International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Ethical Concerns of Artificial Intelligence Implications in Education: Chatgpt A Case Study

Awadhesh Kumar Pandey[1], Harshada Anand Kavade[2]

[1,2]Research Scholar, Jawaharlal Nehru University (JNU), New Delhi, India

Abstract

Purpose: Artificial Intelligence is an emerging technology that is becoming a part of our everyday life. From Cooking to Cleaning, from Driving to flying, AI is becoming an essential part of it. It is not possible to turn our eyes away from it, neither socially nor academically. At this critical juncture, after the emergence of ChatGPT, there is a debate about its acceptance. The rate of growth AI is showing makes the attempt to reject it in vain. Therefore, instead of fighting with it, we should focus on different dimensions where we can make it better. This paper provides critical insight into the ethical implications of AI in the education sector.

Originality/methodology/approach: The paper tried to discuss different ethical questions that are accompanied by different generative tools. It refers to the popular ethical philosophy of Jeremy Bentham, i.e., the Utilitarianism and Deontology of Immanuel Kant as a theory, and based on these theories and discussion around them in contemporary scholarship is the foundation at which the ethical stance of AI is checked and tried to find a solution through which we can develop a safe, inclusive and ethical AI.

Findings: The paper discusses the ethical issues surrounding AI and generative tools, arguing that while ChatGPT is suitable for academic use, it raises questions about its potential. It suggests that while AI is constantly evolving, it is crucial to regulate its growth and use. The paper also highlights the potential benefits of AI in underdeveloped countries, such as India. Generative tools like ChatGPT can be beneficial for personalised learning, but proper training is needed. These tools can replace personal tuition but should not replace human intervention. Instead, they can be developed in a democratic, inclusive way, ensuring better support for students.

New technology challenges conventional notions, causing disruption. To build ethical AI, engage disciplines and harness ChatGPT's potential in education. Adapt curricula with learning objectives, tasks, and assessment methods, including foundational competencies like mass media and digital literacy, to effectively assess and use these technologies. AI's role in education is shifting towards higher-order learning outcomes, promoting creativity and critical thinking. Formative assessment, involving authentic methods, is becoming more reliable. Teachers play a crucial role in this process, evaluating students throughout the session. However, the use of ChatGPT is still in its early stages, necessitating further research to understand its impact. The potential of ChatGPT to enhance personalised learning is significant, and further research is needed to determine the most effective ways to use it.

Teachers should emphasise the importance of the process over the result in using AI tools, promoting Kantian values. Banning these tools may not solve the problem, but it does not improve learning. As AI becomes more integrated into our lives, it is crucial to address accountability and responsibility. Future

research should focus on developing ethical principles and guidelines to address concerns about ChatGPT usage in higher education and daily life.

Value- why this study matters: The conceptual framework introduced in this study, which aims to comprehend AI and its associated ethical discourse, has thus far remained underexplored, especially in light of the emergence of ChatGPT and its transformative impact on our comprehension of ethical considerations within the realm of AI. This development has contributed to a blurring of the boundaries between human-generated and machine-generated content. The objective of this paper is to lay the groundwork for a critical re-examination of the ethical dimensions of AI, questioning whether the traditional perspective necessitates re-evaluation. Additionally, this paper sheds light on the implications of AI deployment within the academic sphere and encourages educational institutions to view it as an opportunity rather than a challenge.

1.0 Introduction

Artificial Intelligence (AI) constitutes a multifaceted discipline situated at the confluence of computer science, mathematics, neuroscience, and engineering. It is defined by the pursuit of creating computational systems possessing intellectual capabilities that mimic, simulate, or potentially surpass human cognitive functions, including problem-solving, decision-making, and adaptation. AI is a domain of knowledge that opens a new horizon of knowledge not only to science and technology but also to the various disciplines of social – sciences like ethics, law, psychology, etc.

Since the emergence of ChatGPT, the discussion over artificial intelligence and its pros and cons have once again been brought to scrutiny. It goes to the degree where the world's leading tech minds signed an open appeal to stop further research and analyse the impact of AI on the human race. We do not want to open the Pandora – Box of AI, which we cannot handle.

The understanding of AI and its ethical implication in education through the case study of ChatGPT is the central idea of this paper. The rapid development in the field of AI is keeping astonishing us with its intelligence. What once seemed far-fetched now appears as reality. It is really hard to assume the next milestone of it. However, with the rate of growth in this field, we can make some fair, constructive speculation about the future of AI. In his predictions, Andy Hines claimed that life in 2010 will be "The teacher of 2010 will rarely spend a day lecturing, but will be primarily a facilitator and coach. ... The teacher will coach students through video lectures, educational television programs, and artificial intelligence-based programs. Only occasionally will teachers instruct classes themselves. Instead, they will be freed up to deliver the personalised instruction critical to educational achievement. "The artificial intelligence tutor will become a valuable assistant, providing the individualised instruction that a teacher with 20 or more pupils does not have the time for. Learning can take place at the student's pace" (Hines, 1996, pp. 9-10)[1]."

The prediction was correct in place, but the current development is so advanced that it compels us to scrutinise the ethical codes of AI. We stand at a critical juncture. To fully harness the potential of AI in education, it is imperative that we engage in substantial deliberations regarding our foundational philosophical principles. Failing to do so before integrating AI significantly into the classroom environment may curtail the breadth, efficacy, and positive impact that AI can offer to the realm of learning. The paper discusses the ethical issues accompanying AI and the mitigations we can make to reduce the adverse effects of generative AI. The paper also opens a discussion about the future of AI and

how all the different stakeholders can come forward and develop a safe, inclusive, non-discriminatory AI for our society.

2.0 What is Artificial Intelligence?

In order to understand the seriousness of this debate, we should first understand what AI actually is. The answer lies in the word itself: artificial intelligence. These two words are sufficient to make us understand the whole notion of AI.

The term 'artificial', which means anything humanly contrived and not natural[2], is objectively acceptable, whereas the word intelligence is still a continuum of debate among scholars. Moreover, the emergence of human intelligence is still an enigma for neuroscientists, psychiatrists, anthropologists and other related stakeholders. Although no universally accepted definition of intelligence is available, if one analyses the different descriptions, it would be obvious to extract some common notions that can be assimilated together to form a definition.

"Intelligence" can be defined as the capacity to acquire knowledge from experience and adjust to influence and choose one's surroundings. This conventional measurement of intelligence using standardised tests can fluctuate not only over the course of an individual's life but also across different generations. According to the American Psychological Association, Individuals differ from one another in their ability to understand complex ideas, adapt effectively to the environment, learn from experience, engage in various forms of reasoning, and overcome obstacles by taking thought[3]. Now, this complex notion of intelligence, which humans have not entirely comprehended or decoded, has been created artificially. This intelligence is called Artificial Intelligence. From the time of its emergence, AI developed rapidly.

In this rapid growth, humans have not taken a step back to introspect about the holistic impacts of AI on society. In the formative years, experts tried to make artificially intelligent machines that could automatically do the work for humans without humans getting directly involved. The purpose of it was to reduce the workload on humans and save some time for them, which humans can use in some other more critical and creative activities. As time passed, experts tried to make these machines function more like humans or their simulations. In this race, everyone wanted to do it better and faster than others, which caused an enormous development in the field of AI, which acts like humans. As this growth was happening around us and astonishing every day, we failed to check the box of ethical issues associated with it and its impacts on society.

2.1 Ethics in Artificial Intelligence

To understand the importance of ethics, we should know a basic summary of the idea of ethics. Ethics is an integral part of the human psyche. Ethics and Morality are the fundamental social constructs that make humans different from other animal species. In the course of evolution, humans made different codes of conduct to thrive for a better life. There are multiple variables that influence the ethical and moral principles of a society in a definite time and space. It implies simultaneously that the ethical codes are driven by the idea of specific time and space. A very apt example of this could be slavery. Slavery was considered ethically wrong, and the great minds of their time, from Aristotle to Darwin, had arguments to support this. Still, with time, we now agree that acts like slavery are discriminatory and unscientific. This mutation in the notion makes the task of defining ethics easy, but at the same time, finding an eternal example is impossible.

Ethics, also called moral philosophy, is the discipline concerned with what is morally good and bad and right and wrong. The term is also applied to any system or theory of moral values or principles[4]. There are

many scholars have tried to explain ethics, but here, we will superficially divide it into three categories. The first is Jeremy Bentham's concept of Utilitarianism, the Second is Emanuel Kant's concept of Deontology, and the last is Friedrich Nietzsche's conventional morality. These approaches will be used to develop a holistic understanding of the ethics of AI.

2.2 Artificial Intelligence Guidelines according to the European Union

On 8 April 2019, the High-Level Expert Group on AI presented Ethics Guidelines for Trustworthy Artificial Intelligence. This followed the publication of the guidelines' first draft in December 2018, on which more than 500 comments were received through an open consultation[5].

According to the Guidelines, trustworthy AI should be:

1. lawful - respecting all applicable laws and regulations
2. ethical - respecting ethical principles and values
3. robust - both from a technical perspective while taking into account its social environment

The Guidelines put forward a set of 7 essential requirements that AI systems should meet in order to be deemed trustworthy. A specific assessment list aims to help verify the application of each of the key requirements:

S.No.	Requirements for a trustworthy AI	Explanation
01	Human agency and oversight	AI systems should empower human beings, allowing them to make informed decisions and fostering their fundamental rights. At the same time, proper oversight mechanisms need to be ensured, which can be achieved through human-in-the-loop, human-on-the-loop, and human-in-command approaches.
02	Technical Robustness and safety	AI systems need to be resilient and secure. They need to be safe, ensuring a fall-back plan in case something goes wrong, as well as being accurate, reliable and reproducible. That is the only way to ensure that unintentional harm can be minimised and prevented.
03	Privacy and data governance	Besides ensuring full respect for privacy and data protection, adequate data governance mechanisms must also be ensured, taking into account the quality and integrity of the data and ensuring legitimised access to data.
04	Transparency	The data, system and AI business models should be transparent. Traceability mechanisms can help achieve this. Moreover, AI systems and their decisions should be explained in a manner adapted to the stakeholders concerned. Humans need to be aware that they are interacting with an AI system and must be informed of the system's capabilities and limitations.
05	Diversity, non-discrimination and fairness	Unfair bias must be avoided, as it could have multiple negative implications, from the marginalisation of vulnerable groups to the exacerbation of prejudice and discrimination. Fostering diversity, AI systems should be accessible to all, regardless of any disability, and involve relevant stakeholders throughout their entire life circle.

06	Societal and environmental well-being	AI systems should benefit all human beings, including future generations. It must hence be ensured that they are sustainable and environmentally friendly. Moreover, they should take into account the environment, including other living beings, and their social and societal impact should be carefully considered.
07	Accountability	Mechanisms should be put in place to ensure responsibility and accountability for AI systems and their outcomes. Auditability, which enables the assessment of algorithms, data and design processes, plays a key role therein, especially in critical applications. Moreover, adequate an accessible redress should be ensured.

2.3 Artificial Intelligence Characterise

AI is characterised by its intricate taxonomy, comprising diverse subfields dedicated to distinct objectives and applications. Machine learning, for instance, concentrates on developing algorithms that allow computational systems to autonomously derive knowledge from data, identify patterns, and make predictive inferences. Natural language processing (NLP) seeks to impart machines with linguistic comprehension and the capacity to engage in human language interactions. Computer vision strives to equip computational systems with the faculty to interpret and process visual information akin to human perception. Reinforcement learning pertains to the cultivation of autonomous agents endowed with the capacity to acquire optimal behaviours through iterative trial-and-error learning. These specialised domains collectively embody the extensive landscape of AI research and application.

AI's utility transcends numerous domains and sectors, including healthcare, finance, transportation, and entertainment. AI contributes to disease diagnosis, patient-specific treatment planning, and drug discovery in healthcare. In finance, it optimises trading strategies, conducts risk assessments, and aids in fraud detection. Autonomous vehicles rely profoundly on AI-driven algorithms for safe and adaptive navigation, and AI-generated recommendations have a pervasive influence on enhancing entertainment and content personalisation.

The rapid evolution of AI technologies evokes both enthusiasm and apprehension. The positive prospects of AI include the potential for industry transformation, improved quality of life, and the resolution of intricate global challenges. However, AI also engenders ethical, privacy, and security concerns and substantial implications for the labour market and sociocultural norms.

3.0 ChatGPT: not just a buzzword

There are thousands of AI-driven tools around us with their efficiency and challenges, but it is not possible to take each of them into account and develop an understanding of them. We take the most recent AI-driven technology that will change our understanding of art and ethics and pose some tough questions about what it is being called human, what is an artistic creation, how is the line between influence and stealing diminishing, that is, Open AI's newly launched ChatGPT. Crafted with conversational AI in mind, this specialised system excels at producing natural language dialogues and delivering insightful responses across a broad spectrum of topics. It achieves this by enhancing its comprehension of user queries through the incorporation of comprehensive contextual information.

OpenAI characterises it as a dialogue-optimized language model[6]. This characterisation underscores its

ability to furnish human-like text responses to queries while retaining a comprehensive grasp of the ongoing conversation. Consequently, it wields considerable potency, particularly in the context of diverse potential dialogues. These dialogues can encompass a broad spectrum, ranging from offering dictionary-based definitions to weaving narratives and dispensing medical guidance.

3.1 ChatGpt Architecture

The architecture underpinning ChatGPT employs a Transformer framework[7], encompassing an encoder-decoder structure combined with a self-attention mechanism. This amalgamation empowers ChatGPT to generate responses imbued with context sensitivity[8]. The versatility of ChatGPT extends to various applications, including chatbot interactions, question answering, and text summarisation. The design of ChatGPT prioritises the intricate understanding of the immediate conversational context, facilitating the generation of coherent and contextually relevant responses.

Compared to OpenAI's GPT-3, tailored for chatbot purposes, ChatGPT has been meticulously engineered to excel in natural language conversations. Its capacity to discern context and user intent enhances its ability to swiftly and accurately respond to user input. Furthermore, ChatGPT demonstrates a knack for producing imaginative responses that add an engaging dimension to conversations.

3.2 Reinforcement learning with human feedback (RLHF) component in ChatGPT

A hallmark of ChatGPT's design is its proficiency in generating conversations that sound remarkably human-like, creating a more seamless and immersive user experience. In contrast, GPT-3 leans more towards delivering factual responses. ChatGPT integrates a reinforcement learning with human feedback (RLHF) component, an additional layer of training that harnesses human input to teach the system how to adhere to commands and generate responses that align closely with human expectations.

As advancements were happening in the area of artificial intelligence, different scholars and institutions came up with specific ethical guidelines to navigate the route of AI development in society. Seeing them today, it seems they are insufficient to guide something like ChatGPT, which is getting closer to blurring the line between human and machine-made text.

4.0 Education and AI

Talking about education, Albert Einstein said, “Education is what remains after one has forgotten what one has learned in school.” This statement was made by the famous Albert Einstein. Education is an attempt to make an everlasting change in someone’s life and make them a better person. It also aims to contribute to the society. The primary purpose of education is to foster critical thinking and the formation of individual perspectives and beliefs. It plays a pivotal role in earning respect from others and honing one's cognitive abilities. Education serves as a catalyst for positive societal transformation, given the diverse array of mindsets within society. Those well-versed in education possess a wealth of knowledge that equips them to engage in meaningful discussions across a spectrum of topics encompassing society, politics, and the environment. This knowledge acquired through education is a potent tool for making informed decisions and choosing the right path. Education equips individuals with problem-solving abilities, empowering them to navigate the often perplexing and complex realm of solutions.

An educated person can dissect and address the 'why,' 'what,' and 'how' of any predicament, elevating their status as adept problem solvers. It serves as a powerful tool for alleviating poverty. Financial constraints sometimes compel individuals to halt their educational pursuits prematurely. However, completing one's education can substantially enhance earning potential, effectively eradicating poverty. Moreover, it instils the courage to confront injustices. Truly educated individuals are willing to stand against wrongdoing and

champion the cause of justice, refusing to shy away from confronting injustice. Education is a vital source of knowledge and awareness. A deep understanding of our surroundings and society is essential for effecting positive change. It not only imparts information but also cultivates knowledge.

Furthermore, it empowers individuals to address various challenges, whether they pertain to society, economics, politics, or healthcare. This versatility is invaluable when seeking employment in both the public and private sectors, facilitating career advancement and specialisation.

Finally, education plays a pivotal role in personal skill development. Students are exposed to a broad spectrum of skill sets and courses during their academic journey, shaping their personalities. Extracurricular activities and sports foster social skills, enhance communication through peer interaction and group activities and contribute to the development of excellent written communication skills via group projects.

4.1 Changing dimension of technology in education

Computer-based education, including AI technology, is a new medium and an essential source of information. If the source of students' or learners' information is critically evaluated, then it is very likely to impart a wrong set of ideas or beliefs. It has the capacity to adversely affect young learners across multiple dimensions: ethical, aesthetical, psychological, intellectual, and social.

One facet to consider is the potential for computer technology to facilitate unethical conduct. For instance, there exists a prevalent issue where students draw upon information sourced from the web without adequately accrediting the original authors, a transgression known as plagiarism. With the help of ChatGPT, it is easy for a student to write a paper with the help of it; only if the student manages to give suitable prompts will ChatGPT very easily and quickly write a very sophisticated article, which is almost impossible to know if it is written by a human or an AI. Plagiarism was already an issue, but now the students do not even have to write it from somewhere since this new tool not only provides you with the information but also curates it for you as per your need. It can be in an academic language or general language or with some slang, so there is no limit to the creation of information.

4.2 AI &ChatGPT for students and educators

For students, the adverse effects are multifaceted. It highlights the risk of detriment in higher-order cognitive skills, which are crucial for intellectual development. These include creativity, critical thinking, reasoning, and problem-solving[9]. The paragraph attributes this potential decline to the ease with which ChatGPT can furnish answers and information. Students, when presented with a quick and effortless solution, may be less inclined to engage in the rigorous cognitive processes involved in independent research, critical analysis, and the formulation of their conclusions or solutions[10].

For educators, the ramifications of over-dependence on AI tools like ChatGPT are equally significant. Beyond reducing the quality of interactions between teachers and students, it introduces another dimension of concern. It accentuates how this reliance has the potential to exacerbate existing inequalities within the educational system. Students who are more familiar with or have access to AI-based assistance may have an advantage over their peers, leading to disparities in the learning experience and outcomes.

This multi-faceted issue highlights the need for a balanced approach that leverages AI tools like ChatGPT for their educational advantages. It also encourages the cultivation of essential cognitive skills and fosters equitable learning opportunities. It is not only the adverse effect of these Generative tools, but they have many strengths as well. Here, we will try to understand the strength of AI.

ChatGPT has this design that empowers AI-driven chatbots to analyse the connections between words within a sentence, maintaining context and producing coherent and pertinent responses. The impressive

performance of ChatGPT is primarily attributed to its extensive training dataset[11], which enables it to grasp a broad spectrum of linguistic patterns and relationships, thereby ensuring a comprehensive understanding of language and context.

4.3 AI and ethics in education

Ethical and moral codes that we have over the course of time govern us to navigate our decisions and act accordingly. These codes are the mediums that made us somewhat different from machines. There are certain foundational qualities that make a living organism a human[12].

- **Ethical**: Pertains to actions and behaviours concerning their potential impact on other human beings, living creatures, and the environment. This dimension involves an appreciation of fundamental ethical principles and a commitment to align one's conduct with these principles.
- **Aesthetic**: Encompasses an innate sense of beauty across diverse domains, including the aesthetics found in nature, the arts, mathematics, science, and technology.
- **Social**: Reflects an individual's self-concept and their connections with others. It delves into the values associated with community, family, and friendships.
- **Intellectual**: Focuses on the human intellect and its multifaceted capabilities, including the capacity to comprehend existing knowledge and contribute to the creation of new knowledge.
- **Psychological**: Relates to an individual's ability to lead a content and gratifying life, interwoven with influences from the social, intellectual, aesthetic, and ethical dimensions of existence.

We assume the qualities mentioned above are available in all humans with different degrees of intensity, but how one gets to know about them is the way humans express them through their actions or words. It is not yet possible to engineer a machine in a way that it can feel something. In different scenarios, our ethical stance changes for the same set of actions. Even for us, it is not easy to give a logical reason for these choices, but we made them anyway.

Sometimes, we act to get the maximum benefit out of the act without questioning the process because we believe the result is more significant than the process. While doing this, we associate ourselves with the idea of utilitarianism. For example, Jumping the red light in an emergency health situation, but jumping the same red light if you are going to miss your flight would not be considered a good act. Here, we get into agreement with Kant's Deontology. The act in both cases is the same. It was jumping the red light, but as the scenario changes, our ethical stance of right and wrong also changes. Now, what made the phenomenon of missing a flight not worth jumping the red light while driving a patient to the hospital is worth jumping the red light. There can be multiple explanations given in these cases, but none can be an absolute explanation for this. The spectrum of ethics is too broad and complex, and one cannot decipher it with logic or pure reason. It needs something more than that which might be impossible to express. As Wittgenstein said, "Language disguises thought"[13]. Maybe a certain part of our understanding is not possible to express through any language, which means we just know or at least pretend to know what is ethical or what is unethical.

Now, it is established that language is not a sufficient tool or medium to express our understanding of ethics, but unfortunately, it is the only tool available at our disposal. So, if a machine that got its intelligence artificially expressed in the same way as we do, where will we draw the line of that distinction between human and machine? Conventionally, we made machines to do the assigned task with precision and uniformity; now, there is a machine that could be just as imperfect and ambiguous as we are, and it has the potential to function in its own way, whether it understands it or not.

4.4 The Implication of ethics and the role of AI &ChatGPT in Education

The creation by this machine is as human as we made, and this compels us to redefine what exactly art is. The ethical issues with ChatGPT lie in the execution. It is very good at giving you a superficial solution to all your problems since it is designed in such a way that it has to be interactive rather than informative. This causes an issue to seek a solution. However, it does not understand the deep nuances of problems. It tries to engage with the user, so if the user is not aware, it can easily manipulate the user without providing them with the correct answer.

ChatGPT runs over the training of a large amount of data set. With the help of that data, ChatGPT provides its response, but unlike humans, it is not possible for ChatGPT to assess its own training data. So, the information it provides is not credible, and it never acknowledges it, which is a major ethical drawback.

There is also an issue of biases and discrimination in the data. These tendencies stem from various factors, including biases embedded in the training data, the design of algorithms, and the prevailing societal context. Operating in accordance with the widely recognised principle known as 'garbage-in-garbage-out,' AI algorithms can amplify biases when they learn from extensive datasets that mirror these preexisting biases[14]. The Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) was used to predict the likelihood of re-offending among US criminals. In 2016, a ProPublica investigation into COMPAS revealed a significant racial disparity in its predictions.

It incorrectly identified a significantly higher percentage of black defendants (45%) as being at a higher risk of reoffending in comparison to white defendants (23%). When controlling for all other variables, such as prior criminal history, age, and gender, COMPAS disproportionately classified black defendants as higher risk, making them 77% more likely to be labelled as such than their white counterparts 16.

Furthermore, AI algorithms can inadvertently foster discrimination by emphasising goals such as profit and efficiency, sometimes disregarding potential consequences like the reinforcement of existing biases. These are not the right traits to develop an AI. This utilitarian methodology will only lead to problems for the upcoming more advanced AI than it already has.

Now, without proper handling of these biases and stereotypes, it would not be easy for the students to understand the subtle and hidden discriminating and stereotypical information, and they will be fed this information and develop an unknown biased understanding. This is a significant problem with AI, and it does not know the data that it is providing, which can cause a divide in society.

Academic integrity is also a noticeable ethical issue with ChatGPT and other generative tools. ChatGPT's ability to produce text that resembles human writing has raised concerns about the potential threat it poses to the security of online examinations, particularly in the context of higher education, where these assessments are increasingly common. In progressive academic discourse, exams like open books paved a path for analytical development in the students, not rote learning. However, generative AI like ChatGPT can easily frame the answer in whatever manner or form is required. It puts a sense of scepticism in the evaluator, and he can never know for sure whether the answer is written by a human or a machine. This causes all the practice of assignment, report or any academic writing to the scrutiny, which for now cannot be distinguished.

There is always a concern about data security and privacy, a widespread cliché yet correct statement: “If you do not pay for the product, then you are the product”. Till now, ChatGPT 4 is a paid version of OpenAI’s generative AI, whereas ChatGPT 3.5 is free. When the user uses it, the AI collects data, behaviour, expected response, and feedback from the user to develop its algorithm to serve the user better. However, it eventually leads to showing us the content in which we are interested, which makes it biased

in providing the information. This is a severe problem since learning through this medium will really manipulate the user in a certain way, which sometimes cannot be correct.

5.0 Discussion & Conclusion

The arguments in the paper reveal that there are multiple layers that need to be scrutinised before moving forward in any direction related to AI or any generative tools per se. It is not the case that ChatGPT is all wrong and cannot be suitable for academic space. The paper represents the ethical issues that ChatGPT accompanied with itself. AI is a technology that is evolving every day, and it is impossible to fully anticipate its future form. However, it does not mean we cannot speculate a superficial understanding of it. We should act now to make some basic rules. One has not to reduce the speed of the growth, but we should govern how it should be. Multiple underdeveloped and developing countries can really benefit from this technology. There are many states in India where the student-teacher Ratio is more than 30, which is the target of the New Education Policy of India. In those conditions, generative tools like ChatGPT can be beneficial if only students get trained on how to use these tools properly. It is a beneficial tool for developing a personalised learning protocol in accordance with the student's need, which a teacher cannot do all the time due to constraints of resources. These generative AI tools with the proper navigation have the potential to replace personal tuition. We should never think of it as a medium to replace the human. It can always facilitate doing the tasks, but human intervention is always required. We can always find better ways to develop the tools in a way that can be more democratic, inclusive and helpful to us.

It was always the case that when a new technology emerges in any sector to challenge the conventional notions of that sector, it causes disruption. We should work by engaging all the disciplines together to build a more ethical and better AI. The most promising approach is to think deeply about the issue and harness the potential of ChatGPT for education while actively working to mitigate the pedagogical challenges. Within this framework, curricula must be adapted by incorporating learning objectives, tasks, and assessment methods. This adaptation should include foundational competencies, including mass media and digital and internet literacy, to provide students with the skills needed to assess and use these new technologies effectively.

As education evolves in response to the growing role of AI, it becomes increasingly important to prioritise the development of higher-order learning outcomes, particularly the promotion of creativity and critical thinking. In the area of assessment, given ChatGPT's ability to produce acceptable end results, relying solely on end-product (summative) assessment is no longer reliable. Instead, educators should engage in formative assessment, a method that monitors the learning process through authentic assessment methods. They will participate in a continuous assessment and evaluation process that will subsequently lead students to opt for the knowledge rather than just knowing it for the exam. This approach has been recognised for its effectiveness in higher education. The role of teachers will be vital here, so they have to evaluate the students throughout the session, not just for the last exam. The utilisation of ChatGPT, which presents both advantageous and detrimental effects on education, remains at an early stage of development. This underscores the necessity for further empirical research to understand its impact comprehensively. Drawing from the outcomes of the SWOT analysis, numerous directions for future investigations become apparent. Foremost among these is the potential of ChatGPT to enhance personalised learning, representing a significant opportunity in education. Additional research is warranted to elucidate the practical implementation of personalised learning and determine the most effective ways to utilise this tool for tailoring students' educational experiences in various settings.

Here, teachers can play a crucial role in making students understand that the process is equally important as the result and sometimes even more important than the result. They should not use these tools as unfair means since it is not right. We have to impart these Kantian values to the students. Banning these tools, as some schools and universities have already done, cannot do any good, only making them understand why doing anything rightly is the right thing to do.

As AI is becoming an inseparable part of our lives, we should focus more on the issue of accountability and responsibility. AI is getting smarter every day, and the debate is now whether we should consider them as an entity, if we can accountable AI for legal action or the company will be responsible for it. This tool is opening new horizons for all disciplines to come together and discuss it.

Subsequent research should prioritise the formulation of ethical principles and guidelines to tackle these concerns related to the utilisation of ChatGPT in higher education and also in daily life.

Reference

1. Hines, A. (1996), "Jobs and Infotech: Work in the Information Society" - *Exploring Your Future: Living, Learning, and Working in the Information Age*, Edward Cornish(ed.), World Future Society, Bethesda, MD, pp. 7-11.
2. Definition of artificial. (2023). In *Merriam-Webster Dictionary*. (Accessed on October 3, 2023)
3. Neisser, U., *et.al.,* (1996). Intelligence: Knowns and unknowns. *American Psychologist, 51*(2), pp.77–101. https://doi.org/10.1037/0003-066X.51.2.77 (Accessed on October 01, 2023)
4. Singer, P. (2023). Ethics, Philosophy, History & Society. *Encyclopedia Britannica*. https://www.britannica.com/topic/ethics-philosophy (Accessed on September 27, 2023)
5. Madiega Tambiama (2019). EU guidelines on ethics in artificial intelligence: Context and implementation. *EPRS | European Parliamentary Research Service*. Available at https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640163/EPRS_BRI(2019)640163_EN.pdf Accessed on September 20, 2023
6. B. Zhang, D. Ding & J. Ling (2022), "How would stance detection techniques evolve after the launch of chatgpt?" arXiv preprint arXiv:2212.14548. (Accessed on July 13, 2023)
7. Wolf, L. *et al.,* (2020). Transformers: State-of-the-Art Natural Language Processing. *In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing: System Demonstrations,* pp 38–45, Online. Association for Computational Linguistics. https://aclanthology.org/2020.emnlp-demos.6/ (Accessed on October 16, 2023)
8. A. Vaswani, *et al.,* (2017) "Attention is all you need," *Advances in neural information processing systems*, vol. 30. https://papers.nips.cc/paper_files/paper/2017/hash/3f5ee243547dee91fbd053c1c4a845aa-Abstract.html (Accessed on October 8, 2023)
9. Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2023). A SWOT analysis of ChatGPT: Implications for educational practice and research. *Innovations in Education and Teaching International*, pp.1–15. https://doi.org/10.1080/14703297.2023.2195846 (Accessed on October 13, 2023)
10. Dwivedi, Y. K., *et.al.,* (2023). Opinion Paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642 (Accessed on October 3, 2023)

11. Kasneci, E., *et.al.,* (2023). ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education. Available on - https://doi.org/10.35542/osf.io/5er8f (Accessed on September 25, 2023)
12. Aiken, Robert & Epstein, R. (2000). Ethical guidelines for AI in education: Starting a conversation. *International Journal of Artificial Intelligence in Education*. 11. pp163-176. https://www.scribd.com/document/514052564/1023-paper (Accessed on July 20, 2023)
13. Ludwig wittgenstein (1922), "Tractatus logico philosophicus", Bertrand Russell, f.r.s. (ed.), kegan paul, trench, trubner & co., ltd. New York: Harcourt, brace & company, inc., pp39. https://www.gutenberg.org/files/5740/5740-pdf.pdf
14. Barocas, S.; Selbst, A.D. Big Data's Disparate Impact. Calif. Law Rev. 2016, 104, 671–732
15. Spielkamp, M. (2020). Inspecting algorithms for bias. *MIT Technology Review*. https://www.technologyreview.com/2017/06/12/105804/inspecting-algorithms-for-bias/ (Accessed on July 30, 2023)