

ATTITUDES TOWARD THE POSITIVE AND NEGATIVE FEATURES OF CHAT GPT BY SELECTED FIRST YEAR COLLEGE STUDENTS

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ABSTRACT

A short period after the launching of the Chat Generative Pre-Trained Transformer or Chat GPT, news broke that some Filipino college students were being investigated for allegedly employing it to do their coursework. A global debate on the advantages and disadvantages of the use of this AI has since ensued. This study attempted to discover the attitudes toward certain stated positive and negative features of Chat GPT. Through purposive sampling, 88 first year college students from a private higher education institution in Rizal and are current users of Chat GPT were invited to be the respondents of the study. A 9-item researcher-made, 6-point Likert scale instrument was crafted. Its items were made using selected positive and negative features of Chat GPT stated in "10 Advantages of Chat GPT | disadvantages of Chat GPT"¹² and in "OpenAI's new Chat GPT bot: 10 dangerous things it's capable of"¹³, and was subsequently administered on the respondents. In terms of the stated positive features of Chat GPT, the respondents moderately agree that in response to user inquiries, Chat GPT gives detailed answers, they moderately agree that Chat GPT uses the prior interactions it had with the user in the same prompt tree, which it remembers, to provide context for their responses, they moderately agree that Chat GPT enables users to make additional adjustments to their questions till they are happy with the response, and they also moderately agree that Chat GPT has been programmed to refuse inappropriate requests. On the other hand, with regard to the stated negative features of Chat GPT, the respondents moderately agree that Chat GPT can be prone to mistakes, they strongly agree that Chat GPT can be misused, they slightly agree that Chat GPT lacks morality in its answers, they slightly agree that Chat GPT can be biased and they also slightly agree that Chat GPT can give convincing but wrong answers.

Keywords: Artificial Intelligence, Chat GPT, AI In Education, AI In Learning.

I. INTRODUCTION

In just 5 days, Chat Generative Pre-Trained Transformer or Chat GPT, which uses OpenAI's cutting-edge GPT-3 language model, has racked up 1 million users. This amount may be attained by Facebook, Netflix, Instagram, and Twitter in 300, 1200, 75, and 720 days, respectively. GPT-3 can produce writing that closely matches human language using 175 billion parameters. Chat GPT can participate in several continuous discussions, comprehend and react to input in real language, and provide individualized and interactive help. Due to its practicality and adaptability, Chat GPT is believed to be a promising tool for open education because it may increase the freedom and autonomy of self-directed learners. Chat GPT is said to possess the potential to boost motivation and engagement among self-taught learners by offering individualized help, guidance, and feedback¹.

The artificial intelligence (AI) tool Chat GPT has gained notoriety in less than two months. It is publicly available via a website portal made by OpenAI, the tool's creator. If you try to utilize the application, which generates text in response to typed requests, it's probably "at capacity right now" due to how well-liked it is. Concerns abound on how Chat GPT will alter education. It can undoubtedly create essays on a variety of subjects. Finding factual solutions is a strength, but there is still more to be done in terms of scholarly writing. If anything, the consequences for education may encourage professors to reconsider their curricula and assign challenging problems that can't be answered by AI².

A study that utilized 23 data sets for 8 different common NLP application tasks carried out a thorough technical evaluation of Chat GPT. Based on these data sets and a newly created multimodal dataset, Chat GPT's multitask, multilingual, and multi-modal features were assessed. On most tasks, it was discovered that Chat GPT outperformed LLMs with zero-shot learning, and on some, it even outperformed fine-tuned models. Additionally, it is more adept at decoding non-Latin script languages than it is at creating them. Through the use

of an intermediate code generation step, it may produce multimodal content from text-based prompts. Furthermore, Chat GPT is an unreliable reasoner with an average accuracy rate of 63.41% across 10 different categories of logical reasoning, non-textual reasoning, and common-sense reasoning. For instance, it excels at deductive reasoning rather than inductive reasoning. Like other LLMs, Chat GPT has issues with hallucinations, and because it lacks access to an external knowledge base, it produces more extrinsic hallucinations from its parametric memory³.

According to a qualitative study, technology can only serve as a tool in the context of using ChatGPT for learning and cannot completely take the place of the teacher. As a result, it's essential to strengthen teachers' technology management skills and incorporate technology into education in a proper and effective manner⁴.

A study examined the literature on Chat GPT's capabilities across subject areas, its possible applications in education, and any concerns that academics may have had in the first three months after its launch. We conducted content analysis on 50 articles. According to the review's conclusions, Chat GPT performed differently in each subject area, ranging from great (for example, in economics) to satisfactory (for example, in programming) to unsatisfactory (for example, in mathematics). Its use was shown to have difficulties (such as producing false or inaccurate information and evading plagiarism checkers). The report makes the urgent recommendation that schools and colleges alter their institutional rules and assessment practices. To address Chat GPT's effects on the educational environment, instructor development and student education are also crucial⁵.

In one study, artificial intelligence (AI) was used to try to address the issue of climate change. The integration of many diverse scientific fields, such as atmospheric science, oceanography, and ecology, is necessary to address the significant global challenge of climate change. To comprehend, analyze, and project future climatic conditions, one must use advanced tools and methodologies due to the problem's complexity and scope. Our comprehension of climate change and the precision of climate projections could be significantly improved by artificial intelligence and natural language processing technologies like Chat GPT. The study's author acknowledged enquiring about Chat GPT's use in studies on climate change. It lists both current and hypothetical uses, some of which are currently feasible⁶.

A study on Chat GPT was conducted about its possible influence on academic institutions and libraries is part of a study. Using interviews, the advantages of Chat GPT, including enhanced search and discovery, reference and information services, cataloging and metadata development and content creation were explored. It also covers the ethical issues that must be taken into mind, including privacy and bias. Chat GPT has the potential to significantly boost academic research and librarianship in both unsettling and novel ways. In the race to advance scholarly understanding and train the next generation of professionals, the study claims that it is crucial to think carefully about how to use this technology responsibly and ethically as well as how professionals can collaborate with it to enhance their work⁷.

While Chat GPT's capacity to produce creative essays, novels, and song lyrics in response to user requests has impressed many users, it has also created significant issues. Microsoft and Google's AI chatbots have come under fire for emotional reactivity, factual mistakes, and downright "hallucinations," as the industry calls it. Similar limits apply to GPT-4. "It is still flawed, still limited, and it still seems more impressive on first use than it does after you spend more time with it," according to Sam Altman, chief executive officer of OpenAI. However, he went on to say that it is now "more creative than previous models, it hallucinates significantly less, and it is less biased." Yet, according to the OpenAI, "great care should be taken when using language model outputs, particularly in high-stakes contexts."⁸

Researchers from the Stanford Digital Economy Laboratory and the MIT Sloan School of Management completed a study, which was then released in April 2023 by US nonprofit research organization, the National Bureau of Economic Research. The researchers looked at 5179 agents' 3 million interactions while they were employed by a Fortune 500 software company that sells business process software. Small business owners in the US who are utilizing the company's software can interact with agents who are 83% of the way around the world, mostly in the Philippines. The majority of the AI assistant's deployment occurred between November 2020 and February 2021, with the distribution of the assistant occurring gradually among the workforce. The study discovered a 13.8% rise in productivity, which was seen in three areas: (1) agents handled individual

chats in less time; (2) they were able to handle more chats per hour; and (3) they were able to slightly increase the number of chats that were deemed successfully resolved⁹.

FILIPINO students offered their opinions on Chat GPT in one article. In an interview, a Davao City-based student studying computer science said, "I found it helpful in generating ideas, assisting with research, and providing summaries." A Quezon City law student who utilized Chat GPT as a research tool in composing legal advice for a school requirement. A Quezon City-based humanities student claimed that he occasionally utilizes Chat GPT for concept exploration or idea production but citing errors as a challenge¹⁰.

However, in January 2023, news broke that some University of the Philippines Diliman (UPD) students were being investigated for allegedly employing artificial intelligence (AI) to do their coursework. According to Ian Cruz on "24 Oras," an AI detection system was utilized to verify the pupils' submission of these academic prerequisites. "It has come to our attention about the alleged instances of academic requirements submitted by students of the University that were created by Large Language Module (LLM) systems, such as Chat GPT," instructors at UP stated. The UPD Artificial Intelligence Program Coordinator claimed that, "They misrepresented the submission coming from this AI tools in submission of actual academic requirement."¹¹

In view of the rapid developments since the advent of Chat GPT as well as the ongoing debate about the ethics of its use, this study attempted to investigate the students' levels of agreement with selected stated positive and negative features of this particular AI.

Specifically, this study addressed the following research questions:

1. What are the respondents' levels of agreement to the stated positive features of Chat GPT?
2. What are the respondents' levels of agreement to the stated negative features of Chat GPT?
3. When the respondents are grouped according to sex, are there significant differences in their levels of agreement in terms of
 - 3.1 stated positive features of Chat GPT;
 - 3.2 stated negative features of Chat GPT?

II. METHODOLOGY

Through purposive sampling, 88 first year college students from a private higher education institution in Rizal and are current users of Chat GPT were invited to be the respondents of this study. There were 54 males and 34 females. Their mean age was 19.13 years. A 9-item researcher-made, 6-point Likert scale instrument was crafted. The items of the instrument were created using selected positive and negative features of Chat GPT stated in "10 Advantages of Chat GPT | disadvantages of Chat GPT"¹² and in "OpenAI's new Chat GPT bot: 10 dangerous things it's capable of"¹³. The instrument underwent content validation prior to administration.

III. RESULTS

The following tables present the data gathered and the statistical treatments it underwent.

Table 1. Scale of interpretation of item weighted means

| Item weighted mean range | Verbal interpretation |
|--------------------------|-----------------------|
| 1.000 – 1.833 | Strongly disagree |
| 1.834 – 2.666 | Moderately disagree |
| 2.667 – 3.499 | Slightly disagree |
| 3.500 – 4.333 | Slightly agree |
| 4.334 – 5.166 | Moderately agree |
| 5.167 – 6.000 | Strongly agree |

Table 2. Levels of agreement to the stated positive features of Chat GPT

| | Male N=54 Item weighted mean | Female N=34 Item weighted mean | Total N=88 Item weighted mean |
|---|---------------------------------------|---|--|
| 1. In response to user inquiries, Chat GPT gives detailed answers. | 4.963 Moderately agree | 4.824 Moderately agree | 4.909 Moderately agree |
| 2. Chat GPT uses the prior interactions it had with the user in the same prompt tree, which it remembers, to provide context for their responses. | 5.000 Moderately agree | 5.059 Moderately agree | 5.023 Moderately agree |
| 3. Chat GPT enables users to make additional adjustments to their questions till they are happy with the response. | 5.148 Moderately agree | 5.177 Strongly agree | 5.159 Moderately agree |
| 4. Chat GPT has been programmed to refuse inappropriate requests. | 4.778 Moderately agree | 4.588 Moderately agree | 4.705 Moderately agree |

Table 3. Levels of agreement to the stated negative features of ChatGPT

| | Male N=54 Item weighted mean | Female N=34 Item weighted mean | Total N=88 Item weighted mean |
|--|---------------------------------------|---|--|
| 5. Chat GPT can be prone to mistakes | 5.037 Moderately agree | 4.882 Moderately agree | 4.977 Moderately agree |
| 6. Chat GPT can be misused. | 5.241 Strongly agree | 5.588 Strongly agree | 5.375 Strongly agree |
| 7. Chat GPT lacks morality in its answers. | 4.056 Slightly agree | 4.324 Slightly agree | 4.159 Slightly agree |
| 8. Chat GPT can be biased | 4.111 Slightly agree | 4.294 Slightly agree | 4.182 Slightly agree |
| 9. Chat GPT can give convincing but wrong answers. | 4.296 Slightly agree | 4.382 Moderately agree | 4.330 Slightly agree |

Table 4. Differences in the levels of agreement to the stated positive features of Chat GPT

| Welch's t-tests | | |
|--|----------------------------------|----------------------------------|
| Item | Males N=54 | Females N= 34 |
| 1. In response to user inquiries, Chat GPT gives detailed answers. | Mean 4.96 SD 0.91 SEM 0.12 | Mean 4.82 SD 0.97 SEM 0.17 |
| | t = 0.6730 | |

| | | |
|---|--|----------------------------------|
| | df = 67 standard error of difference = 0.207 The two-tailed P value equals 0.5033 By conventional criteria, this difference is considered to be not statistically significant. | |
| 2. Chat GPT uses the prior interactions it had with the user in the same prompt tree, which it remembers, to provide context for their responses. | Mean 5.00 SD 0.89 SEM 0.12 | Mean 5.06 SD 0.74 SEM 0.13 |
| | t = 0.3362 df = 79 standard error of difference = 0.175 The two-tailed P value equals 0.7376 By conventional criteria, this difference is considered to be not statistically significant. | |
| 3. Chat GPT enables users to make additional adjustments to their questions till they are happy with the response. | Mean 5.15 SD 0.90 SEM 0.12 | Mean 5.18 SD 0.80 SEM 0.14 |
| | t = 0.1545 df = 76 standard error of difference = 0.183 P value and statistical significance: The two-tailed P value equals 0.8777 By conventional criteria, this difference is considered to be not statistically significant. | |
| 4. Chat GPT has been programmed to refuse inappropriate requests. | Mean 4.78 SD 1.04 SEM 0.14 | Mean 4.59 SD 1.18 SEM 0.20 |
| | t = 0.7659 df = 63 standard error of difference = 0.247 The two-tailed P value equals 0.4466 By conventional criteria, this difference is considered to be not statistically significant. | |

Table 5. Differences in the levels of agreement to the stated negative features of Chat GPT

| Welch's t-tests | | |
|--------------------------------------|--|----------------------------------|
| Item | Males N=54 | Females N= 34 |
| 5. Chat GPT can be prone to mistakes | Mean 5.04 SD 1.01 SEM 0.14 | Mean 4.88 SD 1.12 SEM 0.19 |
| | t = 0.6545 df = 64 standard error of difference = 0.236 P value and statistical significance: The two-tailed P value equals 0.5151 | |

| | | |
|--|--|----------------------------------|
| | By conventional criteria, this difference is considered to be not statistically significant. | |
| 6. Chat GPT can be misused. | Mean 5.24 SD 0.99 SEM 0.13 | Mean 5.59 SD 0.66 SEM 0.11 |
| | t = 1.9797 df = 85 standard error of difference = 0.176 The two-tailed P value equals 0.0510 By conventional criteria, this difference is considered to be not quite statistically significant. | |
| 7. Chat GPT lacks morality in its answers. | Mean 4.06 SD 1.05 SEM 0.14 | Mean 4.32 SD 1.30 SEM 0.22 |
| | t = 1.0131 df = 59 standard error of difference = 0.265 The two-tailed P value equals 0.3152 By conventional criteria, this difference is considered to be not statistically significant. | |
| 8. Chat GPT can be biased | Mean 4.11 SD 1.19 SEM 0.16 | Mean 4.29 SD 1.31 SEM 0.23 |
| | t = 0.6588 df = 65 standard error of difference = 0.278 P value and statistical significance: The two-tailed P value equals 0.5124 By conventional criteria, this difference is considered to be not statistically significant. | |
| 9. Chat GPT can give convincing but wrong answers. | Mean 4.30 SD 1.21 SEM 0.16 | Mean 4.38 SD 1.28 SEM 0.22 |
| | t = 0.3139 df = 67 standard error of difference = 0.274 The two-tailed P value equals 0.7546 By conventional criteria, this difference is considered to be not statistically significant. | |

IV. DISCUSSION

It can be observed in Table 2 that for items 1 and 4, the male respondents had higher weighted means while in items 2 and 3 the female respondents had higher weighted means. When the respondents are taken as a whole, they all moderately agree to the 4 stated positive features of Chat GPT.

It can be seen in Table 3, that in items 6, 7, 8 and 9 the female respondents had higher weighted means while in item 5 the male respondents had a higher weighted mean. When the respondents are taken as a whole, they moderately agree to item 5 while they slightly agree to items 6, 7, 8 and 9.

Table 4 presents the Welch's t-test computations between the male and female responses to the stated positive features of Chat GPT. In all 4 items, no significant difference was found.

Table 5 shows the Welch's t-test computations between the male and female responses to the stated negative features of Chat GPT. In all 5 items, no significant difference was found.

V. CONCLUSION

In terms of the stated positive features of Chat GPT, the respondents moderately agree to item 1: "In response to user inquiries, Chat GPT gives detailed answers," they moderately agree to item 2: "Chat GPT uses the prior interactions it had with the user in the same prompt tree, which it remembers, to provide context for their responses," they moderately agree to item 3: "Chat GPT enables users to make additional adjustments to their questions till they are happy with the response," and they also moderately agree to item 4: "Chat GPT has been programmed to refuse inappropriate requests."

On the other hand, with regard to the stated negative features of Chat GPT, the respondents moderately agree to item 5: "Chat GPT can be prone to mistakes," they slightly agree to item 6: "Chat GPT can be misused," they slightly agree to item 7: "Chat GPT lacks morality in its answers," they slightly agree to item 8: "Chat GPT can be biased" and they also slightly agree to item 9: "Chat GPT can give convincing but wrong answers."

As there were no significant differences found between the responses of the males and females, it would appear that sex is not a factor in the respondents' levels of agreement to the stated positive and negative features of Chat GPT.

The results provide preliminary findings that the use of Chat GPT is not entirely positive or healthy based on the results that the respondents to some extent agree to all the stated negative features of this particular AI.

Many of the studies mentioned herein provide fair warning to those who would use this tool.

VI. RECOMMENDATIONS

Since this study is limited by the number respondents, future researches could be done with larger and more diverse samples. At present, there appears to be no standardized instrument in evaluating attitudes toward the use of Chat GPT. Efforts could be done to create a more comprehensive tool in assessing such attitudes.

Ethical declaration

The researcher declares that this study strictly adhered to the ethics of research. Informed consent was obtained, freedom to withdraw at any time from the study was made known to the participants, their identities were anonymized, the participants were not exposed to any physical, psychological or social harm and the results were used for research purposes only. The researcher further ensured steps to prevent bias in the interpretation of the data. Lastly, this study was self-funded and there was no conflict of interest in the conduct of the study.

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