



User Attitudes and Behavioural Intentions Towards ChatGPT: An Exploratory Study

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Abstract

This research study aims to explore the user attitudes and behavioural intentions towards ChatGPT, a language model chatbot based on GPT-3.5 architecture. The study used an online survey to collect data from 110 respondents, focusing on their demographic information, usage patterns, and behavioural intentions towards ChatGPT. The findings suggest that the majority of users are young males with a bachelor's degree and student occupation. The primary motive behind using ChatGPT is to quickly acquire information, with a focus on general knowledge questions and writing assistance. Both male and female users have a positive attitude towards ChatGPT, finding it easy to use, trustworthy, and helpful. Behavioural intentions of users are strongly influenced by satisfaction, future use, and recommendation to others. The study also highlights the potential of ChatGPT as a valuable resource for students. The results indicate that ChatGPT has emerged as a preferred chatbot among users, providing quick and accurate responses to their queries. The findings of this study provide insights that can be used to enhance the capabilities of ChatGPT and improve user satisfaction. Further research is recommended to investigate the usage and attitudes towards ChatGPT among different age groups, genders, and educational backgrounds.

Keywords: *ChatGPT Use, Purpose, User Attitude, Behavioural Intentions, Recommendation.*

I. INTRODUCTION

ChatGPT is a powerful tool that has revolutionized the way we communicate. It is an artificial intelligence-based chatbot that can generate natural language conversations with humans. ChatGPT is designed to understand user input and respond in a natural and meaningful way. This technology has been used in various applications such as customer service, virtual assistants, and more. With its ability to understand context and generate relevant responses, ChatGPT has become an essential tool for businesses looking to improve their customer service experience. The rise of ChatGPT has enabled businesses to provide better customer service

while saving time and money. ChatGPT and other AI technologies are expected to automate many routine, repetitive, and low-skilled tasks, freeing up workers to focus on higher-level tasks that require creativity, problem-solving, and critical thinking skills. This will lead to an increased demand for workers with these higher-level skills and a decreased demand for workers who perform routine tasks. Without a doubt, ChatGPT has been a topic of conversation amongst households, classrooms, boardrooms and slack channels across the world. Google and Microsoft are clashing as they race to predict, understand and incorporate conversational, user-friendly AI into their business model. No generative AI application has managed to achieve the kind of influence and virality that ChatGPT has and it's only been three months.

ChatGPT, developed by San Francisco-based OpenAI, in November 2022. The main aim of the software is to mimic human-like conversations based on questions asked by the user, reaching 100 million users in the space of two months as its ability to compose credible-looking essays, recipes, poems and lengthy answers to a broad array of queries went viral. The technology behind ChatGPT has been harnessed by Microsoft, a key backer of OpenAI, for its Bing search engine. Google has launched its own chatbot and has said it will integrate the technology into its search engine. Both ChatGPT and Google's competitor to it, Bard, are based on large language models that are fed vast amounts of text from the internet in order to train them how to respond to an equally vast array of queries.

The chatbot has subsequently gained national attention because of its wide range of uses, which ranges from answering questions on an exam to drafting an email. Although the AI service occasionally confidently provides inaccurate information, some analysts and professionals have indicated that because of its capacity to summarise publicly accessible data, it may be a reliable alternative to Google search and a list of links that are provided by the search engine. Excitement around ChatGPT -- an easy-to-use AI chatbot that can deliver an essay or computer code upon request and within seconds -- has sent schools into panic and turned Big Tech green with envy. The potential impact of ChatGPT on society remains complicated and unclear even as its creator Wednesday announced a paid subscription version in the United States. The usage traffic from India for ChatGPT was day by day increasing, specifically from the metro cities such as Mumbai, New Delhi, Kolkata, Chennai, and Bengaluru. This research paper has the specific intention of studying the user's attitudes towards ChatGPT and their behavioural intentions on ChatGPT.

II. REVIEW OF LITERATURE

Viriya Taecharunroj (2023), collected tweets about ChatGPT, an innovative AI chatbot, in the first month after its launch. The results revealed three general topics: news, technology, and reactions. The author also identified five functional domains: creative writing, essay writing, prompt writing, code writing, and answering questions. The analysis also found that ChatGPT has the potential to impact technologies and humans in both positive and negative ways.

D. Gašević et al. (2023), studied for decades by the research community, artificial intelligence (AI) in education has recently sparked much public debate with the wide-spread popularity of systems such as ChatGPT and DALL-E. The findings of these studies highlight pressing research and policies challenges and opportunities that arise with the broad penetration of AI in education. They also emphasize the need for future research that addresses issues of ethics, bias and fairness in the use of AI in education; challenges associated with data sources and ownership as the key fuel and enabler of present-day AI generation; AI literacies and competencies of stakeholders who use and are impacted by AI in education; identification of effective learning and teaching practices with the use of AI; and policy development to increase responsiveness of education systems to rapid changes driven by AI.

Enkelejda Kasneci et.al (2023), the research was presenting the potential benefits and challenges of educational applications of large language models, from student and teacher perspectives. We briefly discuss the current state of large language models and their applications. The authors believe that, if handled sensibly, these challenges can offer insights and opportunities in education scenarios to acquaint students early on with potential societal biases, criticalities, and risks of AI applications. The research concludes with recommendations for how to address these challenges and ensure that such models are used in a responsible and ethical manner in education.

Abid Haleem (2022), This paper briefs about the ChatGPT and its need. Further, various Progressive Work Flow Processes of the ChatGPT Tool are stated diagrammatically. Specific features and capabilities of the ChatGPT Support System are studied in this paper. Finally, we identified and discussed the significant roles of ChatGPT in the current scenario. The neural language models that form the foundation of character AI have been developed from the bottom up with talks in mind. This technology implies that the programme uses deep learning methods to analyse and produce text. The model “understands” the subtleties of human-produced natural language using vast amounts of data from the internet.

Mubin Ul Haque et.al (2022), ChatGPT developed by OpenAI is one such implementation of a large, pre-trained language model that has gained immense popularity among early adopters, where certain users go to the extent of characterizing it as a disruptive technology in many domains. Only a limited percentage of users expressed concerns about issues such as the potential for misuse of ChatGPT, especially regarding topics such as Impact on educational aspects. We discuss these findings by providing specific examples for each topic and then detail implications related to addressing these concerns for both researchers and users.

Andrej Thurzo et.al (2023), The aim was to provide an up-to-date overview of the upcoming changes and a brief analysis of the influential advancements in the use of AI in dental education since 2020. In addition, this review provides a guide for a dental curriculum update for undergraduate and postgraduate education in the context of advances in AI applications and their impact on dentistry. Unsurprisingly, most dental educators have limited knowledge and skills to assess AI applications, as they were not trained to do so. Also, AI technology has evolved exponentially in recent years.

Md Doulotuzzaman Xames and Jannatul Shefa (2023), ChatGPT has far-reaching implications for scholarly research and publication going forward. In this paper, we investigate its current use in contemporary research and based on this we outline the opportunities that ChatGPT could potentially offer. We believe that ChatGPT could be leveraged by researchers, journal editors, and reviewers to make the research and publication process more efficient. Later, we discuss the challenges and concerns exposed by ChatGPT that require immediate attention such as AI authorship, unintentional plagiarism, nonexistent references, and threats of international inequalities. We conclude with optimistic expectations for ChatGPT adoption in research in the future.

III. METHODOLOGY

Research Design: The research design for the study will be a cross-sectional survey design. The study will use a self-administered online questionnaire to collect data from respondents.

Sampling: The study will target a sample of individuals who have used or interacted with ChatGPT before. The sample will be selected using convenience sampling methods. The target sample size will be 100 respondents.

Data Collection Instrument: The data collection instrument for the study will be a self-administered online questionnaire. The questionnaire will consist of closed-ended questions to measure user attitudes and behavioral intentions towards ChatGPT. The questionnaire will be designed based on the theoretical framework and literature review.

Data Collection: The data collection will be conducted through an online survey using platforms such as Google Forms. The survey link will be shared with the target population through social media platforms, emails, and other relevant online platforms.

Data Analysis: The collected data will be analyzed using descriptive statistics such as frequency distributions, Inferential statistics such as one sample t-test, and chi-square tests will also be used to test the hypotheses.

Ethical Considerations: The study will adhere to ethical considerations such as informed consent, confidentiality, and data protection. The participants will be informed about the purpose of the study, and their participation will be voluntary.

IV. ANALYSIS AND RESULTS

4. 1. Demographic Profile of the Respondents

Variable	Levels	Counts	% of Total	Cumulative %
Age	a. Less than 18	1	0.8 %	0.8 %
	b. 18-30	108	90.0 %	90.8 %
	c. 31-45	6	5.0 %	95.8 %
	d. 46-60	4	3.3 %	99.2 %
	f. 61 or older	1	0.8 %	100.0 %
Gender	a. Male	64	53.8 %	53.8 %

	b. Female	55	46.2 %	100.0 %
Education	a. School	1	0.8 %	0.8 %
	b. Bachelor's degree	67	55.8 %	56.7 %
	c. Master's degree	37	30.8 %	87.5 %
	d. Professional	14	11.7 %	99.2 %
	e. Other	1	0.8 %	100.0 %
Occupation	a. Student	73	60.8 %	60.8 %
	b. Professional (e.g. lawyer, doctor, accountant, IT)	25	20.8 %	81.7 %
	c. Manager or Executive	7	5.8 %	87.5 %
	d. Academician or Teacher	1	0.8 %	88.3 %
	e. Self-employed	4	3.3 %	91.7 %
	f. Other	10	8.3 %	100.0 %

In total, 110 respondents participated in the research survey. The majority of them, 90%, are between the ages of 18 and 30. 53.8% of the males and 46.2% of the females participated in answering the questions related to the ChatGPT research title. 55.8% of the graduates completed their bachelor's degree, followed by 30.8% of those holding a master's degree. On behalf of their occupations, the majority of the students are followed by professionals belonging to IT, law, and medicine. It implies that the majority of them are younger and between the ages of 18 and 30, with the majority of them belonging to the student community.

4.2. Primary Reason for Using ChatGPT

Level of education	a. To get information quickly	b. To automate simple tasks	c. To receive personalized recommendations	d. To get customer support	e. Other	Total
a. School	0	0	0	0	0	0
b. Bachelor's degree	35	16	2	5	6	64
c. Master's degree	21	3	2	1	6	33
d. Professional	6	4	0	1	2	13
e. Other	1	0	0	0	0	1
Total	63	23	4	7	14	111

The ChatGPT was primarily used to get information quickly, with specifically bachelor's degree students using this for their assignments, class note preparations, etc., followed by master's degree students for purposes such as research, case studies, problem solving, and code clarifications. The second highest is to automate simple

tasks, and the least is to receive personalised recommendations. This research infers that the majority of them are using chatGPT to get various information quickly.

4.3. Use of ChatGPT

Use of ChatGPT - Purpose	Occupation						Total	%
	Student	Professional	Manager or Executive	Academic or Teacher	Self-employed	Other		
a. Getting answers to general knowledge questions	17	4	0	0	0	2	23	20.91%
b. Assistance with writing	12	4	0	0	1	1	18	16.36%
Different Mixed Groups of a,b,c,d,e,f	7	5	1	0	1	3	17	15.45%
f. Other	9	1	2	0	1	2	15	13.64%
a. Getting answers to general knowledge questions, b. Assistance with writing	8	4	1	0	0	0	13	11.82%
c. Getting personalized recommendations	6	2	0	0	1	0	9	8.18%
b. Assistance with writing, c. Getting personalized recommendations	4	1	2	0	0	0	7	6.36%
a. Getting answers to general knowledge questions, b. Assistance with writing, c. Getting personalized recommendations	4	1	0	0	0	0	5	4.55%
a. Getting answers to general knowledge questions, c. Getting personalized recommendations	1	1	1	0	0	0	3	2.73%
Total	68	23	7	0	4	8	110	100.00%

The students are mostly using ChatGPT for getting answers to general knowledge questions and for getting assistance with writing. Overall, respondents of all occupational levels use ChatGPT to get answers to general knowledge questions and for writing assistance. Very few respondents prefer personalised recommendations

through ChatGPT. The different combinations were also used by the respondents in rank 3. The study infers that getting answers to general knowledge questions is the major purpose of using ChatGPT by the students.

4.4. User Attitude towards ChatGPT

Cross Tab	Easy to Use ChatGPT						χ^2 Tests					
Gender	1	2	3	4	5	Total	χ^2	Value	df	p	Result	
a. Male	1	2	1	10	40	54		2.079	4	0.721	3	Not Significant
b. Female	0	2	1	12	28	43						
Total	1	4	2	22	68	97						
Chat GPT answers are helpful												
Gender	1	2	3	4	5	Total	χ^2	Value	df	p	Result	
a. Male	2	1	0	24	27	54		4.612	4	0.329	5	Not Significant
b. Female	0	0	1	24	18	43						
Total	2	1	1	48	45	97						
ChatGPT responses are Accurate												
Gender	1	2	3	4	5	Total	χ^2	Value	df	p	Result	
a. Male	1	0	2	37	14	54		3.246	4	0.517	5	Not Significant
b. Female	0	1	2	32	7	42						
Total	1	1	4	69	21	96						
ChatGPT is Trustworthy												
Gender	1	2	3	4	5	Total	χ^2	Value	df	p	Result	
a. Male	1	2	10	30	11	54		1.79	4	0.774	3	Not Significant
b. Female	0	1	9	27	6	43						
Total	1	3	19	57	17	97						

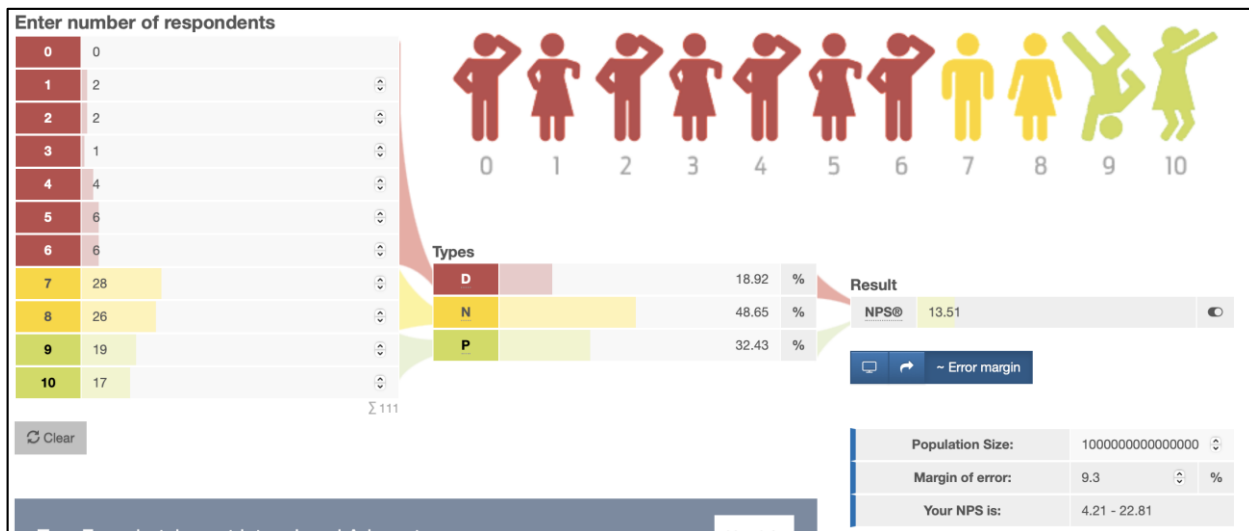
The user attitude towards ChatGPT was analysed using the Chi-Square statistical tool with the hypothesis that there is no relationship between gender and user attitude variables such as ease of use, accuracy of responses, and trustworthiness. The P-Value of the analysis resulted in it being >0.05 and inferring that the hypothesis was rejected and the null hypothesis was accepted, resulting in a high relationship between male and female adoption on ChatGPT with user attitude variables.

4.5. Behavioural Intentions on ChatGPT

One Sample T-Test				
Variables	Statistic	df	p	Result
Like to continue using ChatGPT in the future	20.985	97	$<.0001$	Significant
Like to recommend ChatGPT to others	18.771	97	$<.0001$	Significant
Overall Highly satisfied with ChatGPT	24.301	97	$<.0001$	Significant
ChatGPT is better than other chatbots	19.616	97	$<.0001$	Significant

One sample T-test was used to analyse the behaviour and intentions of the respondents towards ChatGPT. The variables listed for behavioural intentions are using ChatGPT in the future, recommending it to others, and satisfaction, and ChatGPT is better than other chatbots. The analysis revealed that all of the variables produced an output of 0.05, the standard, and the table revealed that the respondents' behavioural intentions were highly influenced.

4.6. Recommendation of ChatGPT to friend or colleague – Net Promoter Analysis



The Net Promoter Score analysis was used to check the respondents attitude towards recommending ChatGPT to their friends and colleagues. Out of 110, 18.92% are detractors, 48.65% belong to the group of passives, and only 32.43% belong to the promoters category. The net promoter score for this study is 13.51, which falls between the standard range of 4.21 and 28.81, and the results indicate that respondents are likely to recommend ChatGPT to their friends and colleagues.

V. DISCUSSIONS:

The study finds that the majority of them are male respondents belonging to the age group between 18 and 30, their level of education is a bachelor's degree, and their occupational status looks like that of a student. The primary reason for using ChatGPT is to get information quickly, with students mostly preferring answers to general knowledge questions and assistance with writing. There is a high association between male and female respondents on user attitude variables such as easy to use, answers are helpful and accurate, and trustworthy. The behavioural intentions of the respondents are highly influenced by variables such as use in the future, recommendation to others, and overall satisfaction, and ChatGPT is better than other chatbots. The research study also identified that the respondents will recommend the ChatGPT to their friends and colleagues.

VI. CONCLUSION

Based on the research findings, it can be concluded that ChatGPT is a highly effective chatbot that meets the needs and expectations of users. The study has demonstrated that users are highly satisfied with ChatGPT,

finding it easy to use, trustworthy, and helpful in acquiring information quickly. The positive user experience of ChatGPT has created a strong behavioural intention among users, resulting in a high likelihood of future usage and recommendation to others. To further improve the effectiveness of ChatGPT, it is recommended to expand its capabilities beyond general knowledge and writing assistance. This could include incorporating features such as personalized recommendations, news updates, and mental health support, which could enhance the value and utility of ChatGPT to users. Additionally, increasing the accessibility and availability of ChatGPT across multiple platforms could increase its reach and usage among users. Another recommendation is to conduct further research on the usage and attitudes towards ChatGPT among different age groups, genders, and educational backgrounds. This will provide a deeper understanding of the needs and preferences of diverse users and enable the development of personalized features and services that cater to their needs. Overall, ChatGPT has emerged as a highly effective and useful chatbot, and the findings of this study provide insights that can be used to enhance its capabilities and improve user satisfaction. By continually improving and evolving, ChatGPT can become an even more valuable resource for users, providing quick and reliable access to information and services.

VII. REFERENCES:

1. Huh, S. (2023). Are ChatGPT's knowledge and interpretation ability comparable to those of medical students in Korea for taking a parasitology examination?: a descriptive study. *Journal of Educational Evaluation for Health Professions*, 20, 1. <https://doi.org/10.3352/jeehp.2023.20.01>
2. Haque, M. U., Dharmadasa, I., Sworna, Z. T., Rajapakse, R. N., & Ahmad, H. (2022). "I think this is the most disruptive technology": Exploring Sentiments of ChatGPT Early Adopters using Twitter Data. <http://arxiv.org/abs/2212.05856>
3. Xames, D., & Shefa, J. (n.d.). *ChatGPT for Research and Publication: Opportunities and Challenges*. <https://ssrn.com/abstract=4381803>
4. Teixeira, L., Cardoso, I., Oliveira e Sá, J., & Madeira, F. (2023). Are Health Information Systems Ready for the Digital Transformation in Portugal? Challenges and Future Perspectives. *Healthcare (Switzerland)*, 11(5). <https://doi.org/10.3390/healthcare11050712>
5. 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>
6. Taecharungroj, V. (2023). "What Can ChatGPT Do?" Analyzing Early Reactions to the Innovative AI Chatbot on Twitter. *Big Data and Cognitive Computing*, 7(1), 35. <https://doi.org/10.3390/bdcc7010035>
7. Thurzo, A., Strunga, M., Urban, R., Surovková, J., & Afrashtehfar, K. I. (2023). Impact of Artificial Intelligence on Dental Education: A Review and Guide for Curriculum Update. In *Education Sciences* (Vol. 13, Issue 2). MDPI. <https://doi.org/10.3390/educsci13020150>
8. Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
9. Gašević, D., Siemens, G., & Sadiq, S. (2023). Empowering learners for the age of artificial intelligence. In *Computers and Education: Artificial Intelligence*. Elsevier B.V. <https://doi.org/10.1016/j.caeai.2023.100130>
10. https://economictimes.indiatimes.com/news/new-updates/chatgpt-witnesses-massive-rise-chatbot-gains-100-million-users-in-two-months/articleshow/98428443.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
11. <https://tesseract.academy/chatgpt-report-attitudes-and-predictions-for-the-future/>

12. <https://www.dropforbusiness.com/2023/02/15/conversing-with-ai-user-adoption-expectations-and-attitudes-of-chat-gpt/>
13. <https://www.theguardian.com/technology/2023/feb/08/chatgpt-users-views-ai-chatbot-essays-emails>
14. <https://www.newindianexpress.com/lifestyle/tech/2023/feb/02/what-are-some-promises-pitfalls-and-panic-surroundingchatgpt-2543711.html>

