
THE ROLE OF AI GENERATIVE (CHAT GPT) IN THE EDUCATION SECTOR: BOON OR BANE

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ABSTRACT

The present paper humbly attempts to analyze the role of AI Generative Chat GPT in the education sector and submits both the aspects of Chat GPT in the following postulation. Further the author strives to define the AI tool Chat GPT and describe various methods through which it can be useful especially in the education sector. The article also presents various speeches of the famous personalities that give their views upon the role of Chat GPT in the education sector. One of the personalities named Jerry Blumen Garten once said, "Tech gives the quietest student a voice" while others like Dr. A Patrick, a professor of commerce at Osmania University, once said, "This tool is going to disrupt the education sector. The students are always apprehensive when they are assigned some projects or assignments, with the invention of this tool, it has been seen that students have been dependent on it but any such instances have not been reported in Telangana."

With this, the author has tried to furnish the present tech scenario in the area of functioning of Chat GPT in the education sector and provide some suggestions that can be useful for the manufacturers to modify these AI tools which could lead to a more effective and efficient consumer satisfaction. The author further highlights the legal and judicial approach towards the working of AI tool Chat GPT in the country.

Keywords: Artificial Intelligence, Chat GPT, Contemporary Tools, Education Sector, Legal Approach.

INTRODUCTION

Chat GPT is an Artificial Intelligence (AI) which was developed by its research company Open AI in November 2022. The term Chat GPT is derived from two words i.e. Chat and GPT. Chat refers to a chatbot which is a software application that involves mimic of human conversation in text or voice forms. It is mostly online in nature and was developed and coined by Michael Mauldin in 1994 to describe conversational programs. He has also contributed in the creation of the first Verbot (Verbal-Robot).¹ GPT refers to a generative pre-trained transformer which is a type of large language model (LLM). This model is trained using Reinforcement Learning from Human Feedback (RLHF) that works like Instruct GPT which is a model that follows the received instructions and gives a detailed response. Chat GPT is like an AI assistant which possesses the power to answer every single question just like a human being.²

Chat GPT, being an Artificial Intelligence system, produces certain forms of data in the form of text, image or synthetic data based on the questions asked by the receiver. It not only produces artificial information but also natural data in some seconds with the help of large amount of data as its training source. It has emerged as a powerful tool to utilize the Artificial intelligence in order to effectively solve the social problems like health and education and skill development that enhances human capital and reaps the benefit of demographic dividend.³ Advanced artificial intelligence chatbots like Chat GPT have unprecedented capabilities that provides a detailed and well-articulated answers to most of the questions asked.⁴

ROLE OF CHAT GPT IN THE EDUCATION SECTOR: BOON

The role of AI Generative Chat GPT in the education sector is a boon as it helps the students in improving their critical skills through its advanced features. These advanced AI platforms helps the students to get each and every required information on their fingertips and further reduces the dependence on other sources of knowledge. This platform provides the facility to its users to get the answers for all their logical and critical questions in a quick and rapid manner. Chat GPT works like an expert for each and every question asked and provides its

¹ *What is Chat GPT? Open AI's Chat GPT Explained*, Remote skills, <https://remoteskills.io/blog/post-11fc1f21-7b44-4a51-bcc4-db4e40ccaf37>

² , *Introduction to Chat GPT*, Cedcoss blog, <https://cedcoss.com/blog/how-is-chatgpt-bringing-the-change-will-it-be-a-boon-or-a-bane/>

³ *Features of Chat GPT*, Lokmaan IAS, <https://blog.lukmaanias.com/2023/02/15/topic-chatgpt-and-future-of-society/?print=print>

⁴ Manish Kumar, *Features of Chat GPT*, <https://www.epw.in/journal/2023/15/letters/chatgpt-boon-or-bane%C2%A0-students.html>

answers at one place which is often derived from various sources otherwise the students had to surf different webpages in order to derive the answer for their query. This platform often saves a lot of time and effort of students to get the information and further saves money in the form of providing cashless and free availability of information to its users.

The data provided by this platform is quite detailed, quicker and cheaper than other sources of information. Chat GPT is a set of generative A.I. that comes post DALL-E which is also a type of AI graphic generator. It assists in improving novel creativity and provides its users an edge to push the Google 's spam policies. It further provides data in a very easy language in order to reach to the people from each nook and corner of the world. It provides certain benefits to its users such as it serves to provide personalized and interactive feedback and guidance just as human responses in a conversation, it enhances and improves problem-solving skills and boost their sense of creativity and it provides an easy and quick access to the diverse and high-quality learning resources. It further promotes inter-disciplinary and cross-cultural cooperation and collaboration by serving as a human-like platform. Generative AI Chat GPT serves as a powerful tool for improving learning outcomes and experiences because it works as a guide for the students who want to gain knowledge but suffer a scarcity of other sources of learning.

Furthermore, it develops the feeling of empathy and a sense of responsibility towards their environment and other institutions as it opens them up to vast, diverse and complex geographical, political, and other forms of environmental problems. It not only generates original but also artificial and creative data upon the question asked, which enhances their critical understanding skills and further gives them the ability to write much better than the available and given information. It provides access to learning beyond one 's time, space, language and skill and bridges the learning gaps by providing personalized education and smart learning content. This AI tool provides a quick and prompt assessment with unbiased grading to one 's own created data or content which reduces the workload of teachers in checking their student assignment for long and long hours. It helps in improving the student engagement and outcome in the learning process as there are many shy students who feel scared in sharing their queries around their peers and teachers with the fear of being judged but the usage of AI tools helps them to quench their doubts in some seconds without any fear of being judged which aids the students in getting motivated to learn and ask more. Upon this Jerry Blumen Garten said,

“Tech gives the quietest student a voice.”⁵ The AI-powered system aids the teachers to provide customized feedback to the students that helps them to save their time and effort at the same time.⁶

UTILITY OF CHAT GPT IN THE EDUCATION SECTOR

There are certain ways in which the students employ the use of Chat GPT in their daily life such as they use it to get some information about their assignments and projects that helps them to complete it in a more effective manner. It also helps the students to enhance their creative and problem-solving skills as it has the capability to generate and put before the existing challenges, ideas that help the students in exploring the knowledge nowadays. It further assists the students in simplifying the complex texts and data by providing summaries, thesis and translations in a more easy and understandable manner. Most importantly, it helps the students to get the information about dissenting or consenting views and opinions of different people on a particular topic at one particular place.

An Economist named Dr. Carl Benedikt Frey horrified Americans with his co-authored paper titled ‘The Future of Employment’ in around 2013. He predicted in his research that “47% of US jobs will be fully automated in the next decade or so.” The study of Gartner predicts that chatbots will constitute the effective customer service channel for roughly 25% of companies by 2027⁷. Chat GPT has the ability to process a vast amount of data and generate accurate responses. It further possesses the quality of adapting to the learning environment of the individual seeking answers to their questions that makes it the most accessible platform for search of knowledge. It is investigated that many edtech organizations have been using the Chat GPT for their learners in order to provide solutions to their queries instantly while some companies are involved to use the app as an assistance in their electronic learning (e-learning) courses. Ahmed Khan, being an educationist and government school teacher, rightly stated, “Chat GPT can help teachers streamline their lessons and provide their student’s wide information in a particular subject, especially this is going to be a boon to language and

⁵ Naga Vydyanathan, *Role of Chat GPT as a boon in the education sector*, <https://akaike.ai/ai-in-education-is-it-a-boon-or-a-bane/>

⁶ Lund, B. D., & Wang, T, *Chatting about Chat GPT: how may AI and GPT impact academia and libraries?* *Library Hi Tech News*, 2023, <https://doi.org/10.1108/lhtn-01-2023-0009>

⁷ *Introduction to Chat GPT*, Cedcoss blog, <https://cedcoss.com/blog/how-is-chatgpt-bringing-the-change-will-it-be-a-boon-or-a-bane/>

mathematics teachers or professors.”⁸

It is a versatile platform that can be used for various purposes such as it can create fiction in the form of stories and prose, it can write speeches and letters for the professional leaders, it can guide the students with their assignments and projects, it can aid the teachers by providing an easy access to notes on various subjects in the form of documents and pictures, it can aid the researchers in getting all the necessary information of their research questions at one certain place. It can further automate the repetitive tasks which can improve consumer ‘s satisfaction and engagement. ⁹

ROLE OF CHAT GPT IN THE EDUCATION SECTOR: BANE

We have seen the positive aspects about the role of Generative AI Chat GPT in the education sector but it has some negative effects too. As every coin has two sides, every substance exists on this earth with its pros and cons, likewise Chat GPT also exists with some of its ill-effects in the education sector. Although Chat GPT provides easy access to the answers for the questions asked, yet the overdependence and overreliance of AI tools destroys human ‘s creativity, critical thinking and expertise. Excessive use of AI tools disconnects the students with their teachers. Teachers develop strong personal bond with the students during their learning process but the substitution of Chat GPT with the teacher, is a great concern nowadays. Chat GPT being an Artificial Intelligence (AI) is a platform that often delivers the information as provided by the humans. Knowledge is often an interpretative tool that is differently being interpreted by the people as per their vision and mindset and relying on the information provided by a human developed platform cannot be taken as a trusted source of knowledge.

It has been observed that one of the universities situated in Bangalore along with some schools, colleges and universities situated in New York have banned the use of Chat GPT because they are concerned with the fact that the usage of this AI tool can become a significant obstacle in the path of learning as well as teaching in the near future. It is often advised by many teachers that the rapid use of AI tools can pose the risk of plagiarism and lack of originality in the information provided.¹⁰ On being asked about the effects of AI tools in the education sector,

⁸ Harshini, *Ways as to how Chat GPT can be useful in the education sector*, <https://www.analyticsinsight.net/is-chatgpt-a-boon-or-bane-to-the-education-sector/>

⁹ John Rampton, *Ways as to how Chat GPT can be useful in the education sector*, <https://www.entrepreneur.com/growth-strategies/the-advantages-and-disadvantages-of-chatgpt/450268>

¹⁰ *Features of Chat GPT*, Lokmaan IAS, <https://blog.lukmaanias.com/2023/02/15/topic-chatgpt-and-future-of-society/?print=print>

Dr. A Patrick being a professor of commerce at Osmania University, replied, “This tool is going to disrupt the education sector. The students are always apprehensive when they are assigned some projects or assignments, with the invention of this tool, it has been seen that students have been dependent on it but any such instances have not been reported in Telangana.”¹¹

It can be rightly deduced that the AI tools have reduced the teacher-student interaction. Bill Gates has said, “Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is most important.” Over usage of these tools leads to technology addiction which has led to various social, health and psychological problems. It further kills student creativity, critical thinking and makes them dependent on these AI tools for the completion of their projects, home works and assignments. Most importantly, it creates data privacy and security issues.¹² It is said that traditional academic institutions understood that AI tools could disrupt the organic growth and development of learners because it negatively affects one's ability to think, perceive, analyze, and apply what they learned during class hours.¹³

The role of Generative AI Chat GPT has its ill-effects specifically in the education field such as it undermines the academic integrity and originality of the content created by the app upon the topic mentioned. It also creates legal as well as ethical issues in relation to intellectual property and data privacy of the desktop using the AI tool because it collects the information from various sources but fails to give due citations to the plagiarized material. It further generates misleading, confusing and harmful contents as their information is often biased, inaccurate and offensive to the reader having one-sided impression upon the students. Most importantly, the use of AI tools neglects the importance of teachers and professors. Although these AI tools provides the information upon the question asked, yet they cannot become the alternative to the teachers because teachers not only provide information about a particular topic to the students but they also provide effective and efficient guidance and feedback to their students on their answer sheets and assignments which enhances the efficiency and intellect of the students if they work upon their lacunas and pitfalls chalked out by their teachers and professors.

¹¹ Meghna Nath, *Role of Chat GPT as a bane in the education sector*, <https://www.thehansindia.com/news/cities/hyderabad/chatgpt-and-education-an-opportunity-or-threat-782619>

¹² Lund, B. D., & Wang, T, *Chatting about Chat GPT: how may AI and GPT impact academia and libraries?* *Library Hi Tech News*, 2023, <https://doi.org/10.1108/lhtn-01-2023-0009>

¹³ *Role of Chat GPT as a bane in the education sector*, <https://www.indiatoday.in/education-today/featurephilia/story/chatgpt-a-bane-or-boon-for-education-and-edtech-sector-2345838-2023-03-13>

Teachers also foster social as well as emotional skills of the students which is not provided by any other AI tool. It provides limited dialogue options to its users that hinders these AI tools to engage in a more meaningful and deep conversations with its users. As an AI language model, sometimes they might struggle with certain aspects of natural language processing that makes it difficult for the users to understand and interpret its responses. Its response is often bound within its domain knowledge as it has acquired the knowledge through its training data.¹⁴

LEGAL AND JUDICIAL APPROACH

Law, being a diverse domain all over the world, holds a great place in the education sector as well. While we talk about the legal approach to the working of Generative AI tool Chat GPT, it is not well-defined and well-established because it is an evolving and new technology that poses various challenges and risks to it. The working of AI tools in the fields of intellectual property, data privacy and security, liability and accountability of the information provided and ethics and values that law ensues through its functioning, cannot be maintained and promoted by these tools effectively. As legal approach remains silent upon the working of Chat GPT, judicial approach follows the same. The courts fail to administer and witness the full addressal to the working of Chat GPT. The failure of working of these AI tools can be vividly described as to how the documents, transcripts and information provided by Chat GPT can be treated as admissible in the form of evidence and proof in the courts? How can the courts accept the interpretation and application of the laws through the use of AI tool Chat GPT.

While we discuss about the legal approach to the working of Chat GPT, it is important to note that Italy has blocked the use of AI through a press release on March 31, 2023 where the Italian data protection authority GPDPA announced "an immediate temporary limitation on the processing of Italian users' data by Open AI", resulting in an immediate blocking of the service Chat GPT in Italy and the opening of an investigation procedure to the functioning of AI. The major cause identified by the authority in taking the action is mentioned as the lack of transparency because these AI tools collect and process the personal data without their approval. The consent of the user of that collected data is a necessary legal basis for collecting the personal data of a person. They also criticize the filtration process of the content as these AI tools do not look into the age limit of the data. The idea behind the criticism is that there exists some information which is approved for the people above 13 years but these tools do not

¹⁴ Vasylykiv, B, *Limitations and Ethical Considerations of Using Chat GPT*, Incorp -European Software Development Company, 2023, <https://incora.software/insights/chatgpt-limitations>

filter and implement the content as per the age limit. One of the members of the Italian data protection authority named Guido Scorza justified that Chat GPT was used as a personal advisor that aids them to get professional, medical or legal advice without being sufficiently informed about it. She also gives an indication that it is not the death-end of Chat GPT in Italy but they want to have a word with the Open AI and coerce them to bring the feature of transparency in their data collection and ask the users for their approval for data usage that also gives an option to the users to opt whether to give their personal data for use or not. Thus, it is going to have serious impacts on the other European countries regarding the use of Chat GPT in their respective countries.¹⁵

CONCLUSION

Through the discussion, we came to the conclusion that the usage of AI tools requires a careful evaluation and regulation by their users. Although with a lot of problems AI exists, it fully places an over reliance on technology and hampers the accuracy and originality of the information thus provided; yet we wait to see the capabilities of AI tool Chat GPT to bring changes in the education sector in the form of being a better opportunity or being a worse option. John Dewey opined, “If we teach today as we taught yesterday, we rob our children of tomorrow.”¹⁶

Every country is striving for development and its technology is also a rapidly changing. It is duly mentioned by our ancestors that change is necessary for the growth and development of the people, society and country and every change is followed by merits and demerits as no substance on this earth is perfect in nature. It is important for the one to embrace change as it is the basic necessity for progress of all. Once a kindergarten teacher said that kids love technology, but they also love Legos, scented markers, handstands, books and mud puddles. It is just that we have to balance both. Embracing change along with balance and awareness is the great way to explore.¹⁷

¹⁵Helena Kasper, Moritz Mehner, Hannah Mugler and Matthias Orthwein, *Chat GPT banned in Italy: Is Germany facing a similar decision?* SKW Skwarz, <https://www.skwschwarz.de/en/details/chatgpt-banned-in-italy-is-germany-facing-a-similar-decision#:~:text=The%20German%20Federal%20Ministry%20of%20Digital%20Affairs%20and%20Transport%20also,search%20for%20a%20common%20path>.

¹⁶ John Dewey, *Quotes on the role of Chat GPT in the education sector*, <https://edusites.uregina.ca/brodlanj/2019/01/25/a-quote-by-john-dewey/#:~:text=%E2%80%9D%20If%20we%20teach%20today%E2%80%99s%20students%20as%20we,exper%20the%20most%20important%20thing%20within%20the%20curriculum>

¹⁷ Naga Vydyanathan, *Role of Chat GPT as a boon in the education sector*, <https://akaike.ai/ai-in-education-is-it-a-boon-or-a-bane/>

The legal approach to the working of AI tool Chat GPT should be dealt with a careful and comprehensive analysis of the relevant laws and regulations. There should be active and collaborative engagement of all the teachers, students, developers, regulators and many more in the field of education. The legal approach is an interpretative domain where adapting and adopting to the needs and requirements of law by the emerging technology such as AI tool Chat GPT is very beneficial for the growth and development of the nation. As the judicial approach is closely interlinked to the functioning of the legal approach, the same applies for the judicial approach where the functioning of Chat GPT must be carefully and properly dealt with a comparative analysis and observation of the relevant cases and judgements. However, the active and collaborative engagement of all the lawyers, judges, legal experts, litigants and many more in the field of law.

Having free and easy access to these AI tools makes it popular among the students and academicians but its inaccuracies, ambiguities make it an unreliable source of knowledge. It is the potential to generate coherent and natural-sounding responses that paves the way for the success of Chat GPT. It is also trained upon a massive corpus of text data that aids its tools learn the nuances of language and administer contextually appropriate responses. Although the implementation and functioning of Chat GPT is complex and sophisticated, yet it continues to evolve, change, develop and improve itself. Thus, we expect to see the possible evolution in its cases and the growth and development of several special applications that make it more appealing and more useful. It is suggested that the AI tools must work upon their emotional intelligence because it fails to provide the effect of emotions in its answers that makes it insensitive and quite rude to its users.¹⁸ It has the capability to be fine-tuned in order to perform specific tasks or applications, such as customer service or language translation, by adjusting its training data and algorithms. It is also efficient in nature as it possesses the ability to handle multiple conversations and generate quick responses in a short span of time. The limited knowledge is another drawback of these tools as its responses are limited to the knowledge acquired through training data so it must also work upon their database to make it wide and far-reaching to the complex and highly specialized topics.¹⁹

¹⁸ Dinesh Kalla and Nathan B. Smith, *Suggestions to the functioning of Chat GPT*, https://www.researchgate.net/publication/369506216_Study_and_Analysis_of_Chat_GPT_and_its_Impact_on_Different_Fields_of_Study

¹⁹ *Role of Chat GPT in the education sector*, Abstracts written by Chat GPT fool scientists, 2023, <https://doi.org/10.1038/d41586-023-00056-7>

Having the potential to improve its productivity, efficiency and user satisfaction is of immense nature, and its applications are just the beginning that has to be explored. As Chat GPT, it continues to evolve and improve, we can expect to see even more impressive results in the upcoming years. The use of these AI tools, along with its pros and cons, still lies in infancy and the need to get involved in more empirical research. It is suggested that we need to adjust curricula and include learning goals, learning tasks, and assessment approaches which can be done by including essential forms of literacy, such as media and digital literacy, in order to enhance students' capability to properly evaluate, assess and make use of these new technologies.²⁰

²⁰ *A SWOT analysis of Chat GPT: Implications for educational practice and research*, tandfonline.com