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## Chat GPT: Perception of students towards AI tool

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**ABSTRACT:** ChatGPT is an AI tool that provides users with chat-based answers to their questions. This powerful technology offers numerous benefits across various sectors, including education. In the educational context, AI can serve as an assistant to students, aiding their learning processes. This paper examines the perception of students towards ChatGPT usage. This present research investigation was conducted on 66 Undergraduate students of G. B. Pant University of Agriculture and Technology, Pantnagar. The results reveal a high level of student appreciation for ChatGPT's capabilities and effectiveness as a learning tool, highlighting its potential to transform educational practices and improve student engagement and productivity. The findings also suggest that while ChatGPT significantly enhances learning efficiency and student engagement, its full potential can be realized through careful integration and additional resources to support its use.

**Key words:** AI tool, Chat GPT, effectiveness

In recent years, artificial intelligence (AI) has revolutionized various sectors, and education is no exception. Among the myriad AI tools emerging in the educational landscape, OpenAI's ChatGPT stands out as a transformative technology. Designed to simulate human-like conversations, ChatGPT leverages natural language processing (NLP) to interact with users in a coherent and contextually relevant manner. ChatGPT's capabilities extend beyond simple question-and-answer interactions; it can provide personalized tutoring, assist with homework, generate creative writing prompts, and even offer emotional support. (Rudolph *et.al*, 2022) The tool's versatility makes it a valuable asset in promoting student engagement, enhancing learning experiences, and fostering independent thinking. Furthermore, as education increasingly shifts towards digital platforms, AI tools like ChatGPT can play a crucial role in bridging educational gaps, offering support to students who may not have access to traditional tutoring resources. Conversational bots are increasingly becoming ubiquitous, driven by technological advancements from industry giants like IBM, Facebook, Google, and others. Known variously as chatbots, virtual assistants, conversational interfaces, or automated chat, these tools are crucial for modern businesses. They enhance website engagement, improve user

experience, collect valuable visitor data, and convert leads into customers. The adoption of chatbots is motivated by their numerous benefits. Artificial Intelligence (AI) has a rich and varied history that spans several decades, originating from ancient mythology but formally beginning in the mid-20th century. In the 1950s, John McCarthy coined the term "Artificial Intelligence" at the 1956 Dartmouth Conference, marking the formal inception of AI as a field of study. The 1960s and 1970s saw the development of early AI programs focused on problem-solving and symbolic reasoning, such as ELIZA, an early natural language processing program, and Shakey the robot, capable of navigating and performing tasks. The 1980s introduced expert systems that mimicked human expertise in specific domains, though progress slowed during the AI winter due to computational limitations and funding cuts. The 1990s revitalized AI with machine learning advancements, driven by increased data availability and computational power, exemplified by IBM's Deep Blue defeating world chess champion Garry Kasparov in 1997. The 2000s saw AI integration into various applications, from search engines to recommendation systems. From the 2010s to the present, AI has entered the era of deep learning and neural networks, achieving breakthroughs in image and speech recognition and becoming prevalent in

natural language processing, autonomous vehicles, and medical diagnostics. Advanced AI systems like OpenAI's GPT-3 exemplify the cutting-edge capabilities of contemporary AI. The current landscape of AI includes diverse applications across everyday technologies and advanced industries, raising important ethical and societal considerations as AI continues to evolve and impact society.

Artificial Intelligence (AI) has revolutionized the education sector by introducing innovative solutions that cater to personalized learning, administrative efficiency, and enhanced research capabilities. AI-powered adaptive learning platforms like Khan Academy and Coursera personalize educational content based on individual student progress and learning styles, optimizing learning outcomes. Intelligent tutoring systems such as Carnegie Learning provide personalized tutoring and real-time feedback, adapting instructional approaches to students' needs. Automated grading tools like Gradescope streamline assessment processes, ensuring consistency and saving educators valuable time. AI-driven chatbots and virtual assistants assist students with queries, course enrollment, and administrative tasks, enhancing accessibility and service efficiency. These AI applications not only transform classroom dynamics but also contribute significantly to educational research. (Schon, *et al.*, 2023). AI facilitates data-driven insights through educational data mining and learning analytics, enabling researchers to predict student performance, analyze learning patterns, and develop effective teaching strategies. Moreover, AI supports advanced research methodologies such as predictive modeling and simulation, fostering innovation and collaboration in educational research. As AI continues to evolve, its integration into education promises continued advancements in personalized learning, administrative support, and research excellence, shaping the future of education worldwide.

In the education sector, chatbots are specifically designed to meet the needs of EdTech companies, colleges, and other educational institutions. These educational chatbots assist in updating curricula,

grading papers, collecting data on students and alumni, and streamlining the admissions process. Historically, the education sector has been at the forefront of adopting new technologies, particularly in distance learning. The COVID-19 pandemic significantly accelerated this trend, transforming online education from a peripheral option into a core component of mainstream education. Universities now offer comprehensive online courses and distance learning programs, supported by EdTech innovations like chatbots, which have revolutionized educational delivery for students, professors, and administrative staff alike.

In November 2022, OpenAI launched ChatGPT, an AI-powered chatbot that engages users in natural, conversational interactions. ChatGPT can answer questions, correct errors, and even generate written content such as blogs and essays. While this technology holds great promise for education, it is not without its limitations. ChatGPT may struggle with understanding context, interpreting tone and emotions, handling complex topics, and creating personalized lesson plans. There is also concern that over-reliance on such AI tools could impede students' problem-solving skills and reduce opportunities for creativity in learning.

AI assistants have become more relevant in recent years, being used by student sand have reached the context of higher education, which is shown by the increasing number of publications and literature reviews conducted. Dempere *et al.* (2023) identified notable benefits of AI in education including research support, automated grading, and enhanced human-computer interaction. However, concerns such as online testing security, plagiarism, and broader societal and economic impacts like job displacement, the digital literacy gap, and AI-induced anxiety have been identified. Kasepalu *et al.* (2022) find that an AI assistant can help teachers raise awareness and mindfulness and give a data bank of co-regulation interventions, likely leading to improved collaboration and self-regulation. Similarly, Wang *et al.* (2017) investigated the impact of chatbots in immersive virtual English learning environments, discovering that this technology

AI chat boot service providers name are given as follows:

AI Chatbot Service Provider	Description
ChatGPT (OpenAI)	AI language model based on GPT-3 architecture, capable of generating human-like text responses for various applications such as customer support and content generation.
IBM Watson Assistant	AI-powered chatbot platform using natural language processing (NLP) for creating conversational interfaces across industries, integrated with IBM's cloud services.
Amazon Lex	Service by Amazon for building conversational interfaces with advanced deep learning functionalities, widely used for virtual assistants and customer service bots.
Google Dialogflow	Development suite by Google for creating chatbots and voice applications using machine learning and natural language understanding (NLU) capabilities.
Microsoft Azure Bot Service	Platform on Microsoft Azure for building, deploying, and managing intelligent bots with advanced AI functionalities like language understanding and sentiment analysis.
Facebook Messenger Platform	Tools and APIs for businesses to develop chatbots on Facebook Messenger, supporting automated responses and personalized interactions.
Chatfuel	Chatbot development platform enabling creation of AI-driven bots for Facebook Messenger and Telegram, with a visual interface and third-party integrations.
ManyChat	Platform for building chatbots on Facebook Messenger and SMS, providing tools for interactive chatbot sequences, broadcasts, and data collection.
Pandorabots	Platform for building and deploying customizable chatbots with personalities, using AIML (Artificial Intelligence Markup Language) and integrating with various APIs.

enhances students' perception of such settings. Kerly and Bull (2006) studied chatbots' benefits in developing university students' negotiation skills, while Tegos *et al.* (2015) analyzed and reported the effects of chatbots in collaborative learning experiences among college students, suggesting that the technology increases different knowledge acquisition measures.

Similarly, Dwivedi *et al.* (2023) researched the impact of ChatGPT on academic research, identifying its potential to improve the quality of writing and make research more accessible to non-experts. However, the challenges similar as the authenticity and reliability of generated text and issues of accountability and authorship were also highlighted by them. Students can use AI assistants to identify strengths or gaps in their knowledge and to receive feedback on their learning progress (Zawacki-Richter *et al.*, 2019), thus being individually supported in the development of their competencies. ChatGPT may help one to improve their academic research and writing skills. Because ChatGPT generates near-perfect natural speech answers, a human may think, "That must be correct." However, ChatGPT also has other limitations: generated answers can be too short, misinterpreted, not understandable for students, or wrong (Gao *et*

*al.*, 2022). Therefore, while AI offers significant benefits, it is essential to be aware of and address its limitations and the broader implications of its use in education.

This paper aims to explore utilization patterns of Chat GPT in education system. While the theoretical framework of ChatGPT is understood, a deeper exploration into its technical workings, underlying algorithms, and practical applications is necessary. The subsequent sections explore into these aspects, providing a comprehensive overview of ChatGPT's potential and limitations in the educational context.

## MATERIALS AND METHODS

The research investigation was conducted at GBPUA&T, Pantnagar, involving a total of 66 B.Sc Ag final year students. An online questionnaire was created using Google Forms and distributed among 150 students. Out of these, 66 responses were received. The questionnaire aimed to gauge students' perceptions through a series of 34 statements, each measured on a three-point continuum.

## RESULTS AND DISCUSSION

It was revealed through the survey that ChatGPT is

**Table 1: Perception of students towards Chat GPT**

N=66

S. No.	Statement	Satisfactory	Most satisfactory	Unsatisfactory
1.	Chat GPT has powerful capabilities.	62 (93.9%)	1 (1.5%)	3 (4.5%)
2.	Chat GPT is an effective tool for learning.	56 (84.8%)	3 (4.5%)	7 (10.6%)
3.	Chat GPT is a complementary for learning resource.	48 (72.7%)	1 (1.5%)	17 (25.8%)
4.	Chat GPT helps to study more efficiently.	47 (71.2%)	16 (24.2%)	3 (4.55)
5.	Chat GPT is easy to use.	64 (97%)	-	2 (3%)
6.	Chat GPT presents an impressive explanation.	45 (68.2%)	5(7.58%)	16 (24.2%)
7.	Chat GPT provides well-structured answers.	43 (65.2%)	5(7.58%)	18 (27.3%)
8.	Chat GPT usually answers the question correctly.	42 (63.6%)	10 (15.16%)	14 (21.2%)
9.	Chat GPT is better than any other tools, such Google.	32 (48.5%)	8 (12.13%)	26 (39.4%)
10.	Students are optimistic about Chat GPT.	57 (86.4%)	-	9 (13.64%)
11.	Chat GPT is used to improve vocabulary.	46 (69.7%)	2(3.03%)	18 (27.3%)
12.	Chat GPT is useful for writing tons of ideas.	53 (80.3%)	-	13 (19.7%)
13.	Chat GPT is useful for better at telling stories.	45 (68.2%)	3 (4.55%)	18 (27.3%)
14.	Chat GPT is useful for reading and comprehension.	47 (71.2%)	1 (1.52%)	18 (27.3%)
15.	Chat GPT helps in Language Translation.	47 (71.2%)	3 (4.55%)	16 (24.2%)
16.	Chat GPT helps in solving Practical Problems.	53 (80.3%)	1 (1.52%)	12 (18.2%)
17.	Chat GPT helps in Clarifications.	56 (84.8%)	-	10 (15.2%)
18.	ChatGPT helps students to compose essays and write articles.	62 (93.9%)	-	4 (6.1%)
19.	ChatGPT helps students to compose poetry.	50 (75.8%)	2 (3.03%)	14 (21.2%)
20.	ChatGPT is a formidable tool for increasing human productivity	52 (78.8%)	-	14 (21.2%)
21.	ChatGPT is a revolution in Natural Language Processing capability.	45 (68.2%)	1 (1.52%)	20 (30.3%)
22.	ChatGPT is full of creative ideas to share with students.	51 (77.3%)	3 (4.55%)	12 (18.2%)
23.	ChatGPT provides students with the best possible writing ideas.	47 (71.2%)	2 (3.03%)	17 (25.8%)
24.	ChatGPT is an effective problem-solving pathway.	57 (86.4%)	1 (1.52%)	8 (12.1%)
25.	ChatGPT can gain knowledge from its human users as a key feature.	46 (69.7%)	4 (6.06%)	16 (24.2%)
26.	ChatGPT is important in the education sector as it helps students with gaining answers to their questions.	58 (87.9%)	1 (1.52%)	7 (10.6%)
27.	ChatGPT provides students with useful website links for education.	52 (78.8%)	3 (4.55%)	11 (16.7%)
28.	Contribution to students' development in education	54 (81.8%)	-	12 (18.2%)
29.	Usage for academic activities	59 (89.4%)	-	7 (10.6%)
30.	Usage of a traditional method than ChatGPT	38 (57.6%)	3 (4.55%)	25 (37.9%)
31.	Involvement with technology-inclined courses	50 (75.8%)	-	15 (22.7%)
32.	Resources to aid the use of ChatGPT	52 (78.8%)	-	14 (21.2%)
33.	Interference with the ability to think and concentrate on courses	50 (75.8%)	1 (1.52%)	15 (22.7%)
34.	Computer-related experience and use of ChatGPT.	60 (90.9%)	1 (1.52%)	5 (7.6%)

highly regarded among the students for its effectiveness, various capabilities and utility in Education field. It is indicated in Table 1 that the majority (93.9%) of students agree that this AI tool has powerful capabilities and 84.8% consider it an effective learning tool as well. However, it was noted that about 72.7% students see it as a complementary learning source with 71.2 % of believing it helps them study more efficiently. The ease of use emerged as a standout feature of ChatGPT, with 97% students agreeing. Further, 68.2% think it presents impressive explanations, and 65.2% agree that it provides well-structured answers.

ChatGPT is considered optimistic by most of the students (86.4%). About 80.3% believes it is useful in generating ideas, while 19.7 % students disagree with it. It is praised for answering questions correctly by 63.6 %, but is also faces competition from Google, as only 48.5 per cent agree it is better, whereas 39.4 % disagree with it. For storytelling, 68.2% students find it useful and 71.2% agrees that it aids reading comprehension. Whereas, 69.7% agrees it improves vocabulary, though 27.3 % students disagree on its effectiveness of in these areas.

Majority of students (93.9%) see ChatGPT as beneficial for composing essays and articles and around 75.8 % see it useful translating language and composing poetry. The AI tool is considered a revolution in natural language processing by 68.2 students but, 30.3% do not agree with the statement. Though, 78.8% students viewed it as a formidable productivity tool. Regarding specific functionalities, 84.8% students agree it helps in clarification, 80.3% in solving practice problems and 71.2% in language translation.

About 89.4% students appreciate the usefulness of ChatGPT for academic activities, and 81.8% agrees it contributes to student development and provides useful links (78.8%). Most of the students (86.4%) see it as an effective problem-solving pathway and about 77.3% appreciate its creative idea sharing capabilities. While 87.9 % find it important for gaining answers to their questions, 69.7% students agree it can gain knowledge from users as compared to students who disagree (24.2%).

About 90.9% students agree that they have satisfactory computer-related experience with ChatGPT, 75.8% see it useful for technology inclined courses and 78.8 % agree they requires more resources to aid its use. Despite all the benefits of ChatGPT, more than half (57.6%) of students still favor traditional methods of education over it and over 75.8% students feel it interferes with their ability concentrate.

The results revealed that, students are satisfied with ChatGPT, and are appreciating it capabilities and effectiveness particularly as a learning tool. Its user friendliness makes it accessible to a wide range of users. The tool's strength is observed in specific educational tasks like composing essays, articles, clarifications, and solving practice problems and also valued for creative idea generation. However, some students express concerns about its tendency to interfere with concentration. The results indicate a need for additional resources to aid ChatGPT's use, and students with computer experience find it particularly beneficial, suggesting its integration with technology-oriented courses so as to enhance

its effectiveness. Despite its many advantages, a significant number of students still prefer traditional education, even though they view ChatGPT as a useful addition to it.

## CONCLUSION

The results shows picture of ChatGPT's role in education. Students overwhelmingly recognize its powerful capabilities and effectiveness, particularly in enhancing learning efficiency and providing clear, structured answers. However, the preference for traditional educational methods by over half of the students suggests that while ChatGPT is a valuable supplement, it is not yet a replacement for conventional teaching methods. ChatGPT's ease of use, versatility in language-related tasks, and contribution to student development are notable strengths. However, challenges such as perceived interference with concentration and the need for additional resources for effective use highlight areas for improvement. Moreover, the competition with established information sources like Google indicates that ChatGPT's role is still evolving. The study should have concentrated on social implication of AI and related applications.

By addressing these challenges, educational institutions can better harness the potential of AI tools like ChatGPT to complement traditional learning methods and enhance the overall educational experience.

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