



A study on impact of using chatgpt by the academicians with special reference to Coimbatore city

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Abstract

In education, ChatGPT has evolved to include both positive and negative effects. This AI tool was created with the intention of obtaining information rapidly, particularly in the academic domain. The chatGPT is bringing about a new revolution in academia and has both beneficial and detrimental effects on learning, research, and other areas. To ascertain the extent to which academicians are utilizing chatGPT, the complete study was carried out solely in the city of Coimbatore. I have collected 150 samples in order to evaluate ChatGPT's functionality. The material was gathered using both primary and secondary sources. This is an attempt to investigate the effects of academics using chatGPT.

Keywords: Chatgpt, academic, research, impact, usage level, AI

Introduction

In recent years, the integration of artificial intelligence (AI) technologies into various sectors has witnessed a significant surge. Among these, natural language processing (NLP) models, such as ChatGPT, have gained prominence for their ability to generate human-like text responses. This study aims to investigate the multifaceted impact of ChatGPT usage among academicians, seeking to understand its implications on teaching, research, and overall academic communication. As academia embraces digital transformation, ChatGPT has emerged as a tool that offers real-time assistance, facilitates collaborative learning environments, and potentially transforms the way educators engage with students. The dynamic nature of ChatGPT allows for adaptive interactions, raising questions about its role in enhancing pedagogical approaches. This study influence ChatGPT on research endeavors within academic circles. Examining whether ChatGPT aids in idea generation, literature review, or even collaborative writing could provide valuable insights into the evolving landscape of scholarly pursuits.

Objectives of the Study

- To ascertain the usage level of the ChatGPT among the academicians.
- To identify the factors that influence the use of ChatGPT.
- To know the impact of using ChatGPT among the academicians.
- To know the opinion of the respondents after using ChatGPT

Scope of the Study

- The primary scope of the study is to know the expectation about chatGPT in the future by the academicians.
- To determine the factors that influence how frequently chatGPT is used in comparison to other sources.

- The results of this study will help the open AI to modify the materials, information, and other components of the data.

Statement of the Problem

In today's digital environment, human power is being used as little as possible, with artificial intelligence taking over. A chatbot known as ChatGPT was created by open AI. It can reduce the amount of labour, simplify it for them, and offer a range of materials, data, and information. Through the use of a generatively pre-trained transformer, we may obtain complete clarity and accuracy of the outcome by implementing this chatGPT. Academicians mostly use it to construct their research, articles, and other works. Thus, this is an attempt to study the impact of using ChatGPT by academicians.

Limitations of the Study

- The survey's applicability to other cities is limited because it was conducted solely in the Coimbatore region.
- The sample size is limited to 150 academicians only.
- The study was conducted over a very short period of time.

Research Methodology

The research is based on primary and secondary data to understand the scope of chatGPT among academicians and to make suggestions for the open AI under the study of the impact of using chatGPT. The primary data was collected through a questionnaire.

Primary Data

Primary data is fresh data, and has been used for the purpose of studying the impact of using ChatGPT by academicians.

Secondary Data

The secondary data was collected from the various sources related to the chatGPT like newspaper, social media, magazine and etc.

Sample Size

The sample size has been selected for the study is 150.

Area of the Study

The study was conducted in Coimbatore city.

Tools Used

- Simple percentage
- Chi – square

Simple Percentage

Simple Percentage Analysis refers to a special kind of rate or percentage (%) used in making comparisons between two or more series of data. A percentage is used to determine the relationship between the series.

CHI – SQUARE

The chi-squared test is done to check if there is any difference between the observed value and expected value.

$$\chi^2 = \sum(O_i - E_i)^2 / E_i$$

Review of Literature

Dong Hwa Kim (2023) [1], “A Study on the Job Replacement Impact of ChatGPT and Education Method” This paper deals with the job impact of ChatGPT and education preparation will give an influence on many areas because it can be implemented with ease as just normal editing works and speak including code development by using huge data. Currently young generations will take a big impact on their job selection because ChatGPT can do well as much as human can do it everywhere. Therefore, education method and system should be rearranged as new curriculums. However, government and officers do not understand well how serious it is in education. This paper provides education method and curriculum for AI education including ChatGPT through analyzing many papers and reports, and experience.

Overview of the Study

Introduction About Artificial Intelligence (AI)

Artificial intelligence (AI) is the intelligence of machines or software, as opposed to the intelligence of humans or animals. It is a field of study in computer science which develops and studies intelligent machines. Such machines may be called AIs.

Introduction About Chatgpt



ChatGPT (Chat Generative Pre-trained Transformer) is a chatbot developed by Open AI and launched on November 30, 2022. Based on a large language model, it enables users to refine and steer a conversation towards a desired length, format, style, level of detail, and language. By January

2023, it had become what was then the fastest-growing consumer software application in history, gaining over 100 million users and contributing to the growth of Open AI's valuation to \$29 billion. ChatGPT's release spurred the development of competing products, including Bard, Ernie Bot, LLaMA, Claude and Grok. Microsoft launched its Bing chat based on Open AI's GPT-4. Some observers raised concern about the potential of ChatGPT and similar programs to displace or atrophy human intelligence, enable plagiarism, or fuel misinformation.

Data Analysis and Interpretation

Table 1: Shows the Educational Status of the Respondents

S. No	Educational level	No. of respondents	Percentage
1	Faculties	5	3.3%
2	Research scholars	8	5.3%
3	Undergraduate	85	56.7%
4	Postgraduate	52	34.7%
	Total	150	100

Source: Primary Data

Interpretation

Table shows that 3.3% of the respondents are School level, 5.3% of the respondents are Research scholars, 56.7% of the respondents are Undergraduate, 34.7% of the respondents are Postgraduate.

Hence, majority (56.7%) of the respondents are Undergraduate.

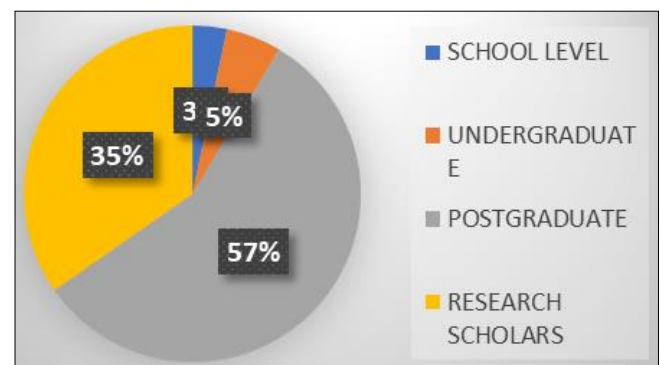


Chart 1

Table 2: Respondents Impacts of Using this Chatgpt

S. No	Impacts of Using Chatgpt	No. of Respondents	Percentage
1	Creating laziness	27	18%
2	Reduce creativity	38	25.3%
3	Facilitating information retrieval	12	8%
4	Easy process	73	48.7%
	Total	150	100

Interpretation

The table shows that 18% of the respondents are Creating laziness, 25.3% of the respondents are reduce Creativity, 8% of the respondents are Facilitating information retrieval, 48.7% of the respondents are Easy process.

Hence, majority (48.7%) of the respondents are Easy process.

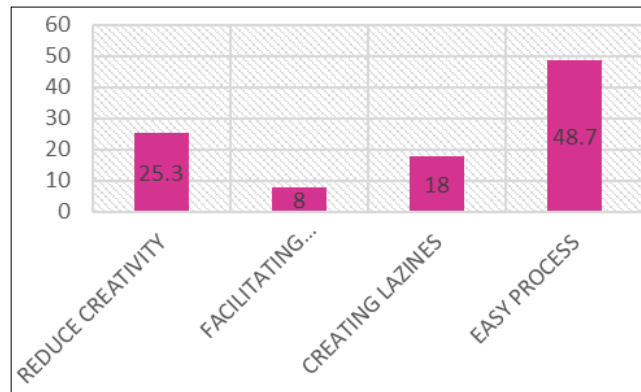


Chart 2

CHI – Square Test

S. No	Factors		No of respondents	Percentage (%)
1	Educational level	Faculties	5	3.3
		Under graduate	85	56.7
		Research scholar	8	5.3
		Post graduate	52	34.7
2	Impact of using chatGPT	Accurate output	12	8
		Easy process	73	48.7
		Reduce creativity	38	25.3
		Creating laziness	27	18

Interpretation

The table clearly states the demographic profile of the respondents & impact of using ChatGPT. Most of the respondents give their impacts after using ChatGPT is Easy process.

H₀(Null hypothesis) = There is no significance relationship between educational level and impact of using chatGPT.

H₁(Alternative hypothesis) = There is a significance relationship between educational level and impact of using chatGPT.

Chi- square analysis = $\chi^2 = \sum(O_i - E_i)^2/E$

O	E	(O-E) ²	(O-E) ² /E
2	4.16	4.6656	1.121538
3	0.64	5.5696	8.7025
1	0.4	0.36	0.9
6	6.8	0.64	0.094118
8	9.36	1.8496	0.197607
2	1.44	0.3136	0.217778
	0.9	0.81	0.9
17	15.3	2.89	0.188889
27	25.31	2.8561	0.112845
2	3.89	3.5721	0.918278
4	2.43	2.4649	1.014362
40	41.37	1.8769	0.045369
15	13.17	3.3489	0.254282
1	2.03	1.0609	0.522611
	1.27	1.6129	1.27
22	21.53	0.2209	0.01026
150	150	34.112	16.47044

Significance level 5% or 0.05

Result: The calculated chi – square value is (16.47044) less than the table value (16.919). Hence, the hypothesis is accepted.

Findings

- The majority (52.7%) of the respondents are male.
- The majority (68%) of the respondents ages are between 21 and 30.
- The majority (89.3%) of the respondents are single.

- The majority (56.7%) of the respondents who are educational are undergraduates.
- The majority (58.7%) of the respondents occupations are students.
- The majority (54%) of the respondents monthly income is between Rs. 10000 and Rs. 15000.
- The majority (61.3%) of the respondents live in rural areas.
- The majority (79.3%) of the respondents are using ChatGPT

- The majority (50%) of the respondents know about this AI through social media.
 - The majority (80.7%) of the respondents access ChatGPT through smartphones.
 - The majority (50.7%) of the respondents are using this ChatGPT for less than 1 month.
 - The majority (40.7%) of the respondents are using Weekly.
 - The majority (66.7%) of the respondents said No to activating ChatGPT Plus.
 - The majority (24.7%) of the respondents are using this ChatGPT for Research articles.
 - The majority (43.3%) of the respondents said it was easy to understand as an influencing factor.
 - The majority (48.7%) of the respondent's impact after using ChatGPT is Easy process.
 - The majority (57.3%) of the respondent's opinion about chatGPT is Time management.
 - The majority (52%) of the respondents said the speed of the chatGPT is Moderate.
 - The majority (52.7%) of the respondents are satisfied with the content performance of chatGPT.
 - The majority (32.7%) of the respondent's future expectations are voice-based interactions.
 - The majority (70%) of the respondents said yes to security.
 - The majority (64%) of the respondents said yes for the recommendation of chatGPT.
5. <https://openai.com>

Suggestions

- Majority of them use this chatGPT for the purpose of research articles, and they prefer voice-based interaction. Hence, the AI may introduce voice-based interaction in the chatGPT.
- Many of them suggested that the information from this chatGPT might be presented in simpler terms because it is slightly difficult to understand.
- A few of them proposed that the chatGPT would provide an understandable picture result, similar to mind maps.

Conclusion

This study has offered a comprehensive exploration of the impact of ChatGPT on academicians within educational settings. The integration of ChatGPT has shown promise in transforming traditional teaching methodologies and enhancing various aspects of academic activities. The findings from this research indicate that ChatGPT has played a pivotal role in facilitating interactive and personalized learning experiences. Over 56.7% of the undergraduate students are rely on ChatGPT for completing their work. This has shows both positive and negative impacts. As a conclusion students should be educated with the uses and limitations of chatGPT.

References

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