such a reaction. In fact, the idea that the use of essay generating software is synonymous with academic dishonesty is as passé as worries about allowing students to use calculators or chalkboards. Both are tools that emerged by affording students a different type of learning which was not rote memorization.

The questions now become how AI tools can and should be used to teach English composition and to what extent. In the conceptual age where AI is used to augment all other facets of human creativity, providing students with the tools they will need for effective communication becomes inevitable. These new AI tools may allow students to master grammar and syntax more quickly in order to move on to important research questions that will contribute to knowledge in their given fields. This study investigates the current and potential uses of AWE, AAG and AI essay generators in a first-semester English composition classroom.

Students in the study were provided with the same assignments and learning outcomes as are standard in English, composition courses but were encouraged to use AI applications when prompted to discover the usefulness and limitations of such technology. Results from the study confirm that use of such tools does not automatically lead to plagiarism or academic dishonesty. On the contrary, higher-order thinking skills and metacognition are required to use AI tools appropriately to learn writing skills. Furthermore, the tools themselves became the topic covered in the class for the study and led to further social and ethical implications.

Introduction

Adopting emerging technologies in higher education has historically been met with suspicion and even outright rebellion. When the chalkboard was introduced to classrooms in 1801, students revolted against something perceived to challenge the centuries-old tradition of memorization and oral exams. As a technology, the chalkboard allowed a new type of learning where students could write out information to be learned and shorten time-on-task (Krause, 2001). Later in the century, the magic lantern was introduced in college classrooms but was slow in adoption due to the perception of the device as valuable for entertainment and not learning (Shepard, 1987). These and other technologies have shaped and reshaped higher education today with another revolution upon us. With open access to a seemingly unlimited amount of information, students have immediate access to knowledge once only gained in the classroom.

The shift in role of faculty is being felt as educators transition from imparting information to facilitating learning in active learning environments supported by technology (Brownridge, 2020). As Generations Z and Alpha enter and move through the college experience, there is a disjuncture between their previous experiences and use of technologies and what they encounter. These digital natives have never experienced a time in their lives without computers, nor do they remember a time without smartphones (Flynn & Frost, 2021). On the other hand, most faculty teaching today are digital immigrants. They were not trained to incorporate new technologies into their classrooms and instead adapted to them later in life

(Prensky, 2001). As such, emerging technologies are often slow to be adopted, even if proven effective, and the blame often leveled at teachers assuming unwillingness to adopt (Ertmer & Ottenbreit-Leftwich, 2010; Howard & Mozejko, 2015).

Educators are, however, already adopting emerging technologies like AI in their classrooms in various ways, from delivery of content in an LMS to providing feedback to students. For instance, AI is closer to being accepted for essay assessment and grading and is currently seen in applications such as Intellimetric, Packback, MyAccess! and other automated writing evaluation (AWE) software [1,2]. Algorithms are used to provide real-time diagnostic feedback, assessment, and grading, especially in shortform student writing assignments. But while AI has been accepted as a tool to assist instructors with grading and assessment, the same has yet to extend to acceptance in the process of creating student artifacts themselves. In fact, studies continue to warn of the abilities AI has to assist in cheating for students [3].

While so-called "authentic writing" has been held as a standard for education and research, many scholars are concerned about the growing difficulty in identifying AI-generated essays [3, 4]. While plagiarism detection software such as Turnitin is standard across higher education, emerging Automatic Article Generator (AAG) writing that is powered by AI provides new ways to bypass such safeguards. Highlights this ability with Generative Pre-trained Transformer 3 (GPT-3) and OpenAI, warning of the inevitable infiltration of the university. Other researchers, such as, have presented studies to help academics identify AAG writing and continue to raise awareness of the perceived danger such technology represents for academic integrity [4, 5].

Even when attempting to integrate into the classroom in a purposeful fashion, studies frame the activity as encouraging "cheating" among students on their final papers instead of how AI may be used as a useful tool [6]. The use of artificial intelligence (AI) in writing has had two recent areas of study. The former is in the ability to improve proper use of grammar and clear syntax with cloud-based typing assistants that review spelling, grammar, punctuation, clarity, engagement, and delivery mistakes. Such software uses AI to identify and search for an appropriate replacement for the located error. The latter has applications in creative writing to move beyond grammar and usage. As these tools become more widely used pedagogically, they have become useful as a means of generating suggested alternative content for the given goal of a writing exercise (e.g. marketing, poetry, short stories). Unfortunately, there is often a false dichotomy in discussions of these tools between the well-crafted essay (supported near the end of the writing process by grammar/usage AI functions) and the "human" domain of idea creation and development. In many ways, English professors would and should expect a better crafted essay when using AI tools to generate the early drafts or "skeleton ideas" of an essay.

This support would allow the student to get to the crafting of the proceeding draft stages of writing more quickly and efficiently, allowing the focus to be placed on the content instead of being concerned with the rules of grammar. Many students struggle with the "blank page" stage of writing and end up with "cookie-cutter" essay beginnings anyway. Therefore, using a tool that "jump starts" the essay-generation process would allow more focus on craft, not less. As such, this study seeks to determine the most effective pedagogical use of AI essay generators for college composition classes, and how assignments may be better crafted to accommodate changes in technology. Students from a first-year English composition course were instructed to complete a rhetorical analysis and AI essay writing collaborative project using AI tools, such as EssayAiLab, OpenAI, and AI Article Writer 3.0. Importantly, the AI tools selected for the case study were all freely available and were not designed to complete full-length essays and research papers.

Results from the study indicate that instead of students adopting these tools to write on their behalf, the process was collaborative and required additional effort. The collaborative process to write with an AI (instead of the AI writing for students) did not result in rampant use for plagiarism or cheating and instead assisted with the development of higher-order thinking skills to fully leverage NLP resources. The future of college writing then is not the banishment of technology from the classroom, but an understanding of how to craft assignments and adopt new pedagogical approaches to prepare students to work with (and not against) technology that will be required for the future of work.

Literature Review
AI Essay Generators
Software and AI applications dedicated to essay generation are more varied and accessible to students than ever. The different types of essay generators can be located on a sliding scale from those that can assist with generating topics to outlines to those that write full papers and Automatic Article Generator (AAG) writing that is powered by AI. The most common writing assistants today for most students are Microsoft Word, included in the Office Suite, and Grammarly. In fact, the technology has become so commonplace that one would be hard pressed to find a writing or research assignment in higher education that did not require the use of word processing software to check for spelling and grammar, format research, and package for electronic sharing.

At the same time, advances in NLP and machine learning (ML) have moved so rapidly that academia is continually challenged to keep pace and integrate these newer technologies into existing policies and procedures of teaching and learning. For instance, as noted the web-based GPT-3 software program, developed by OpenAI (https://openai.com/api/ , is able to generate prose from any prompt that cannot be detected from anti-plagiarism software as the output cannot be found elsewhere. The ML algorithm scours the entire internet each time a new query is submitted and produces a unique output that is always different. The outputs from GPT-3

can be tailored and specific to any form of writing, including op-eds, jokes, advertisements, and so on.

As noted, given that each prompt costs less than one cent and the cost to hire a writer to produce a college-level essay is around $15 to $35 per page, the value proposition is quite enticing for students [5]. And GPT-3 is just one of a growing number of inexpensive or free options available including Moonbeam (https://www.go-moonbeam.com/), The Good AI (https://www.the-good-ai.com/), EssayAiLab (https://www.essayailab.com/), Paper Typer (https://papertyper.net/), My Assignment Help (https://myassignmenthelp.com/essay-typer.html), and EssaySoft (https://www.essaysoft.net/essay-generator.html) to name a few. The initial reaction from educators, especially those who teach English composition, has been to design assignments that thwart a student's ability to use these generative tools.

AI in the Composition Classroom

In order to push back the adoption of AI essay generators by students, relays several strategies currently employed by college faculty [5]. For instance, students can be required to draw on materials covered in class in the essays and to revise work in response to instructor feedback. As these tools are unable to cite sources and readily edit content, scaffolding assignments is one strategy to discourage their use. Writing prompts can also be designed to specifically address localized issues not available online. Another method is to have students produce artifacts that AI is unable to create, such as PowerPoints, podcasts, or verbal presentations. Finally, students could be required to complete written assignments using proctoring software, such as ProctorU or Honor Lock, or offline in a live proctored computer lab.The preceding examples all represent efforts that might be adopted to discourage the use of AI writing tools and focus instead on traditional teaching methods of college composition, which have a healthy corresponding body of scholarship [7-12].

Research into the use of AI essay generators in college composition classes, however, remains in a nascent phase. The limited studies that have been conducted point to the limitations of using such tools and the need for instructional interventions on the part of peers and instructors. for instance, conducted a classroom-based approach to determine the viability of using automatic writing evaluation (AWE) software for pedagogical purposes in the teaching of writing. As a tool, AWE is designed to provide instant scoring for submitted essays along with diagnostic feedback. The study specifically looked at the implementation of the AWE software MY Access! in three EFL college writing classes in Taiwan to determine how students perceived its effectiveness in improving their writing. Results indicated a negative perception of the software by students overall but more positive in the early stages of the drafting and revising process, which also included feedback from the teacher and peers later in the process [13].

Using the tool as a surrogate writing coach for students led to frustration and was found to limit learning of proper writing. also studied the use of AI to teach English as a Second Language in Indonesian classrooms [14]. As with Chen and Cheng, students were surveyed on their perceptions of using an AI application in the processing of learning to write in English. Overall, students responded positively to the use of AI in the process, reporting that not only could AI be used to assist during the writing process and help with grammar and vocabulary, but also assist in understanding theoretical concepts. However, in reviewing how the assignments were structured, a trend emerges again. The use of the AI essay generating tools was accompanied by pre-planned interventions on the part of the instructor, as well as communication and collaboration skills reinforced in groupwork. In other words, students found the tool helpful in the learning process as long as it supplemented traditional feedback instead of supplanting it. The same results were more recently confirmed in a study by in a study of the use of AI to support teaching and learning in college creative writing courses [15].

The study included an NLP application that provided students with the ability to check their grammar against the principles and techniques covered in class. The algorithm was also intended to improve creativity in students; however, results indicated that participants were willing to admit the part played by the tool in improving grammar, but not in improving their creativity as writers. Students did find the use of the algorithm useful but only as part of the larger context of peer and instructor interventions in their writing process. As demonstrated in the studies above, the relative usefulness of AI in the college composition classroom is largely dependent upon the design of the assignment and the teacher's pedagogical and technological competences.

Students benefit from being exposed to the tools, especially at the formative stages of writing, but need support and interventions from peers and instructors in the later stages. What is absent from the previous literature is how prevalent the technology will become and the expectation of basic use of ML and AI commonplace in the workforce will be as common as the Microsoft Office Suite today. relates that some faculty have already begun embracing AI and reimagining how to teach using the new tool in order to ensure students have what will be required for future workplaces [16]. On the other hand, adoption will be slow; for as an Inside Higher Ed poll (2022) recently demonstrated, all higher education respondents stated that students submitting essays completely composed by AI are behaving unethically.

The same respondents, however, agreed that there is a "gray area" and that a level of use of AI tools is acceptable. As such, D'Agostino argues that while most faculty will continue to defend traditional methods of teaching English Composition and attempt to identify the difference between cheating and assisting student writing with AI, this ignores the realities of education. These new tools can assist students who do not consider themselves writers, as well as those underrepresented populations that struggle to find their place in literature. Overcoming writer's block is one such area of formative assistance that AI has already proven effective. Other students

who are more proficient will be able to use AI to further hone their abilities, and studies speak to this [15].

Methodology

The mixed-methods study included data from surveys collected from students. The sample was collected from Lindenwood University, a private, four-year, liberal arts institution in the suburban ring of St. Louis, Missouri. Participants included 21 undergraduate students from all colleges across the University enrolled in English Composition I in Fall of 2022. The purpose of the study was to investigate the usefulness and limitations of AI essay generators for teaching and learning in college composition classes. Students were instructed to complete a rhetorical analysis and AI essay writing collaborative project using any of six AI tools, including EssayAiLab, Essay Soft, Good ai, My Assignment Help, OpenAI, Paper Typer, Study crumb, Article Generator, and AI Article Writer 3.0. Students were also encouraged to find other examples. Exercises to introduce students to the functionality of these tools took place for the first three weeks, three days a week.

Early prompts were notably open-ended and intended to showcase potential future uses in the class. Students tested the AI essay generators for two weeks and then completed a reflective essay on their perceptions of the experience. This project utilized a mixed-methods study design which included qualitative (open-ended comments) and thematic (quantitative) results from two online surveys. Students were contacted either through the University course management system or were emailed with links to online surveys. The first survey was administered in the second week of the term, prior to assignments using AI. The pre-survey collected data on student demographics, comfort with technology, dedication to self-improvement, experience using AI in general and essay generators in particular. The second survey was administered in the eighth week, after the two AI essay assignments had been completed.

The post-survey collected the same student demographic data, as well as the experiences using the AI tools and asked students to rank the usefulness for learning writing. Participants were asked to indicate via a 1-10 Likert scale their perceptions of AI technology in general and the new tool in particular. Students were asked an open-ended question regarding their experience. All data was collected using Qualtrics to ensure privacy and anonymity of responses. These results were sorted based on demographics, and data were exported for the survey system. Descriptive statistics were calculated and used for comparisons between groups.

Results

Of the 21 student respondents, all were between 18-24 years of age; 95.24% were First Year students; 61.9% identified as female and 38.10% male; 73.08% identified as White, 15.38% Black or African American, 7.68% Asian, and 3.85% American Indian or Alaskan Native; 95.24% were non-international students; 71.43% identified as student athletes on the University campus; 9.52% identified as first-generation college students; 90.48% stated they

lived on campus as a residential student; and 85.71% claimed to primarily take classes in a face-to-face modality. All students were enrolled in the course as a General Education requirement to fulfill their first-year college writing requirement.

The pre-assignment survey asked students to rate their openness to self-improvement as an indicator of proper use of an AI tool. Of respondents, 90.48% selected moderately or very open to improvement of their writing. Students were then asked to estimate how many hours in a given week they spend trying to improve their performance on skills that matter for them personally- 4.76% stated more than 10 hours, 28.57% 7-9 hours, 14.29% 4-6 hours, 28.57% 2-3 hours, and 23.81% more than 1 hour. Next, students were asked a series of questions about their level of comfort and experience with technology in general and AI in particular. The majority of students (57.14%) claimed to be somewhat comfortable with technology in general, but 33.33% selected somewhat to extremely uncomfortable. 61.9% also claimed to have never used an AI application to help improve their writing, 23.81% had, and 14.29% were unsure. Finally, participants were asked to rank in order the ways AI essay applications may improve writing followed by a free response to clarify. Students then ranked the following in order of importance from most to least (Figure 1):

1.   Help organize existing ideas
2.   Assist in creating new ideas
3.   Ensure proper syntax is used
4.   Check for correct grammar
5.   Suggest creative solutions
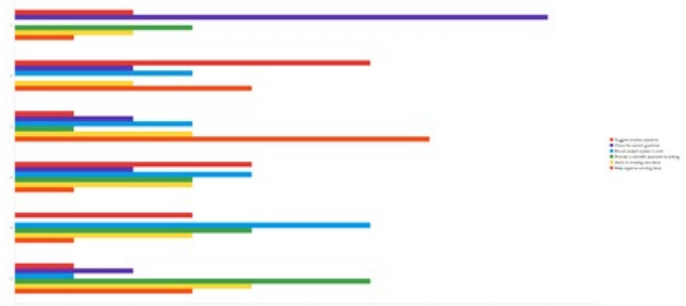6.   Provide a scientific approach to writing

Figure 1: Student ranking of AI usefulness in improving writing before use

The following free responses clarified the selections and highlighted many of the suggested uses outlined in the Literature Review. For instance, one student noted how they did not identify as a writer and the tools could help with creativity: "I am not super creative so hopefully it could help with that." Another reiterated the sentiment and stated that: "these tools can be helpful because it could help in areas i struggle with, it can give me ideas." Nearly half of the responses highlighted the ability of AI tools to assist with the mechanical aspects of writing including grammar and syntax: "They would be helpful because we have a tool that will always

be handy to help us write and caught mistakes maybe you or anyone else couldn't see." Likewise, another student wrote: "They can help fix mistakes that you don't see yourself like grammer or spelling issues."

Many students also touched on the ethical use of AI and highlighted the potential benefits: "If used properly the tools can ensure more creativity as the user would become less focused on details of proper writing and more so on the information they are putting down." Directly addressing what the last student alluded to were a number of others who questioned, "If we rely on a computer to write our essays, how do we improve their writing?" And another noted the potential for academic dishonesty and abuse, claiming, "It could also be a negative thing if people use it as a way of getting an essay wrote for them."

The post-assignment survey asked students to reflect on their experience with AI and to reassess their previous assumptions. Students were first asked if they preferred having the AI essay generator exercises as part of the class. 50% stated that they did, 20% did not and 30% were unsure. In keeping with the feedback from the pre-survey, none of the students claimed that the tools helped improve their writing. In fact, 60% claimed resoundingly that it did not, and 40% responded as being unsure. The ambivalence

over the usefulness of such AI tools surfaced again when students were asked if they could see themselves using something like them again in the future for writing. 60% stated "maybe" with 30% stating "yes" and only 10% selecting "no." As suspected, as with the studies in the Literature Review, the researchers had assumed that students would start the class with the belief that AI could, in fact, write complete and finished essays and would end the class being more dubious.

The results were borne out with 30% believing beforehand that AI could effectively produce essays, 20% unsure, and 50% stating that it could not. After the assignments using AI in class, 70% stated that AI could not produce quality full-length essays with 20% unsure and only 10% believing that it could. Students were then asked to re-rank the ways in which AI may be useful in the writing process again with the same options (Figure 2).

The results were as follows:
1. Assist in creating new ideas
2. Ensure proper syntax is used
3. Suggest creative solutions
4. Check for correct grammar
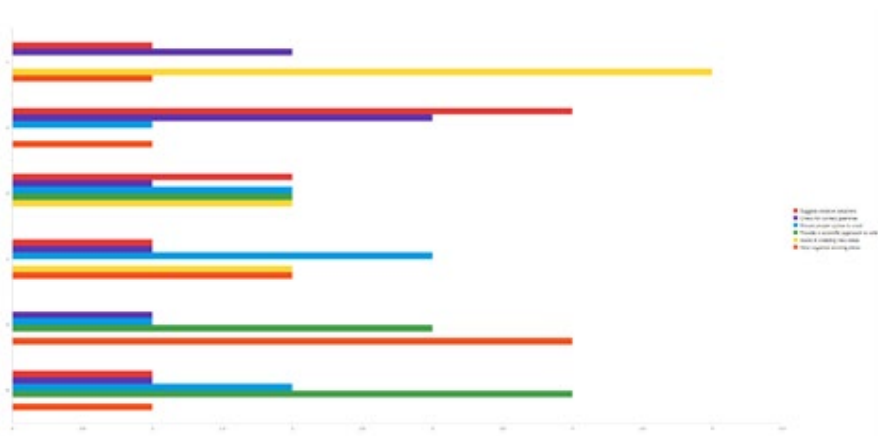5. Provide a scientific approach to writing

Figure 2: Student ranking of AI usefulness in improving writing after use

Notably, no one selected "Help organize existing ideas," which was the first selection in the pre-survey of the ranking. In comparing the responses from the pre-and post-survey results, before using the tools, students ranked creativity and organizing ideas the highest. After using the tools, students more emphatically in their ranking (the last three in the post-survey were tied and one was not even selected) relayed the belief that the tools could really only check for mechanical aspects of writing and help start the writing process if writer's block occurred. In the written artifacts produced and reflective essays, students reiterated their findings of using AI to assist in the writing process and not replace or usurp that process.

Roughly half of the students noted how the tools could be used to assist in starting the writing process. As one student noted, "To be

completely honest, I have been fairly impressed with some of the pieces of writing that have been produced from the AI tools that I have fiddled with. These tools could for sure be something that people can look to, when running into a kind of mental block with writing. It happens often to many where it seems impossible to find topics to write about especially when given a specific prompt and not a whole lot of creativity." Another student provided a concrete example of this during their writing process: "The positive thing about using AI to help write papers is getting started on what topics I can do. For my other paper, I used an AI to help with writing prompts for an essay. It helped by showing me what I can write on the topic, and I can expand on what the AI gives me. So, if the topic were about why coral reefs are dying, it would help give me ideas on what to write on."

While many students were quick to note how writing with machine-in-loop processes worked well in formative stages, ultimately, most noted the limitations of AI in writing complete essays or even ideas. One student noted that there is not a substantial amount of material generated for a full essay: "The first issue is how it does not produce enough material to define its answer as an essay. This limits the AI's usability as an essay writing tool as it gives small and concise answers. This would make it more like a brainstorming tool or a chat bot, but it can't be defined as an essay writer. Of course as a brainstorming tool the AI's human-like answers give a wonderful source to assist writers in getting feedback." Another noted the limitations on following through with reasoning on given topics: "One of flaws many of the AIs presented was the lack of specifics.

For example, they would be able to provide a statement saying bullying has a negative effect on one's mental health, maybe because that is accepted by society, but wasn't able to explain in what ways or provide examples." The same frustrations were expressed by another student who noted the disjointed nature of generative sections: "These tools do not even truly write most of the work but find the work of authors and hand them to the user. Paragraphs felt as though they were just ripped out of an article rather than incorporated into a proper opening to an essay. In a way, these websites are glorified google searches, giving its user the ability to browse the work of others rather than witnessing the intellect of an AI." In all, students in the study liked working with the AI tools and claimed that their use would be preferable in the future, but only in specific aspects of the writing process and not in writing a coherent, and well-written or crafted essay.

AI as Subject and Object

Instructor reflection on the use of AI tools for the class included recommendations for a measured approach in implementing these tools into assignments. While faculty may consider students to be highly proficient in technology, students in this study did not demonstrate self-sufficiency in the use of the tools provided. For instance, even though students were allowed to find their own AI tools, few actually did. The instructor had expected students to immediately take to the use of the NLP with prompts but after the first day decided on a more targeted approach in guiding students through demonstrations of how to use the technology properly. Testing the potential of the writing applications for several weeks led to the realization that the assignment was too open-ended and was, therefore, refined and structured with more meta-writing in the next phase of the class in order to have students write about writing itself. One of the limitations of composition classes is that there is no subject matter inherent to the course as the focus is on writing. Instead, composition readers assigned to classes often focus on political issues of the day, supplemented with some instruction in technical topics such as improving usage. As such, first-year students are not exposed to primary source research and read secondary sources as context for developing arguments. What developed in the next phase of this class is a potential model for others rethinking the composition class. When students began using the AI tools, the instructor predicted that the grammatical and technical functionality would be most useful for students, but that was not the case. Students did not focus on the act/craft of writing or the granular level of processes but instead gravitated towards the macro-level of the tool to be used and began using prompts on how AI would impact society and related ethical considerations.

Instead of accepting articles on given topics as fact, students would use the AI to test whether what they were reading about AI was accurate; the process became self-reflective. For instance, after finding a statistic that AI would automate jobs and displace workers, students began asking AI what the future of work would entail and how AI would impact it. Next, students asked the AI if AI tools are a "good idea," and attempted to discover if the algorithms had any inherent moral or ethical biases by attempting to prompt the AI into the position that "racism was a good thing." Students discovered that AI reflected contemporary values familiar to the students as drawn from their own communities. The process of how ML and NLP actually functioned became a primary area of interest as students began to notice how AI think about things. As they were intrigued by how AI processed information, many students attempted to see if they could make the algorithm malfunction or do or say "silly" things.

Writing as Iterative and Collaborative

As demonstrated in the data collected from this case study, the use of AI certainly falls into a current "gray area" between entirely student-produced and augmented content. The greatest misconception about the use of such tools thus far seems to be in an "all or nothing" mentality: either students write in isolation from emerging technologies, or they are guilty of academic dishonesty. But as the study from North Carolina State demonstrates, the situation is not as clear cut. 87% of students who were accused of "cheating" by integrating AI-generated content into a final essay reported that actually doing so was much more complicated than writing the paper themselves [16]. The claims of students are borne out in other studies as well, which note that for successful use of AI essay generating tools, pre-planned interventions on the part of the instructor must be included, as well as communication and collaboration skills reinforced in groupwork [13-15].

In other words, students found the tool helpful in the learning process as long as this use supplemented traditional feedback instead of supplanting it. As noted by the instructor in this study, the most common response from students was that in order to use the tools successfully as a writer, close contact between the student and tool needed to be maintained during the process. As one student wrote of the collaborative exchange between human and AI: The AI-written paper wasn't completely smooth, but that's probably because a large portion of it was generated. The issue could probably be solved with a better ratio between AI and human written parts. With a ratio leaning more towards the human written side, it brings not only a more coherent paper, but a more ethical one.

Using an AI to type some of a paper should not be seen as com-

pletely immoral. After all, it's not so different from asking a peer for writing advice, and using some of their suggestions. It does become an issue if one uses AI to type an entire paper, and then tries to pass it off as if it was their own. The AI generation was used as the majority of the mock paper to see how it would turn out, not to claim the entire paper as an original work... In conclusion, with their many strengths yet apparent weaknesses, AI tools like OpenAI are good tools for strengthening papers or bridging the gaps. It would be more trouble to constantly find transition words than just writing a paper on your own. AI should be used as a sort of guide to follow on paper typing, or using generated parts as a springboard for adding text when needed. Given that the process is iterative, the AI could generate content, but students still needed to check the suggested material against the overall essay and decide whether to use it or not. The results suggest that writing with computational assistance currently must be collaborative to be successful and demands active engagement on the part of the human participant [16].

Conclusion

While technical instruction using AI for college composition is further out, these tools can be adopted today to prompt interesting conversations or generate ideas on topics. This case study demonstrated the self-reflective nature of student engagement with technology, which led to discussions about social ethics, bias and technology in society. One of the issues with these services is that AI essay generating applications are marketed as ways to replace, and not improve, the writing process, compounding misunderstandings about their actual use and capacities at present. The fears and anxieties over such technologies making college composition outmoded are unfounded.

This is not to say that there are not paid services that are able to effectively generate college-level papers that can receive high marks and are undetectable by plagiarism software. However, the best paper generating tools are over $100 a month, which places them out of reach for most college students. At the same time, paid services such as PapersOwl have existed for decades over the internet, allowing students to pay others to write their papers and pass them off as their own for around $10 a page. Therefore, the concern over the latest method to avoid writing your own term papers is just one in a long line.

The effects on college students in the short term will be two sides of the same coin. Students will be able to focus on studies and spend less time writing essays and focus on the material to be covered. On the other hand, aspects of the writing process will be replaced with automated processes [5]. In the end, the teaching of college composition will still follow some traditional best practices, including scaffolding assignments, instructor and peer feedback during the drafting process, and balancing new approaches with other forms of knowledge gathering and transference. But AI will be beneficial in other ways and support pedagogical areas composition instructors have found challenging. For instance, the social context of writing determines writing conventions, and yet most first-year writing classes are still focused on the development of transferable writing skills across disciplines.

As writing curricula need to teach strategies of how to respond to contextual elements that may inhibit situations of writing [17]. also notes how important successful academic collaborations are in the writing process [18]. point out the importance of writing in context and how important prior knowledge is in developing students' writing abilities. In three models, the authors present how students respond to and use new knowledge, including assemblage, remix, and critical incident [19]. With the debate over a general approach to college composition and one grounded in a discipline-specific framework, AI has the ability to address and augment many of the recommended writing pedagogies out there today and move students beyond their initial perceived self-limitations and open up new possibilities for writers in the future. On behalf of all authors, the corresponding author states that there is no conflict of interest. Data is available upon request for the study.

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