The Impact of Chat GPT on Education: A Comparative Analysis

Swathi.V
Student, SFS College,
swathiv_002@sfscollege.in
Vishnu Kumar
Student, SFS College,
vishnukumar_091@sfscollege.in
Dhanujakshi A
Assistant Professor, School of Commerce, St. Francis De Sales College, Bengaluru, Electronic city,
dhanujakshia@gmail.com

ARTICLE DETAILS	ABSTRACT
Research Paper	This paper aims to present, A Comparative analysis of the impact of ChatGPT on Education. The Data were obtained by reviewing the results of studies published since the launch of this Application [November 2022].This research delves into the transformative influence of ChatGPT on education, examining its effects compared to conventional educational tools. In an era marked by the pervasive integration of artificial intelligence (AI), the study investigates ChatGPT's competitive standing within the educational landscape. Utilizing a convenience sampling methodology, data were collected through primary and secondary data from 150 students through questionnaire surveys. The inquiry aims to assess whether ChatGPT augments or hampers educational processes. By meticulously scrutinizing its impact on instructional methodologies, student engagement, and traditional educational paradigms, the study seeks to offer insights into its potential future implications. Furthermore, it endeavors to elucidate the challenges and opportunities entailed in integrating Chat GPT into educational settings, contributing to a deeper understanding of AI's role in shaping the educational domain.
Keywords : *Chat GPT, Education, Students, Artificial intelligence*	

And also chat GPT can increase the learning process and mainly it possesses the negative impact on students mind set in education environment.

INTRODUCTION:

In the digital age, the integration of Artificial Intelligence (AI) in various facts of life has become increasingly prevalent, with education being no exception. One notable advancement in this realm is ChatGPT, a sophisticated language model developed by OpenAI. ChatGPT harnesses the power of deep learning to engage in conversational exchanges that simulate human-like interactions. Its potential implications for education are vast, ranging from personalized tutoring to facilitating collaborative learning environments. This research paper aims to explore the multifaceted impact of ChatGPT on education through a comprehensive comparative analysis.

The implementation of ChatGPT in education has had a significant impact, videnced by improvements in the efficiency of the educational process, the promotion of global learning, the personalization of learning, the creation of more intelligent content and the optimization of educational management in terms of effectiveness and efficiency.

To contextualize the discussion, it is imperative to examine the existing literature surrounding ChatGPT and its applications in education. Previous studies have explored its potential in various educational settings, including language learning, academic support, and adaptive assessment. However, there remains a need for a comprehensive comparative analysis that critically evaluates the efficacy of ChatGPT vis-à-vis conventional teaching methodologies.

Through a comparative analysis, this research aims to elucidate the unique affordances of ChatGPT in education while also identifying areas where it may fall short or encounter resistance. This study aims to use real-life examples and research data to show how using AI chatbots like ChatGPT can affect education in different ways.While ChatGPT offers promising opportunities for enhancing learning experiences, it also raises concerns regarding data privacy, algorithmic bias, and the erosion of human interaction in education.

1. **Objectives:**

●   To Analyze the positive and negative Impact of ChatGPT on Education sector.

●   To Study the mindset of Student with regard of ChatGPT.

2.   Statement of the problem:

This study contains the both positive and negative aspects, this paper focuses more on comparative analysis of both aspects and mainly concentrating the technical issues of Chat GPT, thinking capacity of the students and lack of creativity from the students. To analyze this data, we used the convenience sampling method.

3.   Review of Literature:

●   Maira Klyshbekova and Pamela Abbott ; ChatGPT and Assessment in Higher Education: A Magic Wand or a Disruptor? [February 2024] , This study on ChatGPT's role in higher education assessment reveals its potential as both a transformative tool and a disruptive force. Ethical considerations, including bias detection and fairness metrics, are critical for its responsible use. Statistical tools employed include regression analysis and correlation studies for comprehensive insights.

●   Brady D. Lund and Ting Wang ; Chatting about ChatGPT: How may AI and GPT impact academia and libraries? [January 22, 2023] , This research highlights the profound impact of AI and GPT on academia and libraries, improving learning and accessibility. Ethical concerns like data privacy and bias demand careful handling. Statistical tools employed include regression analysis and descriptive statistics for comprehensive insights. Embracing AI and GPT in academia and libraries requires a collaborative, thoughtful approach.

●   Sukhpal Singh Gill , Minxian Xu , Panos Patros , Huaming Wu , Rupinder Kaur , Kamalpreet Kaur ; Transformative effects of ChatGPT on modern education: Emerging Era of AI Chatbots [June 2023] , This research illuminates the transformative impact of ChatGPT in modern education, ushering in an era of AI chatbots. Statistical tools utilized include regression analysis and sentiment analysis for comprehensive insights. Ethical considerations, such as privacy safeguards and algorithmic transparency, are crucial for sustainable implementation.

●   Mahir Pradana, Hanifah Putri Elisa & Syarifuddin Syarifuddin ; Discussing ChatGPT in education: A literature review and bibliometric analysis [August 3, 2023] , This literature review and bibliometric analysis provide valuable insights into the multifaceted role of ChatGPT in education.

Statistical tools employed include citation analysis and co- citation analysis to examine trends and patterns in scholarly literature. Ethical considerations, such as data privacy and algorithmic bias, require careful attention in its implementation.

- Indrasen Poola , Velibor Božić ; Chat GPT and education [2023] , This exploration of ChatGPT's integration in education underscores its potential to revolutionize learning experiences. Statistical tools employed include regression analysis and frequency distribution for comprehensive insights into user interactions and outcomes. Ethical considerations, such as privacy safeguards and bias mitigation, are paramount for its responsible implementation.

4. Research Methodology :

The impact of ChatGPT on educational sector depends on the approaches of students with regard to ChatGPT, In order to meet the objectives of study, This study was focuses on understanding the positive and negative aspects of ChatGPT in the minds of college students. The primary and secondary data was used. For survey primary data was used and also some information was collected through interviews and The data for the questionnaire were collected through online mode using Google forms. This study was collected 150 respondents with relevance to the research questions.

6. Analysis : Age

Particulars	Respondents	Percentage
15-18	25	16.7
19-22	107	71.3
22+	18	12
	150	100

Qualification

Qualification

(pie chart)

Legend: ■ 1 ■ 2 ■ 3
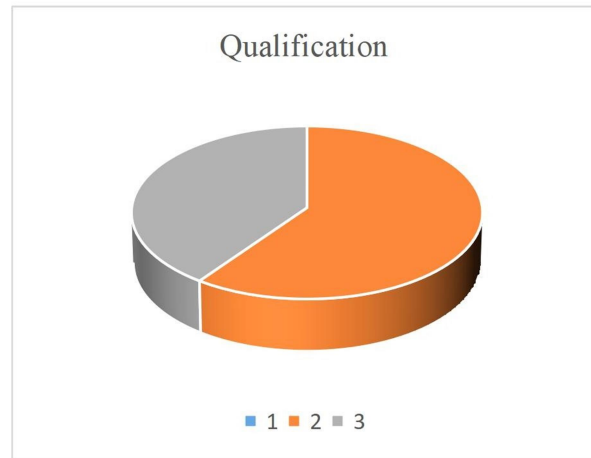
1.ChatGPT is usefull for Education

Particulars	Respondents	Percentage
Yes	130	86
No	20	14
	150	100

2. Important features of ChatGPT

Particulars	Respondents	Percentage
Quick response time	69	46
Accuracy information	22	14.7
Friendly and Conversational language	21	14
Ability to understand complex queries	25	16.7
Personalisation	3	2
Other	10	6.7
	150	100

3.Challenges experienced while using ChatGPT

Particulars	Respondents	Percentage
Misunderstanding queries	21	14
Providing incorrect information	12	8
Limited functionality	43	28.7
Lack of human like interaction	47	31.3
Other	27	18
	150	100

4.ChatGPT's help in Educational queries

ChatGPT's help in Educational queries

	300					
	250					
	200					
	150					
	100					
	50					
	0					
	1	2	3	4	5	6

■ Series1 ■ Series2 ■ Series3
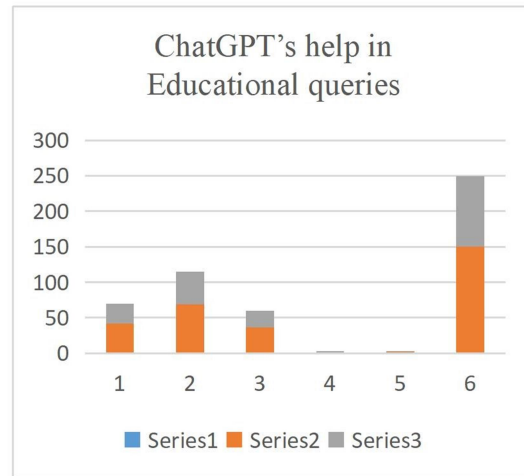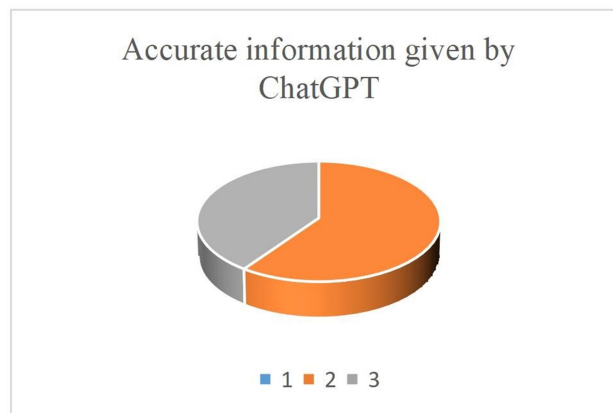
Does relying to much on ChatGPT lead Students to skip understanding the material

5. Accurate information given by ChatGPT

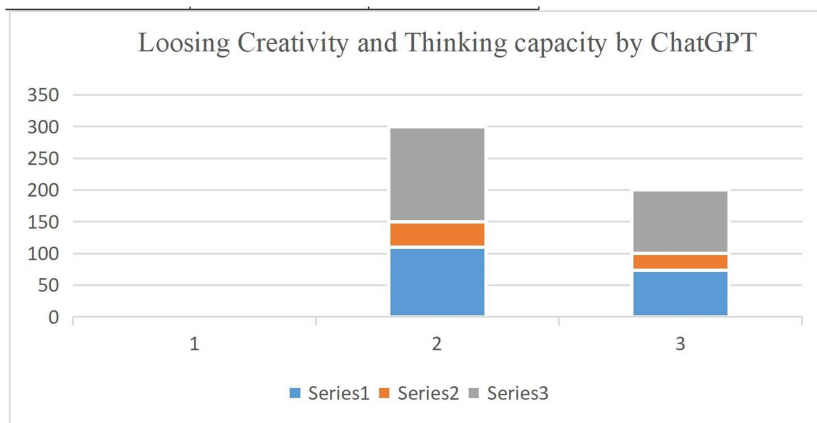| Particulars	Respondents	Percentage
Very well	42	28
Well	69	46
Moderately	36	24
Poorly	1	0.7
Very poorly	2	1.3
	150	100

Students relying on ChatGPT

(Stacked bar chart with Series1, Series2, Series3)
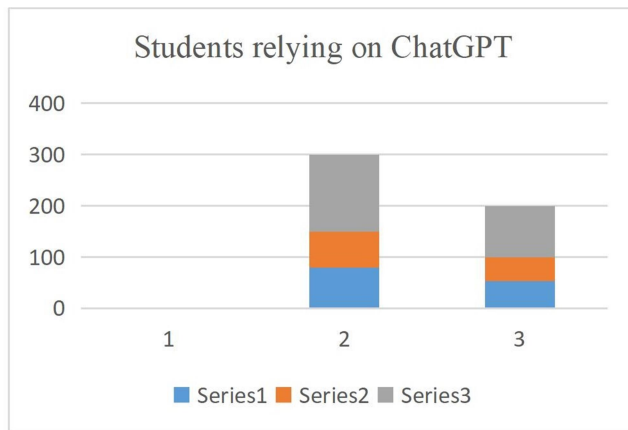
Particulars	Respondents	Percentage
Yes	80	53.3
No	70	46.7
	150	100

Accurate information given by ChatGPT

(Pie chart with legend 1, 2, 3)

Particulars	Respondents	Percentage
Yes	109	72.7
No	41	27.3
	150	100

Loosing Creativity and Thinking capacity by ChatGPT

(Stacked bar chart with Series1, Series2, Series3)

Loosing Creative and Thinking capacity by ChatGPT

Particulars	Respondents	Percentage
Yes	110	73.3
No	40	26.7
	150	100

7. Technical issues while using ChatGPT

Particulars	Respondents	Percentage
Yes	91	60.7
No	59	39.3
	150	100

8.ChatGPT's understanding and responses for queries

Particulars	Respondents	Percentage
Very well	39	26
Well	78	52
Moderately	31	20.7
Poorly	1	0.7
Very poorly	1	0.7
	150	100

● **Findings:**

➢ In the above Data Analysis, 71.3% of the respondents belongs to 19-22 category of Age group & 16.7% of the respondents belongs to 15-18 category of Age group & Only 12% of the respondents belongs to 22+ category of Age group.

➢ In the Analysis, 81.3% of the responses are from Degree students & 18.7% of responses are from Pu students.

➢ 97.3% of respondents have expressed that ChatGPT is useful for Education.

➢ Most of the respondents expressed that Quick response time is the important feature in ChatGPT.

➢ 31.3% of Students have agreed that ChatGPT has Lack of human like interaction & 28.7% of Students have agreed that ChatGPT has Limited functionality.

➢ Majority of the Students expressed that ChatGPT helps in assisting with Educational queries.

➢ 53.3% of the respondents have agreed that Relying too much on ChatGPT lead Students to skip understanding the material & 46.7% of the respondents have disagreed to the same.

➢ Majority of the respondents have agreed that ChatGPT is not 100% accurate.

➢ 73.3% of respondents expressed that Students are Loosing their Creativity & Thinking capacity by using ChatGPT.

➢ 53.3% of Students have not experienced Technical issues while using ChatGPT whereas 46.7% of the Students have experienced Technical issues while using ChatGPT.

➢ Majority of Students have agreed that ChatGPT Understands and Responses to the needs and the queries.

7. Recommendation:

From these papers we identified that Students are losing their Thinking capacity and Lack of Creativity which has been proven by our Study,

The following recommendations are suggested from our study: -

a. Students should gain knowledge about Chat GPT first

b. Students should understand the pros and cons of Chat GPT before they use.

c. Students should think beyond the boundaries so that they cannot lose their thinking capacity.

8. Conclusion:

The Literature review of this Comparative analysis has shown that scientific research on the use of the ChatGPT tool in education. The use of ChatGPT in education has emerged as an promising tool that seeks to enhance the learning experience. However, it is essential to bear in mind that its use presents a series of challenges, which teachers must be aware of to avoid incorrect use. ChatGPT proves to be a Supporting tool for students, by providing Information and Communication Technologies, and significantly improves students' academic performances, if it is used appropriately.

The ChatGPT can generate answers to queries within minutes but from our study, it was evident that the results may not always be reliable. Based on our Findings and Analysis, ChatGPT has achieved both positive and negative aspects. It provides information about known markets but it hasn't succeeded in transforming products or creating new markets. By the usage of ChatGPT, Students are loosing their

Thinking capacity and Lack of Creativity which has been proven by our Study. As ChatGPT will keep actively being developed and improved, the future research could look into this Comparative analysis for the betterment of the Users. Since, the new versions of this Application will keep being released future research could also develop special guidelines on approaching ChatGPT ethically and responsibly.

References:

◆   Maira Klyshbekova and Pamela Abbott ; ChatGPT and Assessment in Higher Education: A Magic Wand or a Disruptor? [February 2024] : https://www.researchgate.net

◆   Brady D. Lund and Ting Wang ; Chatting about ChatGPT: How may AI and GPT impact academia and libraries? [January 22, 2023] : https://papers.ssrn.com

◆   Sukhpal Singh Gill , Minxian Xu , Panos Patros , Huaming Wu , Rupinder Kaur , Kamalpreet Kaur ; Transformative effects of ChatGPT on modern education: Emerging Era of AI Chatbots [June 2023] : https://www.researchgate.net

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https://www.researchgate.net