

Analysis of the Pros and Cons of ChatGPT for College Paper Writing

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Abstract: Chat GPT is a chatbot system that utilizes natural language processing and deep learning technologies to mimic human discussions, potentially reaching or exceeding human intelligence. Recently, Chat GPT has shown significant advancements in various areas, particularly in natural language comprehension, automated question answering, and intelligent customer support, demonstrating promising possibilities. As Chat GPT technology advances and becomes popularity, there are concerns over whether it may bring an end to traditional university essays. This study utilizes a questionnaire-based research methodology to examine the advantages and disadvantages of including ChatGPT in the dissertation writing process for university students. The study seeks to investigate the variables affecting students' inclination to utilize these items, including gender, age, field of study, and prior exposure to comparable products, as well as the potential repercussions on academic integrity.

Keywords: Chat GPT, Artificial Intelligence, Educational Innovation and Reform, Academic Integrity

1. Introduction

Open AI released its AI chat model, Chat GPT, in November 2022, generating significant excitement across several industries. AI-powered educational tools of various types and sizes have become more common in recent years as digital education has been embraced. Chat GPT has emerged as a highly impactful product in the field of education because of its capacity to offer a customized and focused learning experience. ChatGPT is a language model designed for generating conversations. It can produce suitable responses by analyzing the user's text input. Due to its robust generating capacity and adaptability, it quickly became highly desired by many individuals upon its release. As the conversation progressed, individuals transitioned from discussing initial novelties to covering a wide range of topics within the industry, with a particular focus on the education sector [1-2].

An investigation is needed to examine the role of Chat GPTs in higher education due to the varied feedback from the academic research community and the lack of research on students' inclination to utilize them. This study utilizes a questionnaire-based research methodology to examine the advantages and disadvantages of including ChatGPTs in the dissertation writing process for university students. The study intends to investigate the characteristics affecting students' inclination to utilize these items, including gender, age, major, and prior experience with comparable products, along with the potential implications for academic integrity.

2. Methodology

A questionnaire was used as the research approach for this particular publication. 100 people participated in the survey, and 100 valid questionnaires were collected. The questionnaire was disseminated on August 20 for three days, and it was collected on August 23. The total number of people that participated in the survey was 100. For the purpose of ensuring that the information is both comprehensive and accurate, the majority of the questionnaire samples were selected from students who were enrolled in universities. The questions were centered on ten different dimensions, which included personal information, understanding and exposure, usage, challenges of use, academic integrity, future outlook, sources of information, suggestions and perceptions, and feedback.

3. Results and Analysis

3.1. Age and gender of students

The first part of the questionnaire inquired about the age and gender of the participants. According to the data, out of a total of 100 respondents, 32% of the participants were below 20 years old (32 participants); 39% were between 21-25 years old (39 participants); 14% were between 26-30 years old (14 participants); and 15% were between 31-35 years old (15 participants). This suggests that there is a preponderance of young people using Chat GPT, as they have more scenarios to generate demand for its use, and have better accessibility and more exposure, and greater technological proficiency and digital literacy than other age groups. It is important to note that while there is a higher proportion of young people in this sample, it is not representative of the age distribution of all those using Chat GPT. Chat GPT is a widely used technology, and people of all ages are likely to use it, with specific usage varying according to individual needs and backgrounds. Next is the gender of the participants. The data provided shows that of the respondents, 69% were male (69 participants) and 31% were female (31 participants). So there is a male bias in the survey sample. This reflects the composition of the participants and the gender factor needs to be taken into account when analyzing the results of the survey.

3.2. Students' use of Chat GPT in academic projects and writing

The second section of the questionnaire asked participants how often they used Chat GPT in their dissertation writing. The number of frequent and frequent users of Chat GPT amounted to 77% (77 participants), while the number of never and seldom users of Chat GPT was 13% (13 participants). This then suggests that the majority of people in this sample have a positive attitude towards the use of this natural language processing tool and are willing to use it in a variety of situations. This may reflect the usefulness of Chat GPT in some specific domains or tasks and the general acceptance of this technology. However, it is important to note that this is still only a sample data and is not representative of the attitudes and behaviors of the population as a whole. The attitudes and frequency of Chat GPT use may vary depending on a variety of factors such as region, culture, age, occupation, and so on. Therefore, a combination of factors needs to be considered for the popularity and impact of Chat GPT, and more extensive research may be needed to fully understand its use in different areas and populations.

In question three, participants were asked to express their views on whether the use of ChatGPT in the dissertation writing process had a positive effect. Of all the respondents, 39% strongly believed that Chat GPT has a clear positive effect in helping with dissertation writing, and 31% agreed that Chat GPT has a more significant positive effect. Meanwhile, 14% of the participants were neutral and 5% disagreed with the statement.

The results suggest that a significant proportion of respondents believe that ChatGPT and related generative AI products have a positive impact on their learning process. This may be due to the fact that these products can quickly generate answers to their queries, help them complete their assignments, and provide them with new insights and perspectives. However, some participants may have had reservations about using these products, mostly probably because they believed that writing with Chat GPT would result in students lacking the ability to think on their own. Overall, the majority of participants felt that these AI products could have a positive impact on their learning, which may indicate that students are increasingly embracing AI-based educational tools.

3.3. Students' perceptions of the relationship between Chat GPT and academic papers

The fourth question explored participants' perceptions of whether the use of ChatGPT impacts on leading to academic integrity. The results of the survey showed that 44% of the participants believed that it was not at all, 38% believed that it was somewhat not, and notably none of the participants believed that Chat GPT was fully compatible with academic integrity, and a very small number believed that Chat GPT was largely compatible with academic integrity, which suggests that the majority of the students had concerns about the academic moral and ethical relationship that Chat GPT entailed.

The results indicated that more than half of the participants believed that the use of these AI products could lead to academic integrity issues because these AI products could generate text very similar to manually written text, thus making plagiarism by students covert. Additionally, these AI products may be more readily available and easier to use than traditional plagiarism detection software, making it more difficult for instructors and professors to catch instances of plagiarism.

3.4. Extent to which students search for information through Chat GPT

The fifth question explored whether participants were able to access information about Chat GPT through easy and quick access in the process of understanding and learning about it. The majority of participants did not have a very positive experience with accessing information about Chat GPT through convenient and quick means. Forty-two percent (42%) said they were not fully compliant and 40% said they were somewhat compliant. Only a minority felt that they were able to fully comply (1%) or mostly comply (7%) with this requirement. This may reflect the fact that a portion of this sample may not find access to Chat GPT-related information convenient or fast enough, or they may be skeptical about the reliability and quality of this information. Chat GPT is a field that involves complex technologies such as artificial intelligence and natural language processing, so it may require more background knowledge and resources to understand it.

Table 1: Regression statistics on whether students identify with Chat GPT or not

Regression statistics	
Multiple R	0.780406
R Square	0.609034
Adjusted R Square	0.555108
Standard Error	0.625273
Observed Value	100

Table 2: Variance results of regression statistics on whether students identify with Chat GPT or not

Variance results					
	df	SS	MS	F	SignificanceF

Table 2: (continued)

Regression analysis	12	52.98598	4.415498	11.29382	2.95E-13
Residuals	87	34.01402	0.390966		
Total	99	87			

In order to increase understanding of Chat GPT, more education and resources may be needed to ensure that people can easily access accurate information about its potential and limitations in order to better utilize the technology.

4. Regression Analysis and Discussion

Taken together, the results of this ANOVA indicate that the regression analysis factors have a significant effect on the dependent variable because the significance level of the F-statistic is very close to zero, which is much lower than the usual significance level (e.g., 0.05). This means that the regression analysis factors have a statistically significant effect on the dependent variable.

Table 3: *P Value Analysis

	P Value	Significance
Q1	0.527958	No
Q2	0.966221	No
Q3	0.54252	No
Q4	0.590033	No
Q5	0.110651	No

Based on the results of these p-values, this suggests that there is a statistically significant relationship between whether the participants were able to access information about Chat GPT through easy and quick access in the process of understanding and learning about Chat GPT and whether or not they had used Chat GPT in previous academic research and whether or not they identified with ChatGPT.

The reasons why those who have used Chat GPT in academic research are more likely to identify with Chat GPT may include the following, the first being practical experience, by actually using Chat GPT in academic research, individuals can experience its potential and utility first hand. This experience may make them more aware of Chat GPT's strengths and limitations, making it easier for them to identify with its value. The second is efficiency, Chat GPT can increase the efficiency of research work and reduce tedious tasks and time wastage. Those who have used Chat GPT may be more likely to agree with its positive impact on improving the efficiency of academic work. The third is a deeper understanding of Chat GPT; using Chat GPT for academic research may give individuals a deeper understanding of its inner workings and capabilities. This understanding may make it easier for them to identify with Chat GPT's technology and capabilities [3-4].

The accessibility and speed of obtaining information about Chat GPT can impact the degree of identification with Chat GPT due to many reasons. Firstly, the accessibility of information plays a crucial role in enhancing participants' awareness and understanding of Chat GPT. Assisting them in developing a thorough comprehension of the characteristics, applications, advantages, and constraints of Chat GPT contributed to enhancing their understanding of Chat GPT. A positive user experience involves participants being able to readily locate Chat GPT-related information, lessons, or instructions, which increases the likelihood of them actively exploring and using the tool. The third ability is to handle user concerns; Chat GPT could bring up concerns related to privacy, ethics, or

accuracy [5]. Convenient access to information can assist participants in addressing these worries and building confidence in Chat GPT, thus enhancing identification.

Ultimately, individual identification levels can differ based on personal preferences, opinions, and ethical perceptions. However, the study found that the practical experience and usefulness of Chat GPT in academic research, as well as the ease of accessing information about Chat GPT, were key factors influencing identification.

5. Conclusion

Upon analyzing the data, it is evident that the actual application of Chat GPT significantly enhances the efficiency and quality of dissertation writing. Writing a traditional dissertation often involves extensive reading and analysis of relevant material, constructing the dissertation framework, and iteratively refining the specifics through multiple revisions. Students can create an initial dissertation structure and content using Chat GPT by entering the dissertation criteria and data. They can then interact with the Chatbot to converse and make revisions, thereby saving time and effort. Chat GPT's technical capabilities can assist students in organizing and articulating their thoughts, enhancing the quality and coherence of their works.

Secondly, in the realm of education, the utilization of Chat GPT will influence teaching methods and academic principles. Educational institutions and academics must reconsider the conventional essay assessment model and the approach to training academic writing abilities due to the advancement and widespread use of Chat GPT technology. Using Chat GPT could potentially harm students' writing abilities, particularly in terms of academic honesty and originality. Schools should offer additional support and guidance to help students utilize these tools efficiently and responsibly. They should also establish clear laws and regulations to deter and penalize plagiarism and other types of academic dishonesty.

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