

A STUDY ON THE USAGE OF CHATGPT (AN AI TOOL) AMONG COLLEGE STUDENTS

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Abstract: This study focuses on the usage of ChatGPT among college students in Chennai by identifying the areas where ChatGPT is used, understanding the outcomes of its usage, and examining the relationship between ChatGPT usage and the dependency it creates among college students. A quantitative research methodology was adopted, with data collected from 100 students (50 from Arts and Science colleges and 50 from Engineering colleges) through a structured online questionnaire. The findings reveal that students use ChatGPT for academic purposes, such as assistance with assignments, projects, exam preparation, and instant doubt clarification, as well as for non-academic purposes, like seeking personal advice or using it as a companion. Though many students find ChatGPT helpful, concerns were raised about over-reliance and reduced critical thinking. This study highlights how college students utilize ChatGPT for both academic and non-academic purposes.

Key Words: ChatGPT, college students, academic purposes, non-academic purposes, usage, dependency, critical thinking.

1. INTRODUCTION

The world is undergoing a profound transformation as Artificial Intelligence (AI) continues to evolve and impact various sectors of our lives. AI is increasingly being integrated into healthcare, finance, transportation, entertainment, and, importantly, education. One of the most significant contributions of AI in education is through AI-powered applications that are transforming learning experiences. These applications help students by answering questions and solving complex problems. With continued advancements, the influence of AI on education is expected to expand, changing the way students approach their studies. One notable AI application is ChatGPT, developed by OpenAI.

ChatGPT was officially launched in November 2022 and became a significant development in conversational AI. Over time, ChatGPT has evolved from a research preview to a widely used platform worldwide. This AI model enables users to type in questions or requests and receive responses, whether in text or image format. It offers an interactive experience by understanding the input and responding based on the information it has been trained on.

ChatGPT is an advanced AI tool that has become widely used among college students. It assists with various activities, both academic and non-academic, making it a useful resource as well as a hindrance.

2. LITERATURE REVIEW

Recent studies have explored the educational implications of ChatGPT, offering insights into its perceived benefits and drawbacks among college students. Agnes and Vallespin (2023) conducted a qualitative case study across multiple disciplines, and two universities - revealing that students used ChatGPT to extend their knowledge base, finish assignments at a faster pace and, develop skills, although it sometimes led to overdependence, reduced creative thinking and difficulty in understanding information on their own. Sahadevan (2023) study examined how ChatGPT has been integrated into academics, personal, and social contexts, revealing that students found it beneficial for learning, as a guidance for assignments, and as a support for mental well-being, while also encountering challenges in its effective use. The study offers deeper insight into AI's role in higher education and suggests ways to enhance its positive impact while reducing possible limitations. Furthermore, Imran and Lashari (2023) examined the effect of ChatGPT on

students writing skills, most believed it hindered creativity while others found it beneficial when used under proper guidance.

While recent studies have provided valuable insights into the educational use of ChatGPT by highlighting its benefits and limitations in academic contexts, they have largely overlooked differences in usage between students from different academic disciplines and have not explored how students use ChatGPT beyond academics. Addressing this gap, the present study investigates how students from Arts and Science and Engineering disciplines utilize ChatGPT. It explores variations in usage frequency, specific academic and non-academic purposes, perceived benefits and challenges, and overall experiences of using ChatGPT.

3. OBJECTIVES

1. To identify the areas where ChatGPT is used by students.
2. To understand the outcomes from ChatGPT usage
3. To examine the relationship between ChatGPT usage and dependency created on it among college students.

4. RESEARCH METHODOLOGY

This study used a quantitative research design to explore the usage of ChatGPT among college students. A total of 100 students were selected from ten colleges in Chennai, Tamil Nadu, which included five Arts and Science colleges and five Engineering colleges. Among them, 50 students were from Arts and Science colleges and 50 from Engineering colleges. Stratified sampling was used to ensure balanced representation. Data were collected using a structured online questionnaire that included both closed and open-ended questions. Before the main data collection, a small pilot study was conducted to check the clarity of the questions, and minor changes were made based on the responses

5. FINDINGS

This section presents the key findings derived from the responses collected through the structured questionnaire

TABLE 5.1
DISTRIBUTION OF RESPONDENTS BASED ON AGE

AGE	FREQUENCY	PERCENTAGE
17 - 20	85	85%
21 - 24	15	15%

Table 5.1 represents the age of the respondents. As per the above table, out of 100 respondents, 85% are between the ages of 17 to 20, while the remaining 15% are between the ages of 21 to 24. The average age of the respondents is 19 ± 2 years

DIAGRAM 5.1
DISTRIBUTION OF RESPONDENTS BASED ON THEIR STREAM OF STUDY IN COLLEGE

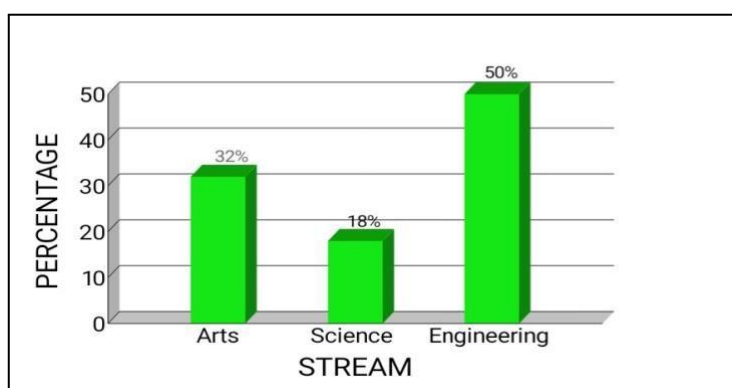


Diagram 5.1 depicts the data on the respondent's stream of study in college, where 32 % of respondents were from the Arts stream, 18 % from the Science stream, and 50 % of respondents from the Engineering stream.

TABLE 5.2
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR COLLEGE

COLLEGE	FREQUENCY	PERCENTAGE
Stella Maris College	12	12%
Loyola College	11	11%
Dwaraka Doss Goverdhan Doss Vaishnav College	6	6%
St. Joseph's College (Arts & Science)	10	10%
Madras Christian College	11	11%
Sathyabama University	13	13%
SRM Institute of Science and Technology	8	8%
Dr.M.G.R Educational and Research Institute	9	9%
Meenakshi Sundararajan Engineering College	10	10%
Vel Tech High Tech Dr.Rangarajan Dr.Sakunthala Engineering College	10	10%

Table 5.2 represents the distribution of respondents in accordance with that college. The study involved 100 respondents from 10 colleges. The colleges can be categorized into 5 Arts and Science colleges and 5 Engineering colleges. A total of 50 respondents were from Arts and Science colleges and 50 respondents were from Engineering colleges. Among the Arts and Science colleges high responses came from Stella Maris College (12%) while among the Engineering colleges the highest number of responses came from Sathyabama University (13%).

DIAGRAM 5.2
DISTRIBUTION OF RESPONDENTS BASED ON USAGE OF CHAT GPT

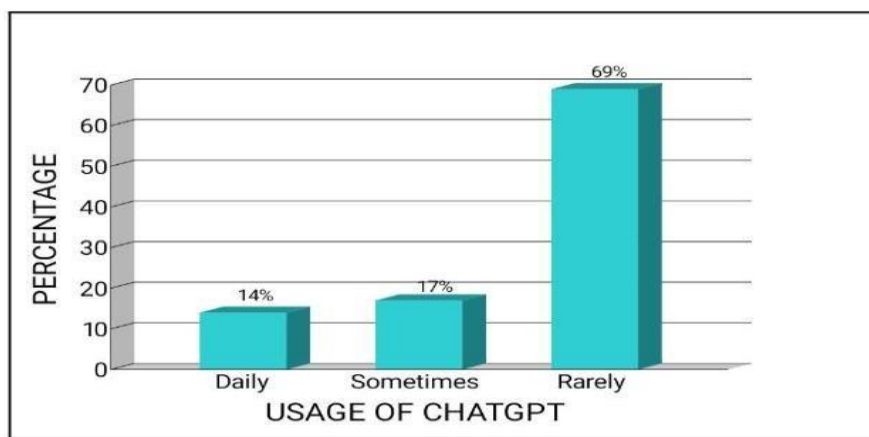


Diagram 5.2 showcases the data on how often students use ChatGPT. 14 % of students use it daily, followed by 17 % of respondents use it sometimes and a high number of students (69%) reported using ChatGPT rarely.

TABLE 5.3
DISTRIBUTION OF RESPONDENTS BASED ON THE PURPOSE OF USING CHATGPT

PURPOSE	FREQUENCY	PERCENTAGE
To assist with homework	3	3%
Guidance for assignments and components	34	34%
Exam Preparation	32	32%
Assistance with grammar mistakes	4	4%
Extra references	20	20%
Research Guidance	5	5%
All of the above	2	2%

Table 5.3 depicts the data on the purposes for what college students use ChatGPT for, 3% of students use it to solve homework questions, 34% of students use it as a guide for their assignments and components while 32% of students use it for their exam preparation, 4% of them use for assistant with grammar mistakes and 20% of students use for extra references. While 5% of students use it for their research guidance and 2% of the students use ChatGPT for all of the above purposes, however the usage of ChatGPT varies according to arts and science streams and Engineering streams.

TABLE 5.4
DISTRIBUTION OF RESPONDENTS BASED ON THEIR DEPENDENCY ON CHATGPT

DEPENDENCY ON CHAT	FREQUENCY	PERCENTAGE
Completely dependent	6	6%
Partially dependent	28	28%
Occasionally dependent	66	66%

Table 5.4 showcases the distribution of respondents based on their dependency on ChatGPT. It highlights varying levels of reliance as, 6% are completely dependent, 28% of respondents are partially dependent, and 66% of respondents use it occasionally.

DIAGRAM 5.3
DISTRIBUTION OF RESPONDENTS BASED ON THE IMPACT OF CHATGPT ON ACADEMIC PERFORMANCE

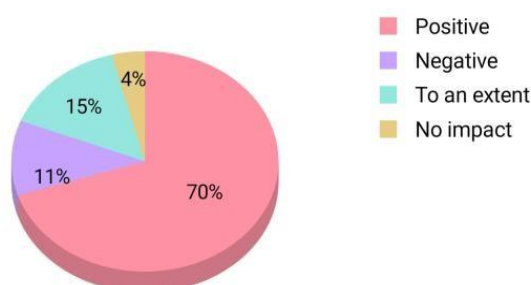


Diagram 5.3 illustrates the impact of ChatGPT on academic performance. 70% of respondents stated that they have a positive impact of using ChatGPT for academic purposes. 11% of respondents reported that they have a negative impact while 15 % mentioned that it has an impact on their academic performance to an extent and 4% of respondents stated it hasn't brought any impact on their academic performances.

TABLE 5.5
DISTRIBUTION OF RESPONDENTS BASED ON THE BENEFITS OF USING CHAT GPT

BENEFITS	FREQUENCY	PERCENTAGE
Makes learning easier	34	34%
Time efficiency and convenience	15	15%
Guide for assignments, projects and exams	15	15%
Knowledge expansion	10	10%
Skill development	5	5%
Instant doubt clearance	6	6%
Accessible	7	7%
Comprehensive learning tool	8	8%

The data in Table 5.5 shows how ChatGPT benefits college students. Most students, around 34%, use ChatGPT because it makes learning easier. Another 15% of students use ChatGPT because it saves time and convenient to use. Similarly, 15% use ChatGPT as a guide for assignments, projects, and exams. 10% of students use ChatGPT to expand their knowledge. Around 6%, rely on ChatGPT for clearing doubts instantly. Another 7% use it because it is easily accessible. Lastly, 8% of students say ChatGPT is a comprehensive learning tool, meaning they find it useful for many purposes .

TABLE 5.6
DISTRIBUTION OF RESPONDENTS BASED ON THE DRAWBACKS OF USING CHAT GPT

DRAWBACKS	FREQUENCY	PERCENTAGE
Inaccuracy and misinformation / at times	29	29%
Makes too dependent and reduces critical thinking	28	28%
It's not able to understand the questions	6	6%
No emotional understanding	3	3%
Limited features	14	14%
No drawbacks	20	20%

Table 5.6 presents the data on the drawbacks of using ChatGPT, 29% of the respondents mentioned that ChatGPT sometimes provides inaccurate information . Additionally, 28% of the respondents are relying on ChatGPT too much which makes them overly dependent on it and reduces their ability to think critically and independently. Furthermore, 6% of respondents stated that ChatGPT sometimes struggles to understand students questions properly. Another 3% pointed out that, AI lacks emotional understanding. Besides these concerns, 14% of the participants mentioned that ChatGPT has limited features, which restricts its usefulness in certain situations. Interestingly, 20% of the students said they did not find any drawbacks in using ChatGPT and were satisfied with its performance.

DIAGRAM 5.4
DISTRIBUTION OF RESPONDENTS BASED ON WHETHER CHATGPT HAS AFFECTED THEIR ABILITY TO WORK INDEPENDENTLY

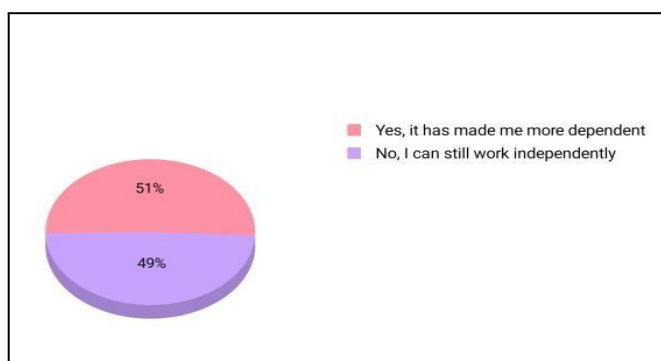


Diagram 5.4 depicts the data on whether ChatGPT has affected respondents ability to work independently. According to the results, 51% of the respondents agreed that it has made them more dependent, while 49% stated that they can still work independently.

DIAGRAM 5.5
DISTRIBUTION OF RESPONDENTS BASED ON THE USAGE OF CHATGPT FOR NON-ACADEMIC PURPOSES

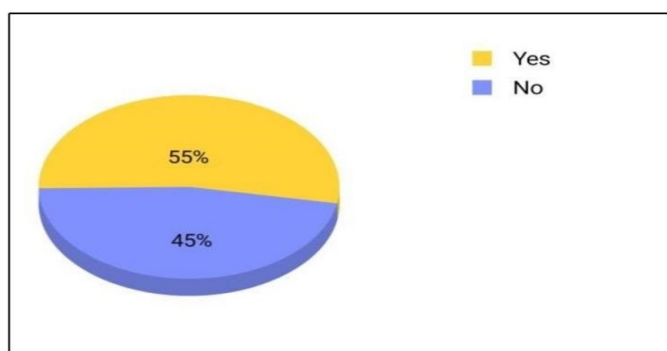


Diagram 5.5 illustrates the usage of ChatGPT for non-academic purposes. 55 % of respondents stated that yes, they use ChatGPT for non - academic purposes, while 45 % of respondents only use ChatGPT for Academic Purposes.

TABLE 5.7
DISTRIBUTION OF RESPONDENTS BASED ON THE SPECIFIC NON-ACADEMIC TASKS FOR WHICH THEY USE CHATGPT

NON-ACADEMIC TASKS	FREQUENCY	PERCENTAGE
Entertainment (e.g. jokes etc.)	13	23.64%
Personal advice or guidance	21	38.18%
As a companion	11	20.00%
Social media content creation	10	18.18%

Table 5.7 presents data on the different non-academic tasks for which students use ChatGPT. According to the responses, 13% of students use it for entertainment, such as generating jokes, stories, or engaging in fun conversations. Meanwhile, 21% rely on it for personal advice or guidance. Additionally, 11% consider ChatGPT as a companion. Lastly, 10% of respondents use it for social media content creation. This data highlights the diverse ways students integrate ChatGPT into their daily lives beyond academics.

6. DISCUSSION

The research was specifically conducted with Arts and Science Colleges and Engineering Colleges to understand how each stream utilizes ChatGPT. The usage of ChatGPT in these fields is more diverse and prominent, whereas other streams like Commerce or Medical fields may utilize ChatGPT less. It can be assumed that this difference is due to the nature of these disciplines, as these areas are more related to business, marketing, and medicine. Commerce subjects involve numerical calculations, legal frameworks, financial databases, and formulas that AI may not accurately process. Similarly, medical students rely on textbooks, clinical guidelines, and hands-on experience making AI responses less reliable.

College students utilize ChatGPT for various purposes. Arts and Science stream students use ChatGPT in similar ways, predominantly for completing assignments, study purposes, and gaining a deeper understanding of their subjects. They rely on it to clarify concepts, get creative ideas, and create study materials like notes and get points for presentations. Engineering students use it for coding assistance, debugging, technical guidance, mathematical problem solving. They also depend on it to generate ideas for projects, prototyping, hackathon preparation, report writing and presentations.

Students previously relied on books and library resources, as well as online search tools where they had to search multiple sources. With ChatGPT's instant responses and 24/7 availability, they no longer struggle to find information, as they find it makes their learning easier. This means they find it helpful in understanding topics more effectively. ChatGPT can also give explanation in any language, even in Tenglish if its requested, in order to make the concept even more clearer. It helps them by providing ideas on how to work on the assignment or project, they also use it to explore new topics and improve their knowledge and understanding. However, this reliance can reduce creativity and logical thinking, raising concerns about ethics in learning.

But, on the other hand students also pointed out drawbacks, such as , at times it provides inaccurate information, it sometimes extracts content directly from sources like Wikipedia, which is not reliable, it makes them too dependent and reduce their ability to think critically and independently. Almost more than half of the study population stated that it has made them more dependent and lazier as they are not able to think and solve problems on their own. It sometimes struggles to understand students questions properly as they have to reframe the same question again and again and, only then it provides relevant answer to that question, which also does not satisfy the student's expectations, some find, no emotional understanding as a drawback as ChatGPT cannot truly comprehend human emotions or provide emotional support while others say that there are only limited features in ChatGPT, as there are certain restrictions like limited image uploads, chat ending after long use, and no access to advanced features. To get full access, they need to upgrade to ChatGPT Plus. However, some reported no drawbacks and were fully satisfied with the application.

Some felt, after the arrival of ChatGPT, the application has impacted student – professor interactions in seeking or clarifying doubts. Half of the study population affirms that it has created distance in their relationship with professors and reduced direct interaction as they now rely more on ChatGPT for explanations as it provides quick and easy clarifications while some reported that there was no impact on their relationship with professors, they still seek them to clarify any doubts stating that they are highly knowledgeable and irreplaceable.

So, overall in terms of academics student find ChatGPT as a dependable study partner, Convenient tool for quick answers, Supplement to traditional learning resources and also as a Distraction and hindrance.

Beyond academics, ChatGPT is also used for entertainment such as generating jokes or engaging in fun conversations, they use ChatGPT to get personal advice or guidance as they seek support and guidance on various life matters, they consider it as a companion, a friend, stating that chatting with it relaxes their mind. They also use it to get ideas for social media content creation. This highlights the growing emotional dependence on AI tools like ChatGPT where students are being emotionally attached to a non - emotional creature highlighting how dependent students are on AI tools like ChatGPT.

7. CONCLUSION

This study focused on identifying the areas where ChatGPT is used by students, understanding the outcomes of its usage, and examining the dependency it creates among college students. The findings suggest that ChatGPT helps in academics and personal support, but it also raises concerns regarding over-dependence and reduced critical thinking.

In conclusion, ChatGPT can be a helpful tool for students when used wisely. It saves time and assists with various tasks, but students must ensure that they do not rely on it excessively as this could affect their future, especially in the job market where practical knowledge and problem-solving matter. AI should serve as a supplement to learning and not a replacement for traditional methods and independent thinking.

As technology continues to evolve, it is the responsibility of users to ensure that such tools aid rather than hinder personal growth. Many people state that AI is going to control the future, but artificial intelligence cannot beat humans if humans do not depend on it. A human mind can recognize a face or recall an incident that happened years ago, even from their childhood, within fractions of a second. But an AI tool only provides stored information and not every information searched is instantly given, it takes time, technical error happens. Human intelligence is very high, AI itself was created by humans to assist humans but its proper usage will determine whether humans will remain in control of AI or not.

8. RECOMMENDATIONS

- This study can be done with a broader range of students across different fields and regions to gain a more comprehensive understanding of ChatGPT's usage among college students.
- It's crucial for young people to think critically and independently, rather than relying too heavily on AI tools. Excessive use could lead to AI becoming a controlling factor in their education and future.
- Assignments are designed to deepen understanding and help students relate to the concepts learned. Instead of using AI tools like ChatGPT, which can sometimes misinterpret questions and give inaccurate answers, students should complete their assignments by referring to books, library resources and, proper websites.
- AI tools like ChatGPT help save time and aid in exam preparation, but students must put in their effort for a deeper understanding, as quality work comes with hard work. "Instant solutions to anything are always harmful".
- Faculty should hold more interactive sessions with students to help them fully grasp concepts. Additionally, assignments should be checked through AI DETECTOR to ensure genuine learning and avoid over-reliance.
- Beyond Academics, ChatGPT is also used for content creation, personal advice, and even companionship. However, students should remember that AI cannot replace human interaction and emotional support. Face-to-face conversations and connections are irreplaceable.

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