



RSGC
Royal St. George's College

The Young Researcher

2025 Volume 9 | Issue 1

ChatGPT Usage among Teens in Humanities Courses

Harshavardan Gunasegaran

Recommended Citation

Gunasegaran, H. (2025). ChatGPT usage among teens in humanities courses. *The Young Researcher*, 9(1), 18-37.
<http://www.theyoungresearcher.com/papers/gunasegaran.pdf>

ISSN: 2560-9815 (Print) 2560-9823 (Online) Journal homepage: <http://www.theyoungresearcher.com>

All articles appearing in *The Young Researcher* are licensed under CC BY-NC-ND 2.5 Canada License.

ChatGPT Usage among Teens in Humanities Courses

Harshavardan Gunasegaran

Abstract : The artificial intelligence program ChatGPT has become increasingly prominent within society, especially in education. It is known for its ability to generate quick responses to prompts, regardless of the discipline. Pre-existing research focuses on issues of AI-related academic integrity, but few identify the motivation for its usage and for what specific tasks. Correlational and thematic analysis was conducted through a mixed-methods approach, in the form of a survey and interviews, identifying the specific tasks for which high school students within the Greater Toronto Area use ChatGPT and their motivations. The results revealed that students primarily use it for writing essays and research papers, based on the time they have to complete an assignment, interest in the course, and character of the assignment (formative vs summative). This research helps humanities teachers and educational policymakers alter their coursework such that students continue to develop the necessary humanities skills despite the growing presence of AI.

Keywords: ChatGPT, high school, mixed method, humanities, GTA (Greater Toronto Area)

Introduction

Artificial Intelligence (AI) is a computer system that can simulate a human's ability to think, learn, and adapt (Stryker et al., 2024). Though the pace of innovation in artificial intelligence grew significantly during the 20th century, it only gained major recognition in the past five years, following the introduction of OpenAI's third-generation ChatGPT, which attracted a million users in less than five days (Reynoso, 2019; Marr, 2023). From creating essays to debugging Python code, its versatility is increasing. However, its unprecedented abilities have given rise to many questions throughout the educational community on the ethics of its usage and its acceptance in academic institutions. Many sources highlight the significant increase in the usage of AI, specifically in educational contexts. Prothero's (2024) findings indicate that 63% of American undergraduates were ac-

cused of using generative AI like ChatGPT in 2023, and 1 in 10 assignments submitted through Turnitin contained some traces of AI-generated content. However, there is not enough emphasis on what specific fields of study (STEM, Humanities, Arts, etc) utilize these tools. Knowing which fields rely on AI the most can help conclude what ChatGPT is most capable of based on what it's being used for the most. This data can then be used to inform educators about what they would change about the coursework to ensure the students make the most out of their classes. Due to the majority of AI studies focusing on AI's ability to code and its ability to write thought-provoking essays, this paper will focus on ChatGPT's impact on humanities courses. There is also another gap regarding the focus on largely post-secondary populations, with studies like Wood and Moss (2024) examining graduate students' usage of generative AI without addressing its impact on younger populations, especially today's

teenagers, who were introduced to such resources earlier on. Finally, a majority of these studies are based in the USA, like Ngo and Chng et al's 2023 studies. As a result, this study will be conducted on Canadian teenagers, specifically those in the Greater Toronto Area (GTA). This leads to the research question: To what extent is ChatGPT utilized by high school students in humanities courses across the Greater Toronto Area to complete schoolwork? Correlational research will be done through surveys to gather data on usage patterns between those who take humanities courses. Qualitative analysis will be conducted through interviews with humanities students who will be asked questions on whether they use ChatGPT for problem-solving, coding assistance, etc. In contrast, humanities students will be asked questions on how they use it to analyze texts, generate essay topics, etc. Understanding the extent to which ChatGPT is integrated into the academic practices of high school students in the humanities provides educators with insights so they can tailor their teaching strategies accordingly.

Literature Review

The Role of ChatGPT in Education: Applications and Prevalence

ChatGPT and other learning AI tools are increasingly prevalent in recent times due to their expansive applications in education. Gonzalez (2024) states that nearly half of the students polled in the Tri-State Area indicated that they used ChatGPT for schoolwork. ChatGPT is beneficial in offering instant responses to learning questions, aiding in writing essays, and summarizing content, thus making it a viable option for students who would like to do academic work with ease. Research by Sumakul et al. (2022) indicates that AI tools like ChatGPT are used extensively for various learning activities such as tutoring, grammar checking, and improving writing structure. As Fitria (2023) explains, ChatGPT has also impacted English as a Foreign Language (EFL) classes, with students using the AI tool to improve writing and avoid grammar errors. Moreover, ChatGPT is also useful for lecturers, as it can prepare course materials, offer ideas for syllabi, and even construct tests or activities (Lo, 2023). As good as these benefits are, greater dependence on AI in academia

evokes concerns about whether there is a possibility for excessive use of such tools. Despite ChatGPT's benefits, there is increasing doubt about its impact on student participation in learning and intellectual development. As per Chen et al. (2020), while it may make students more efficient, it may in turn lower students' motivation to study content thoroughly, especially if they would rather use AI to do the work.

Student Perceptions of ChatGPT and Its Impact on Learning

Students have completely different attitudes regarding the effectiveness and perceived value of ChatGPT as a learning tool. Studies show that several students find the AI tool beneficial, but others are worried about its ability to disengage students and deter them from critical thinking. In Tossell et al.'s study (2024), students using ChatGPT to complete a college essay assignment expressed initial skepticism because of the perceived risks of cheating and academic laziness associated with the use of the tool. After completing assignments using ChatGPT, a considerable number of students did, in fact, report a positive attitude shift, claiming they started viewing the tool as a collaborator rather than a shortcut. This positive attitude shift is consistent with the study conducted by Jen and Rahim (2024), as they report that students taking writing classes appreciated having the support of AI in enhancing their essays as well as argument structure, but were also worried about the over-reliance on AI. Students have expressed appreciation for ChatGPT as a resource that can enhance writing skills, but doubts about its impact on self-learning capabilities remain unsolved. Fitria (2023) notes that some students feel less driven to engage with materials or assignments that require lots of reading when there is an option to just rely on ChatGPT's generative ability to provide responses or summaries. Such reliance can impede students' ability to engage in higher order reasoning as well as develop critical thinking skills, both of which are important for learning and achieving academic success. While students tend to view ChatGPT positively as a convenience, they also regard it with some degree of skepticism since a significant number of students are concerned that it would negatively affect their level of intellectual engagement. The problem remains as to how to apply AI to improve learning while

preventing the erosion of critical and independent thinking skills among learners.

Ethical Implications and Academic Integrity in the Use of ChatGPT

As ChatGPT becomes adopted more in students' academic-related activities, major ethical concerns associated with its usage, particularly around academic integrity, are increasingly emerging. With AI being used in composing essays, calculating math questions, etc., numerous teachers are concerned about the misuse of this technology (Chounta et al., 2021). Studies suggest that AI applications such as ChatGPT can generate essays at par with human writers, which raises the worry of academic fraud. Research by Jen and Rahim (2024) found that 40% of the students had actually utilized AI tools for homework and viewed it as the new norm, with some stating it as a normal routine. This proves that the enforcement of not using AI tools is becoming a challenge. Waltzer et al. (2024), along with Liu et al. (2024), both found that teachers can only confirm ChatGPT-written essays as such 70% of the time, and that students did worse at an accuracy of only 60%. Gonzalez's (2024) study and Baskara's (2023) study discover a paradox: students claim to know about academic integrity, yet students use ChatGPT for academic work. Similarly, Abdelaal et al. (2019) learned that the majority of students do not see AI-assisted writing as misconduct. Many students also justified their ChatGPT usage. They stated it enhances the quality of their work and saves time, proving how AI is being normalized within education (Abdelaal et al., 2019). This shift is giving concern to instructors who are tasked with maintaining academic integrity. Haleem et al. (2022) suggest that schools use AI detection software to prevent further unethical AI usage. He says it is necessary for educators to have conversations with students about the unethical usage of AI to increase their awareness. As AI usage increases, traditional assumptions about plagiarism and cheating are being questioned on a continuous basis. Al Fraidan (2024) advocates for a balanced strategy for AI in education, suggesting that we focus on making our technology more suitable for detecting AI while also making classwork that is not easily replicable by an AI. This ensures that students are still able to benefit from their classwork.

Gap

The increasing presence of artificial intelligence writing tools in today's classrooms has sparked considerable academic discussion, particularly as students incorporate platforms like ChatGPT into their daily schoolwork. The body of literature explores ChatGPT's usage in the context of education prevalence among students, its impact on their writing and learning abilities, and whether it is inducing any academic dishonesty. Many of the sources focus on how university students use these AI tools, and the academic dishonesty issues that come with it, but there is little research done on the specific tasks and motivations behind students, specifically on the usage patterns of high school students. Furthermore, since many humanities courses are vital for developing writing and critical thinking skills, we need to understand how ChatGPT is influencing the way students approach their assignments and how much they are actually learning. A study has yet to be conducted which truly showcases any potential correlation between ChatGPT's explicit integration into the academic practices of high school humanities students. This leads to the research question: To what extent is ChatGPT utilized by high school students in humanities courses across the Greater Toronto Area to complete schoolwork?

Methodology

This mixed method approach began with a review of the survey and interview questions by an expert advisor, followed by approval by an ethics board to ensure the mental health of the participants would not be harmed. The quantitative data involved surveying high school students (grades 9-12) from various schools to mitigate socio-economic limitations. As minimal pre-existing studies relate to this study, their survey questions did not align with this paper's research. As a result, unique questions were created such that they would fit the study while being easily comprehensible to the young demographic. The survey contained Likert scale and multiple-choice questions to gather data on the frequency of ChatGPT usage for academic purposes (both summative and formative work) and the specific tasks for which it was used in a humanities context (e.g., generating ideas, summarizing content, writing essays). The survey also

assessed ChatGPT's perceived effectiveness (e.g., clarity on topics, marks received for AI-generated content and awareness of academic integrity issues related to posing AI writing as their own). Correlation analysis was conducted between the frequency of use and perceived reliability, teacher communication and formative use, as comparing the frequency with these three helps determine whether ChatGPT substitutes or supplements traditional learning, and how trust in AI impacts usage patterns. The other questions like those regarding guilt or student experiences with inaccuracy within ChatGPT were created to give a broader understanding of the student perspective. The Spearman coefficient was calculated for all three comparisons to accurately determine any correlation through Google Sheets. Students who indicated on the survey that they used ChatGPT for academic tasks and were willing to be interviewed were asked to provide their contact information. This was the final question on the survey, and participants were reminded that their personal information would not be shared in the study. I would contact them through email within one day to set an interview date with them and send them the consent form so that they could agree to all terms before the interview. Interviews were conducted via recorded Google Meets, with questions tailored to uncover the root causes of ChatGPT usage. It focused on three open-ended questions that explored when they started using AI, specific tasks that made AI an attractive option, and whether their reasons for using it evolved, keeping the questions neutral to prevent leading them toward predetermined answers. A thematic analysis was conducted to identify common themes (if any) among the interviewed participants. Taguette, a free software tool, was used to analyze the qualitative data. This application was used to encode specific sections of text, simplifying the process of identifying recurring patterns or themes. To encode a segment, the text is highlighted, and a tag is assigned. New tags (or codes) can be created as needed. Taguette also supports assigning multiple tags to a single text segment if it contains diverse ideas. Once the tagging was complete, the data was exported to Google Sheets to be viewed with clarity.

Sample

The study included 75 participants for the quantitative data (surveys) and 15 participants for the qualitative data (interviews). Participants were recruited

from single-sex and co-ed schools throughout the GTA. Recruitment was conducted through social media platforms like Instagram and Discord, email outreach to various schools, and a few of these students shared this link into their own social accounts with my permission. This allowed me to meet my sample size and get a variable audience from multiple schools throughout the GTA.

Justification

Lo (2023) conducted a similar study on American university students in a virtual school, without focusing on specific subjects and without identifying key variables. His study included 75 participants for surveys and 10 participants for interviews. His sample size was used as his study is most similar to my own study, but he stated that he did not find many themes with just 10 participants; thus, this study has five extra qualitative participants given the data-gathering period. The quantitative data was examined by calculating the Spearman coefficient. Gonzalez (2024) used the Pearson coefficient to compare between age and other variables. As this study was different, the correlation between the frequency of usage and the other variables listed in the previous sections were found. She suspected a linear relationship between two variables and that the data were normally distributed. However, in my case, it was not necessary for the relationship between my variables to be monotonic, as the variables tended to change together rather than at a constant rate (Schober et al., 2018). Thus, I still conducted a correlational analysis but calculated the Spearman coefficient rather than its counterparts, as it was more fitting for my data. The qualitative responses were analyzed thematically, similar to Shoufan (2023) who did a thematic analysis of student opinions related to ChatGPT. She utilized Taguette, which was also utilized in this study as a tool to encode and organize qualitative data by tagging specific text segments, thereby enabling the identification of patterns and themes for further analysis in Google Sheets. As a free tool with an understandable user-friendly interface, it proves to be the best tool for this research.

Findings

Quantitative

Of the 75 participants who completed the survey, one of them was 19 or older, thus, not fitting the demographic. All other participants fit the demographic, stating that they had access to ChatGPT and resided in the GTA. Note that the numbers below the bar graphs represent Likert scale values, with 5 being always, and

1 being never. This convention is used throughout this report whenever discussing Likert scores.

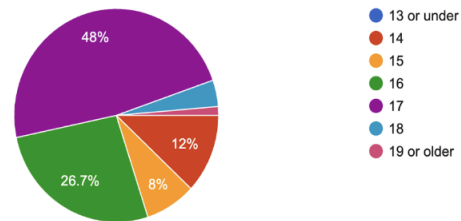
Incidence of ChatGPT Utilization in Humanities Homework

Many high school students in the GTA area use ChatGPT in humanities homework. Of these, 23.7% either never use it or use it sometimes, while 21.1% use it rarely or most of the time. Students most commonly

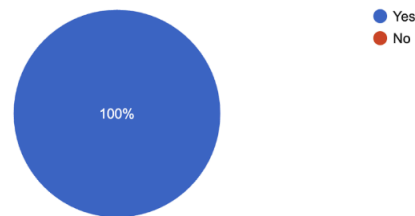
Figure 1

Demographic Questions (age, where they reside, access to ChatGPT)

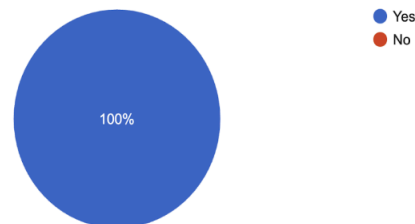
1. How old are you?
75 responses



2. Do you live in the GTA? (All parts that qualify as part of the GTA are represented below).
75 responses



3. Do you have access to the artificial intelligence program ChatGPT?
75 responses



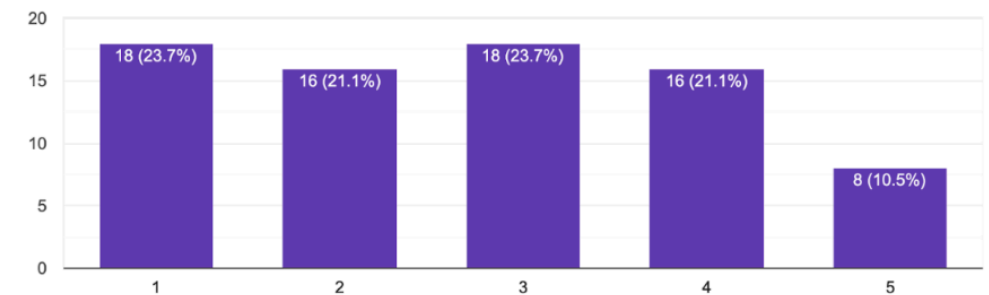
employ ChatGPT in essays (53.3%), research papers (37.3%), and creative writing assignments (28%). Among those who employ ChatGPT for essays, 88% use it to brainstorm ideas, 68% turn to ChatGPT to summarize lengthy texts, and 50% use it to proofread/grammar check. Of those who use it for research papers, 76.5% use it to brainstorm ideas, 64.7% to summarize lengthy texts, and 47.1% to grammar check.

In creative writing, 80.8% use it to brainstorm ideas, while 50% use it to summarize lengthy texts, analyze course materials, and resolve writer's block.

Figure 2

Frequency of Usage and Specific Tasks Used For

5. How often do you use ChatGPT to aid/complete humanities coursework?
76 responses



7. For which of these humanities assignments do you often use ChatGPT to complete? Select all that apply.
75 responses

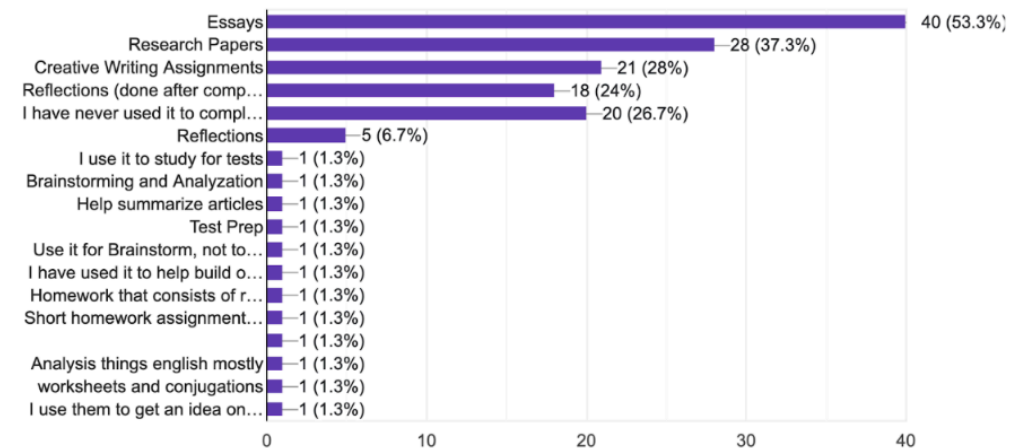
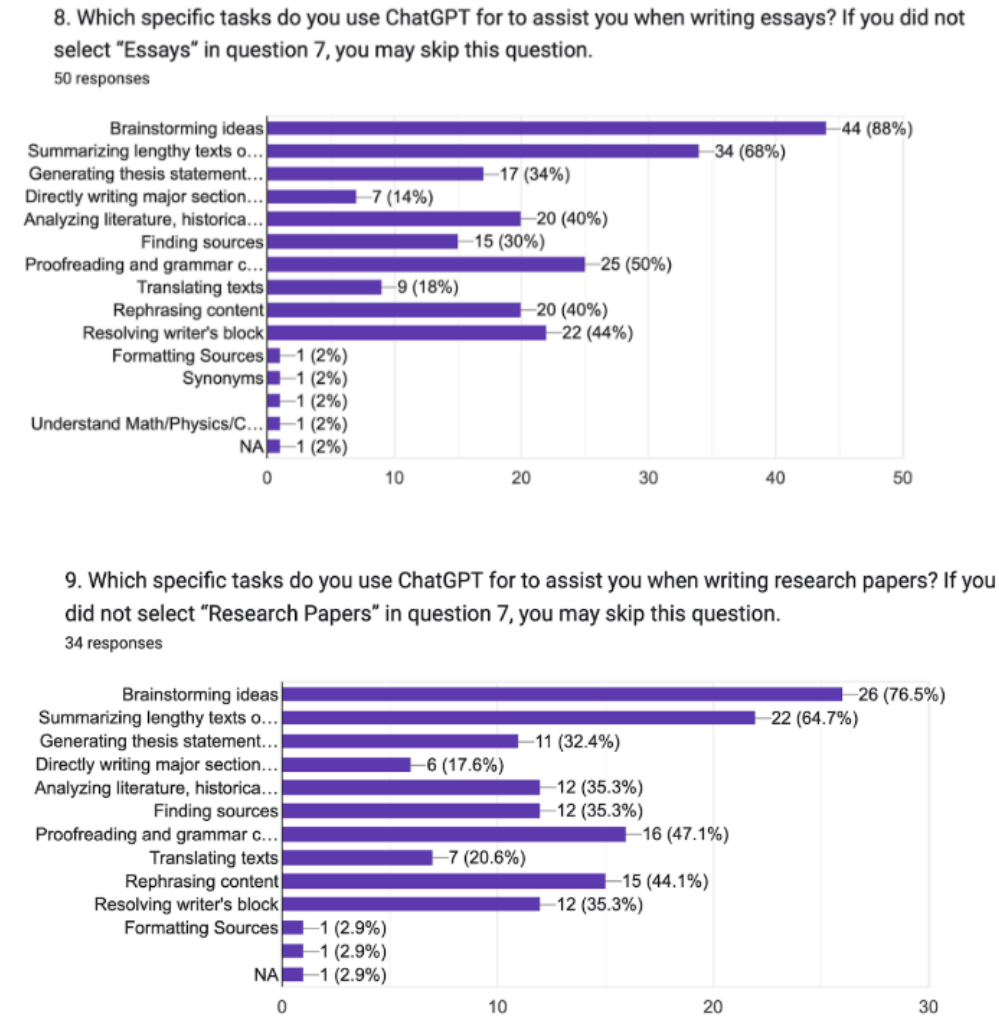
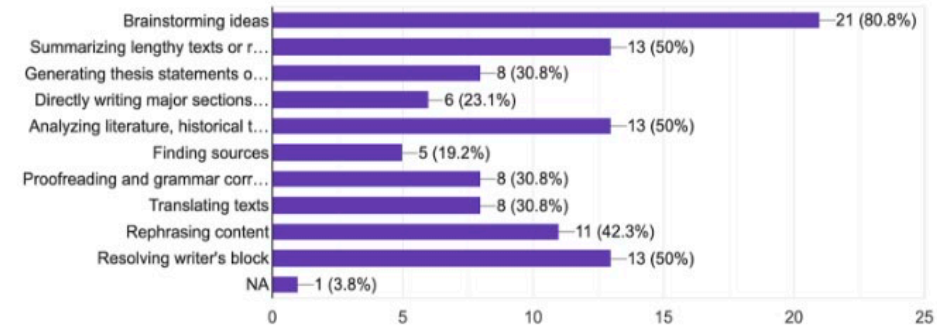


Figure 3
How Used for Writing Essays, Research Papers, & Creative Writing



10. Which specific tasks do you use ChatGPT for to assist you when completing creative writing assignments? If you did not select "Creative Writin...nments" in question 7, you may skip this question.

26 responses



Grades, Perceived Confidence, and Creativity in ChatGPT-Assisted Work

Approximately 9.3% of students indicate that work generated by ChatGPT always scores better than work done by themselves independently, while 17.3% indicate this happens rarely, and 28% indicate this happens sometimes. Meanwhile, approximately 14.7% always have greater confidence in work done through ChatGPT, while 30.7% have greater confidence most of the time. It's also important to note that around

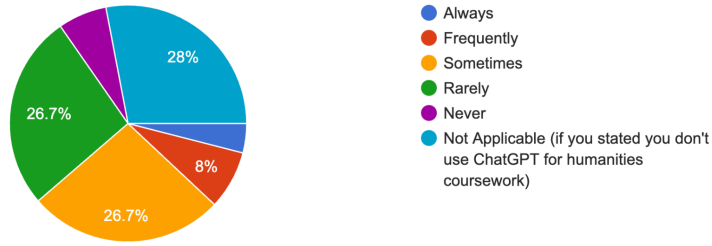
26-30% of students indicated they do not use ChatGPT for humanities courses. Approximately 28% of students feel ChatGPT always limits their creativity in assignments requiring original thinking, while 26.7% say it sometimes does.

Most students use it for formative tasks (26%) compared to summative tasks, whereas 23.7% of students selected a 1, indicating they use it for summative tasks more than formative ones, and 22.4% also selected 3, indicating they use it for both formative and summative tasks.

Figure 4
Grades and Confidence of ChatGPT

17. How often do you feel that using ChatGPT limits your creativity in assignments that require original thinking?

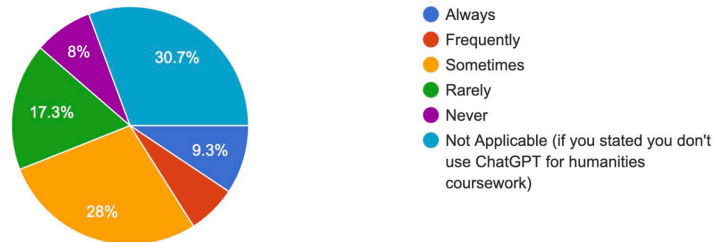
75 responses



CHATGPT USAGE AMONG TEENS IN HUMANITIES COURSES

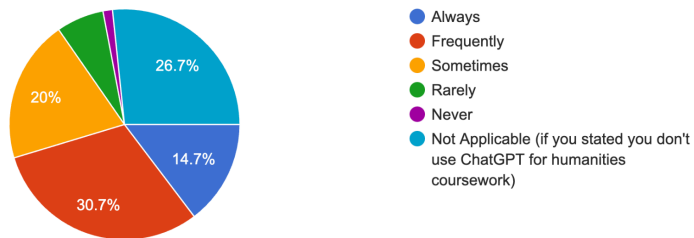
18. How often does ChatGPT-generated content receive better marks than your independently written work in humanities courses?

75 responses



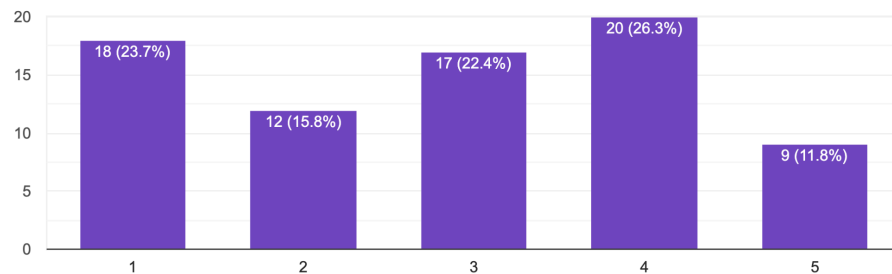
19. How often do you feel more confident in your humanities assignments when you use ChatGPT to assist with them?

75 responses



6. How often do you use ChatGPT for formative tasks (coursework used to check your understanding) rather than summative tasks (cours...butes to your grade) in your humanities courses?

76 responses



CHATGPT USAGE AMONG TEENS IN HUMANITIES COURSES

Efficiency and Reliability of ChatGPT in Humanities Homework

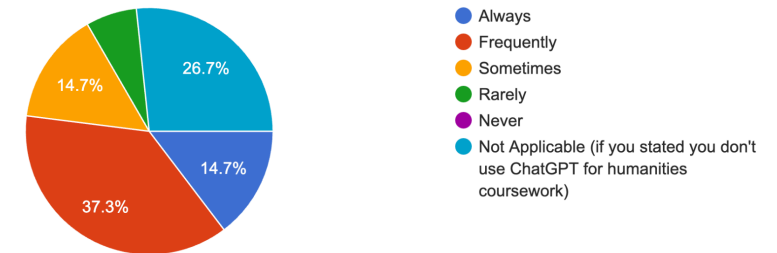
Around 37.5% of students regularly employ ChatGPT to work through homework faster without sacrificing work quality, while 14.7% always think this is helpful in this respect. On the other hand, 6.7% rarely

ever think this helps improve efficiency. Regarding reliability, while 6.7% think ChatGPT is extremely reliable, 25.3% think ChatGPT is a 4 in reliability, while 33.3% think ChatGPT is a 3 in reliability.

Figure 5
Reliability and Productivity of ChatGPT

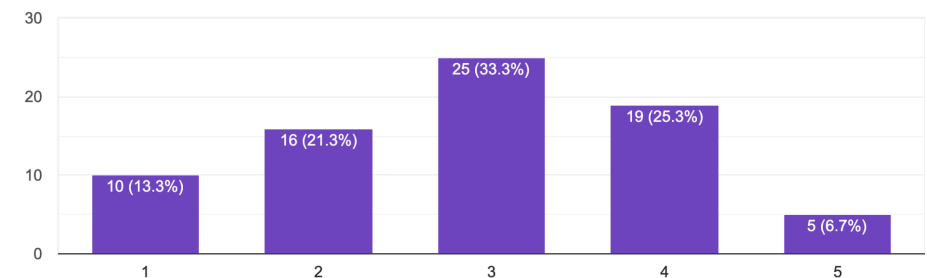
20. How often does using ChatGPT help you complete your assignments faster without compromising on the quality of your work?

75 responses



21. How often do you perceive ChatGPT as a reliable resource for generating accurate and relevant information for humanities tasks?

75 responses



Social and Ethical Considerations

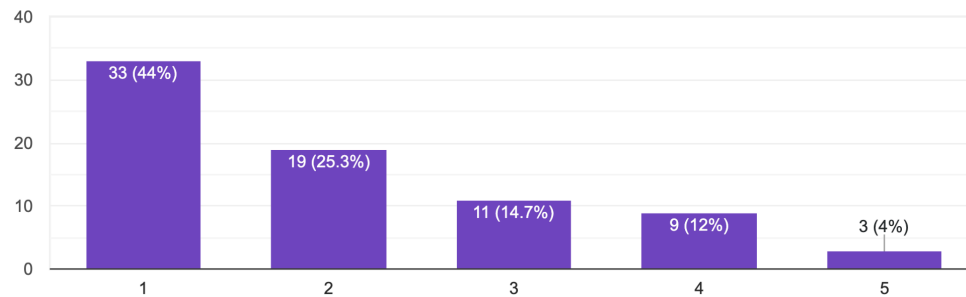
Among students, 44% indicate that they never feel pressured by others to employ ChatGPT, while 25.3% sometimes feel pressured to employ ChatGPT, and only 4% always feel pressured to employ ChatGPT. Additionally, while only 8% always experience guilt in turning in work that is heavily reliant upon ChatGPT,

12% frequently experience guilt in this respect. On the other hand, 28% rarely ever experience guilt in this respect. Regarding peer usage, 41.3% of students frequently see their classmates use ChatGPT for humanities coursework, rating its usage as 4 on a scale of 1 to 5, while 40% rate it as 5, indicating very frequent use.

Figure 6
Peer Pressure and Guilt through ChatGPT Usage

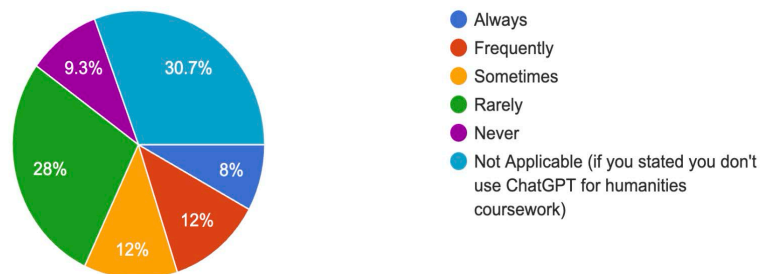
22. How often do you feel pressured by others (peers, media, etc.) to use ChatGPT for your humanities assignments?

75 responses



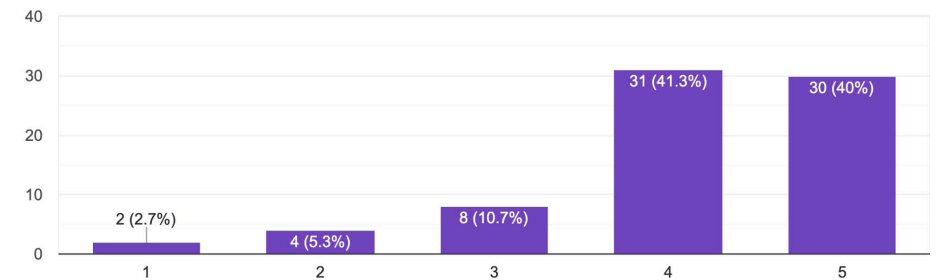
23. How often do you feel guilty when submitting work that heavily relies on ChatGPT?

75 responses



24. How often do you see other students use ChatGPT frequently for their humanities schoolwork?

75 responses



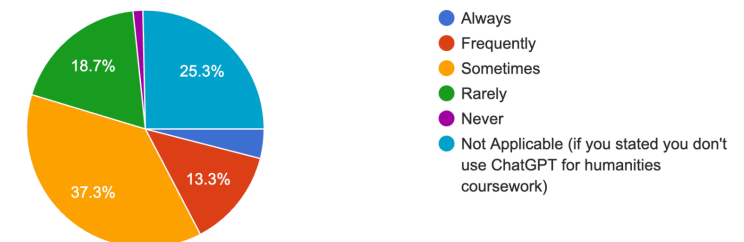
Accuracy and Behaviour in Checking Facts

Around 18.7% rarely experience inaccuracies in ChatGPT use in humanities courses, while 13.3% experience this frequently and 37.3% experience this sometimes. However, only 22.7% always or frequently check ChatGPT responses to be accurate, while 8% never check content produced by ChatGPT to be accurate. Around 32% of students report that ChatGPT sometimes reduces their motivation to seek help from teachers or peers, while 21.3% say it always does.

Figure 7
Accuracy and Students' Willingness to Fact-check ChatGPT Content

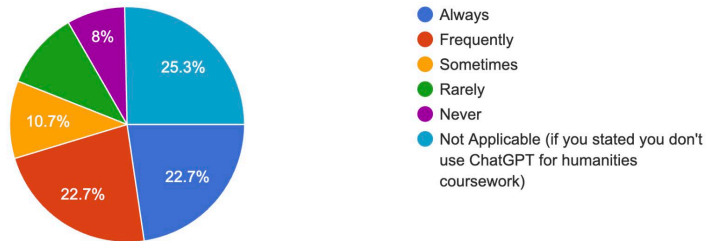
How often do you find ChatGPT providing inaccurate answers to your prompts when working on humanities coursework?

75 responses



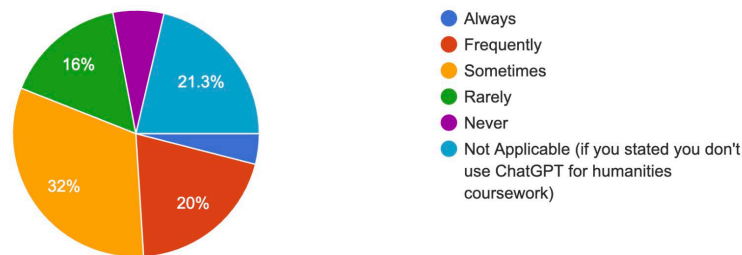
26. Based on the previous question, how often do you verify or fact-check the information provided by ChatGPT?

75 responses



14. How often has the use of ChatGPT reduced your motivation to seek help from teachers or peers?

75 responses



Clarity in Teacher Guidelines regarding ChatGPT Utilization

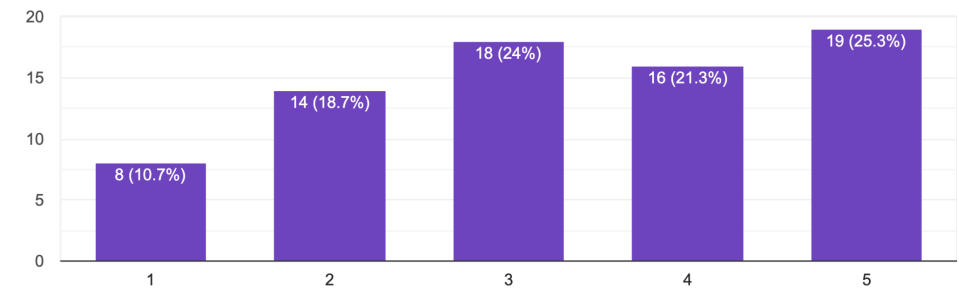
In terms of guidance by teachers regarding ChatGPT utilization, 25.3% report that rules have been explained by teachers clearly (a grade of 5), while 21.3%

grade transparency an overall grade of 4, 24% grade an overall grade of 3, while 29.4% grade an overall grade of 2 or below, an indicator of mixed awareness regarding proper AI utilization in humanities courses.

Figure 8
Teacher Communication of ChatGPT

27. How often have your humanities teachers clearly communicated the acceptable uses of ChatGPT in their courses?

75 responses



Over Reliance on ChatGPT and Impact on Performance

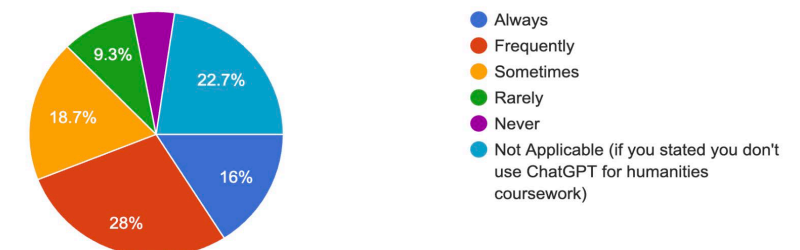
Regarding the use of ChatGPT despite being able to complete a humanities task without it, 28% of students say they sometimes choose to use it, while

22.7% say they always do. Regarding performance, 44% of students believe their humanities performance would stay the same without ChatGPT, while 25.3% believe it would significantly decline.

Figure 9
Overreliance and Impact on the Performance of ChatGPT

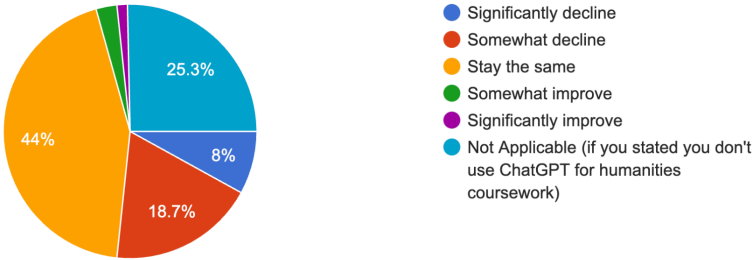
15. How often do you feel you could complete a humanities task without ChatGPT, but still choose to use it?

75 responses



16. To what extent do you believe your humanities performance (grades, understanding, etc) would decline if you stopped using ChatGPT?

75 responses



Qualitative

Below are direct quotations from the 15 interviews conducted, from a variety of high school students from different schools and ages. They have been fil-

tered such that each quote represents a unique idea rather than having multiple quotes that state the same thing. They are organized into three main themes: Factors Influencing ChatGPT Usage, Reliance on ChatGPT, and Challenges of ChatGPT.

Figure 10
Qualitative Themes and Corresponding Quotes

Theme	Direct Quotes from Interview
Factors Influencing ChatGPT Usage	- "It mostly depends on whether the assignment is summative or not."
	- "If the assignment specifically says not to use any AI, I might use ChatGPT to generate some initial ideas to get started, but I won't rely on it for the actual content."
	- "One key factor is whether or not I'm allowed to use it. If I'm not allowed and I get caught, that's not good."
	- "If a teacher, like, openly says that they'd allow ChatGPT, then I'd probably use it to help me a little bit."
	- "I use ChatGPT when I'm stuck or need help brainstorming ideas for writing."
	- "It really just depends on how long I think something will take."
	- "It's more just, like, how confident am I? What mood am I in? Do I want to put in all the work, or do I, like, want to maybe use it for some brainstorming?"

Reliance on ChatGPT	- "I feel less reliant on it now that I'm in grade 12, but definitely earlier in high school, I relied on it more." - "I think when it first came out, I was a little skeptical. Some people took to it more quickly than I did." - "At first, it was kind of a joke, like people would say they wrote everything with ChatGPT, but now it's normalized, and everyone talks about it." - "I feel like I rely on it more now, especially for humanities courses, like English. I'm not a very strong English student, so it's harder for me to come up with ideas on my own." - "Yeah, I'd say I've become more dependent on it, not because I can't do my work without it, but because it's become more popular." - "My use of ChatGPT for humanities has stayed pretty low. I haven't become too reliant on it, and it hasn't really evolved for me." - "So, I'd say I'm more reliant on it now than when I first started using it."
---------------------	---

Limitations and Challenges	- "A challenge is that it can make you too reliant on it, which means you might lose the ability to come up with ideas on your own." - "One challenge I've encountered is that when I ask ChatGPT for quotes on a specific theme or character from a book, it often messes up the page numbers and line numbers." - "I think the biggest challenge is that sometimes it can be inaccurate or contradict itself. When I ask it to clarify, it admits that it's wrong." - "It's not going to be perfect and might not provide the best information or writing structure. So, it's important to review it carefully." - "For me, uh, I don't think it has improved the quality of my work. It mainly helps with efficiency—speeding things up." - "ChatGPT does a really good job of, like, coming up with ideas. But it might use really overly complicated words where, like, you kind of don't understand what's going on." - "Sometimes it straight-up makes things up, and you really can't have that in humanities courses. Accuracy is really important." - "I personally don't think it writes very well, so I don't rely on it for writing."
----------------------------	---

capability, which can encourage them to use it more. Second, usage frequency vs. teacher communication investigates the frequency of communication by teachers about the acceptable use of ChatGPT in the classroom. The relationship between the two variables can be used to ascertain whether increased usage of ChatGPT is related to decreased direct instruction by teachers. The moderate negative relationship of -0.527 shows that students with greater usage of ChatGPT are less likely to have been given clear instructions or rules by teachers about its acceptable use. This can be taken to signify that teachers are not talking about its use in the classroom, or students with greater exposure to the tool are less likely to be looking for such instructions. Finally, usage frequency vs. formative use examines whether students are using ChatGPT for more formative (developmental, continuous) or summative (end-of-unit, evaluation) work. This relationship is important in understanding the nature of the role of the use of ChatGPT in the learning process. The negative correlation of -0.527 shows that the more students use ChatGPT, the less likely they are to use it for formative work (checking for understanding) and the more likely they are to use it for summative work (end-of-unit work for grade contribution). After calculating the p-value for all three correlations, they were all found to be less than 0.05, demonstrating that the results are statistically significant and are unlikely to have occurred by chance.

Discussion

Quantitative

In order to ascertain the extent to which students in humanities classes in the Greater Toronto Area use ChatGPT, several factors were examined related to the frequency of its use. These factors give us an understanding of how students implement the use of ChatGPT in their work as well as the type of use. Specifically, I examined the correlation between frequency of use and perceived reliability, teacher communication and formative use through Google Sheets, and calculated the Spearman coefficient.

First, usage frequency vs. perceived reliability indicates how the perception of the tool by the students can impact their usage pattern. Whether the students use ChatGPT frequently and think it is reliable can reflect whether the tool is appreciated as a valuable and reliable tool for completing schoolwork. The moderate positive correlation of 0.527 suggests that the higher the usage frequency of the tool by the students, the higher the perception of reliability. This suggests the frequent users of the tool can be more confident in its

Qualitative

Factors Influencing ChatGPT Usage

Students have listed a series of determining circumstances that determine whether they will use ChatGPT on a particular assignment. The common ground is that time is a key consideration, with students expressing that they turn to ChatGPT whenever they have a deadline. In circumstances with deadlines, students employ the application in a bid to summarize, do quick research, and format assignments. Another key consideration is the character of the assignment. Students employ ChatGPT to brainstorm and for formative work (work used to check their understanding), but not for summative work (work counting towards their grade), as they do not want to be

involved in academic dishonesty. Some respondents also noted that whether AI tools are allowed or not is a determining factor in whether they will use ChatGPT. Lastly, students' interest in a course also determines whether or not they will use ChatGPT. Assignments that are considered dull or repetitive are likely to be worked on with AI assistance, as students will work on subjects that are of interest to them on their own. Overall, research points out that although ChatGPT is utilized to some extent by a majority of the students for humanities, its usage is variable with students' inclinations, assignment structures, and academic institution requirements. The software is valued in terms of its efficacy, though students are aware of its limitations.

Reliance on ChatGPT

Students' application of ChatGPT is also observed to have evolved. The majority reported increased application from the time that they originally got accustomed to it. Students originally utilized ChatGPT as a novelty, though over time, it more frequently became a more integral part of students' academic work, particularly in formative work as well as preparation.

However, not all students have developed a greater reliance on ChatGPT. A minority of respondents noted that their reliance on the instrument had decreased as they gained more confidence in writing. Some students noted a shift in attitude, realizing that while ChatGPT is efficient, it does not necessarily enhance work quality.

Challenges of ChatGPT

While recognizing its strengths, students identified a series of limitations in ChatGPT in humanities course work. The first is that ChatGPT is not that in-depth in its responses. Some students noted that though ChatGPT is able to generate broad ideas, its answers are shallow or repetitive in a sense, which makes it not as effective in courses that require critical analysis. Another restriction stated by more than half of the participants is that ChatGPT is not necessarily always accurate. Some students observed that ChatGPT can produce incorrect or misleading information, particularly in literary or historical interpretation. In many cases, they say that if you challenge it, it admits

its mistake, raising questions on its reliability. Some also observed that AI-written material can be unnatural-sounding or robotic-sounding, making it identifiable as AI-written material by both teachers and examiners, thus not making it a popular choice for writing-driven courses. Numerous students reported exercising caution in using ChatGPT on graded work because they did not intend to be caught committing plagiarism. Some students also confessed that they had a personal aversion to over-dependence on AI because they did not intend it to undermine their critical thinking or independent reasoning ability in the long run.

Limitations

While I recruited participants with diverse backgrounds from various schools, my study still faced certain limitations in the data-gathering process. I recruited participants through my school connections, social media platforms, and personal contacts, but being an individual high school student, my influence was limited. This limited the capacity to get a fully representative sample of the wide demographic range. Additionally, my recruitment approach—through the utilization of social media platforms such as Instagram and Discord—may have inadvertently recruited students already knowledgeable about or using digital learning tools. The sample may thus be biased towards AI tool users such as those familiar with the use of ChatGPT, which constrains the ability to generalize the results to students who do not typically use such tools. Finally, being a high school student with limited time for the study, I could not further increase the sample size or explore other qualitative questions in more detail, constraining the range of information I could analyze.

Future Direction

Despite the constraints, the data obtained in this study provides valuable insight into the application of ChatGPT by high school students in the Greater Toronto Area. The data reveals that the students use ChatGPT for several purposes in their studies, including the generation of ideas, summarizing text,

and writing essays. The widespread application of the tool indicates the extent to which AI tools are part of the students' learning process. The teachers can apply the data to alter their teaching strategy by indicating how AI can be applied to enhance the critical thinking skills and writing skills of the students while ensuring the students are not too dependent on AI-based content. The study also highlights the requirement for teachers to make the rules for the acceptable usage of AI tools clear. Most of the students indicated that the teachers did not make the rules clear. This is an area for the teachers to devise effective policies for the responsible usage of AI while maintaining the integrity of academics.

Conclusion

From the study results, it can be asserted that the students in the Greater Toronto Area have a significant but diverse application of ChatGPT in their humanities courses. While the majority of the students see the tool as useful for brainstorming, summarizing, and outlining, the application is mostly dictated by the deadline, assignment type, and course nature. While it is considered useful to many, there are still a few students who are reluctant to be too reliant on AI, particularly in the area of critical thinking. This study points towards the growing use of AI tools like ChatGPT in the lives of students, with broad-reaching ramifications for education and learning. However, many variables are still yet to be studied, such as the use of AI in other creative subjects such as artwork or scriptwriting in drama. How AI tools like ChatGPT affect the creativity of students in such subjects may provide a broader insight into the use of AI in education. Further study could also examine how students use AI outside the classroom, such as in extracurricular activities or independent projects, which may provide insight into its use outside the school setting. This gives us deeper insights into the impact of AI tools on teenage lives.

Acknowledgements

I would like to thank Ms. Ashleigh Gledhill for being a mentor in the process of surveying and creating questions.

References

- Abdelaal, E., Mills, J. E., & Gamage, W. (2019). Artificial intelligence is a tool for cheating academic integrity. *AAEE 2019 Annual Conference*. https://www.researchgate.net/publication/337894173_Artificial_Intelligence_Is_a_Tool_for_Cheating_Academic_Integrity
- Al Fraidan, A. (2024). Anticipatory thinking and AI-driven assessments: A balanced approach to AI integration in education aligned with Saudi Vision 2030. *African Journal of Biomedical Research*, 27(3), 619-628. <https://www.ajol.info/index.php/ajbr/article/view/283255>
- Baskara, R. (2023). Unravelling the paradox: Generative AI influences on academic integrity. *Prosiding Konferensi Ilmiah Pendidikan*, 4, 27-36. https://repository.usd.ac.id/48712/1/10356_1643-Article+Text-3740-1-10-20230923.pdf
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264-75278. <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9069875>
- Chng, E., Tan, A. L., & Tan, S. C. (2023). Examining the use of emerging technologies in schools: A review of artificial intelligence and immersive technologies in STEM education. *Journal for STEM Education Research*. <https://doi.org/10.1007/s41979-023-00092-y>
- Chounta, I.-A., Bardone, E., Raudsep, A., & Pedaste, M. (2021). Exploring teachers' perceptions of artificial intelligence as a tool to support their practice in Estonian K-12 education. *International Journal of Artificial Intelligence in Education*, 32(3). <https://doi.org/10.1007/s40593-021-00243-5>
- Fitria, T. N. (2023). Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essays. *ELT Forum: Journal of English Language Teaching*, 12(1), 44-58. <https://doi.org/10.15294/elt.v12i1.64069>
- Gonzalez, A. (2024). The Impact of ChatGPT on academic integrity among students ages 12-19 in the Tri-State Area. *The Young Researcher*, 8(1), 4-17. <http://www.theyoungresearcher.com/papers/gonzalez.pdf>
- Haleem, A., Javaid, M., & Singh, R. P. (2022). An era of ChatGPT as a significant futuristic support tool: A study on features, abilities, and challenges. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*, 2(4), 100089. <https://doi.org/10.1016/j.tbench.2023.100089>
- Jen, L., & Rahim, A. (2024, May 2). *Using Artificial Intelligence for Essay Writing*. Ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4814664
- Liu, Z., Yao, Z., Li, F., & Luo, B. (2024, December). On the detectability of ChatGPT content: benchmarking, methodology, and evaluation through the lens of academic writing. In *Proceedings of the 2024 on ACM SIGSAC Conference on Computer and Communications Security* (pp. 2236-2250). <https://dl.acm.org/doi/pdf/10.1145/3658644.3670392>
- Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences*, 13(4), 410. <https://doi.org/10.3390/educsci13040410>
- Marr, B. (2023, May 19). *A Short History of ChatGPT: How We Got to Where We Are Today*. Forbes; Forbes. <https://www.forbes.com/sites/bernardmarr/2023/05/19/a-short-history-of-chatgpt-how-we-got-to-where-we-are-today/>
- Ngo, T. T. A. (2023). The perception by university students of the use of ChatGPT in education. *International Journal of Emerging Technologies in Learning (IJET)*, 18(17), 4-19. <https://doi.org/10.3991/ijet.v18i17.39019>
- Prothero, A. (2024, April 25). New data reveal how many students are using AI to cheat. *Education Week*. <https://www.edweek.org/technology/new-data-reveal-how-many-students-are-using-ai-to-cheat/2024/04>
- Reynoso, R. (2019). *A Complete History of Artificial Intelligence*. G2.com. <https://learn.g2.com/history-of-artificial-intelligence>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763-1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Shoufan, A. (2023). Exploring students' perceptions of ChatGPT: Thematic analysis and follow-up survey. *IEEE Access*, 11, 1-1. <https://doi.org/10.1109/access.2023.3268224>
- Stryker, C., & Kavlakoglu, E. (2024, August 9). *What is artificial intelligence (AI)?* IBM. <https://www.ibm.com/think/topics/artificial-intelligence>
- Sumakul, D. T. Y. G., Hamied, F. A., & Sukyadi, D. (2022, February 10). *Students' Perceptions of the Use of AI in a Writing Class*. Wwww.atlantis-Press.com; Atlantis Press. <https://doi.org/10.2991/assehr.k.220201.009>

- Tossell, C. C., Tenhundfeld, N. L., Momen, A., Cooley, K., & Ewart. (2024). Student perceptions of ChatGPT use in a college essay assignment: Implications for learning, grading, and trust in artificial intelligence. *IEEE Transactions on Learning Technologies*, 17, 1-15. <https://doi.org/10.1109/tlt.2024.3355015>
- Waltzer, T., Pilegard, C., & Heyman, G. D. (2024). Can you spot the bot? Identifying AI-generated writing in college essays. *International Journal for Educational Integrity*, 20(1). <https://doi.org/10.1007/s40979-024-00158-3>
- Wood, D., & Moss, S. H. (2024). Evaluating the impact of students' generative AI use in educational contexts. *Journal of Research in Innovative Teaching & Learning*, 17(2). <https://doi.org/10.1108/jrit-06-2024-0151>