International Journal of Advanced Trends in Computer Science and Engineering

Available Online at http://www.warse.org/IJATCSE/static/pdf/file/ijatcse091222023.pdf https://doi.org/10.30534/ijatcse/2023/091222023



ChatGPT: Educational Artificial Intelligence

Martand Ratnam¹,Bharti Sharma²,Ankit Tomer³

¹ M Tech Scholar AKTU Lucknow, martandratnam1994@gmail.com
 ² Assistant Professor NIET Greater Noida, bhartisharma0811@gmail.com
 ³ Assistant Professor JMS college Hapur, ankittomer02@gmail.com

Received Date February 19, 2023 Accepted Date: March 29, 2023 Published Date: April 06, 2023

ABSTRACT

On November 30, 2022, OpenAI published ChatGPT, a general-purpose discussion chatbot that is anticipated to have a significant influence on all facets of society. The prospective effects of this NLP tool on education, however, are still unclear. The capacity of ChatGPT may influence adjustments to learning activities, educational learning objectives and assessment and evaluation procedures, which might have a significant impact. In order to create this essay, I piloted ChatGPT as part of a research (see, ChatGPT User Experience: Implications for Education). ChatGPT, according to the pilot study, can help academics write articles that are systematic, coherent, (mostly) right, and instructive. The author's professional experience was used sparingly to complete the article in 2 to 3 hours. I investigate the potential implications of ChatGPT and other similar AI technologies on education in the paper, relying on user experience. The report suggests modifying learning objectives, with an emphasis on enhancing students' creativity and critical thinking rather than broad skill development. Students should be able to employ AI tools to carry out subject-domain activities. Researchers should create AI-based learning projects that involve students in addressing real-world problems in order to meet the learning objectives. Concerns about students contracting out their assessment work are also raised by ChatGPT. The article comes to the conclusion that new evaluation forms are required to emphasise creativity and critical thinking, which AI cannot replace (for details, read the paper).

Key words: ChatGPT, Education, NLP, OpenAI

1. INTRODUCTION

Man-made brainpower is the limit of PCs and different machines to perform errands that would ordinarily require human insight, like picking up, deciding, and critical thinking (artificial intelligence). Artificial intelligence is presently more normal in different areas, including training, on account of improvements in AI and regular language handling. In this essay, we'll examine the many applications of AI in education and talk about both their potential advantages and drawbacks.

Together with looking at the possible effects on teacher responsibilities and the general learning process, we will also look at the ethical issues surrounding the use of AI in education. Lastly, we'll talk about the potential for AI to spur innovation and advancement in the realm of education.

2 POTENTIALS OF AI FOR EDUCATION

Despite the fact that having an exceptionally concise history, computerized reasoning (artificial intelligence) in schooling has become progressively well known lately. In the 1960s and 1970s, researchers used computers to give tailored teaching and adjust to the requirements of individual students. These were the earliest examples of AI in education. These early efforts established the groundwork for the creation of more sophisticated educational platforms and tools driven by AI, which are now widely used in schools. The widespread use of personal computers and the internet in the 1980s and 1990s made it possible to create more advanced educational software and online learning environments. Instead of offering individualised training or making adjustments to meet the requirements of particular students, these early initiatives were primarily concentrated on delivering information and conducting assessments.

In the mid 2000s, progresses in AI and regular language handling empowered the advancement of progressively complex computer based intelligence fueled educating frameworks. These frameworks could adjust to individual students' necessities, give custom fitted guidance, and even grade undertakings. Artificial intelligence is presently being applied in schooling in various ways, including tweaked learning, managerial work mechanization, and in any event, coaching and tutoring. As computer based intelligence advances, we might see significantly more creative purposes of man-made intelligence in training from now on.

A. AI for Personalized Learning

Man-made brainpower (simulated intelligence) can possibly change the manner in which we educate and advance by furnishing understudies with customized opportunities for growth. Redone learning is the utilization of innovation to fit instructive substance and encounters to the necessities, capacities, and interests of individual students. AI may be used for customized learning in a variety of ways, including:

experiences that are tailored to their individual needs and abilities.

Adaptive learning: Man-made intelligence controlled instructive programming might break down an understudy's advancement continuously and change the degree of data to guarantee that it is adequately difficult. Versatile learning is an instructing and learning technique that utilizes innovation to naturally change the substance and intricacy of a growth opportunity in view of a student's presentation. This technique is planned to help understudies learn all the more quickly and successfully by offering custom fitted guidance.

Versatile learning has a long history, tracing all the way back to the mid 1960s, when PC based versatile evaluation was first formulated. Versatile learning innovation has progressed significantly in the many years subsequently, and it is presently utilized in different instructive settings, K-12 schools, advanced education organizations, and web based learning stages are instances of instructive establishments.

Adaptive learning has some evidence that it can increase student learning outcomes. A review of adaptive learning studies published in the Journal of Educational Computing Research, for example, uncovered that versatile learning frameworks can further develop understudy execution across different boundaries, including test scores and course grades.

Nonetheless, the survey's creators expressed that extra review is expected to completely get a handle on versatile learning's true capacity and to track down the most ideal ways to take on and utilize versatile learning innovation in instructive settings.

Subsequently, versatile learning has critical commitment since it has the ability to give understudies altered growth opportunities that are custom-made to their particular prerequisites and gifts, possibly prompting further developed learning results. Be that as it may, further exploration is expected to completely figure out the capability of this innovation and to decide the best

Personalized recommendations: Computer based intelligence can perceive an understudy's advantages and learning style and propose fitting substance and assets. Customized ideas can be utilized in training to assist understudies with finding new learning materials or exercises that are custom-made to their novel requirements and interests. These proposals may be founded on an understudy's earlier execution, learning style, or different characteristics like objectives or side interests.

Personalization in training extends back to the beginning of internet realizing, when instructive sites and stages utilized crude calculations to offer understudies learning assets in light of their earlier way of behaving. Redone ideas in training have become more complex over the long run, and they are presently utilized in a great many instructive settings, including K-12 schools, advanced education foundations, and web based learning stages.

Customized ideas in training have been displayed to help understudies find new learning materials or exercises that are custom-made to their own requirements and interests. A review distributed in the Diary of Instructive Figuring Exploration, for instance, uncovered that customized ideas in training can increment understudy contribution and inspiration while likewise expanding understudy satisfaction.

Yet, the use of personalised recommendations in education has raised concerns about algorithmic bias and the likelihood of these systems reinforcing existing prejudices or propagating stereotypes. As a result, it is critical to thoroughly analyse the possible outcomes of using personalized recommendations in education, and to ensure that these systems are designed and implemented in a way that is fair and transparent.

Generally, customized suggestions have extraordinary expected in schooling since they might assist understudies with finding new learning materials or exercises that are custom-made to their one of a kind necessities and interests, as well as increment understudy commitment and fulfillment. However, it is important to painstakingly think about the potential outcomes of utilizing new advancements, as well as to ensure that they are created and utilized in a fair and straightforward way.

Individualized instruction: Computer based intelligence might be utilized to furnish students with tweaked instruction, for example, one-on-one coaching or individualized illustration plans. Simulated intelligence may be utilized to help in customized schooling, which is an educating and learning approach that endeavors to customize the growth opportunity to every understudy's one of a kind necessities and abilities. Individualized instruction remembers one-for one educational cost, little gathering preparing, and independent learning.

Simulated intelligence for customized guidance has an extensive history that traces all the way back to the beginning of PC based training, when instructive programming was first evolved to help independent learning. In the many years from that point, simulated intelligence has been utilized to help an extensive variety of customized preparing methodologies, including canny coaching frameworks, versatile learning stages, and modified learning conditions.

There is some proof that simulated intelligence can be successful in helping with individualized guidance. A survey of the writing on simulated intelligence based customized training distributed in the Diary of Instructive Registering Exploration, for instance, uncovered that simulated intelligence can further develop understudy execution on various measurements, including test scores and course grades.

In any case, the creators of the paper accept that further exploration is expected to completely figure out the capability of man-made intelligence for customized guidance and to uncover the ideal methods to taking on and applying man-made intelligence in instructive settings.

In general, the commitment of man-made intelligence for customized training is huge, since it can give understudies individualized opportunities for growth that are custom-made to their particular prerequisites and abilities, possibly prompting further developed learning results. In any case, further examination is expected to completely grasp the capability of this innovation and to find the best strategies to involve it in instructive settings.

Artificial intelligence can analyse student performance data to identify areas where students may be failing and provide additional guidance or resources. Artificial intelligence (AI) may be used to aid in the early identification of learning requirements, which is the process of identifying and treating students' academic, social, or emotional needs as soon as possible. Early identification of learning needs is crucial because it may help prevent learning difficulties from deteriorating and ensure that children receive the support they need to flourish in school.

Man-made brainpower (simulated intelligence) for early distinguishing proof of advancing necessities might be followed back to the beginning of PC based training, when instructive programming was first intended to help with the assessment of understudies' advancing requirements. In the many years from there on, man-made intelligence has been utilized to help a large number of techniques for early ID of learning prerequisites, including versatile learning stages, customized learning conditions, and clever mentoring frameworks.

There is some proof that man-made intelligence can help with the early discovery of learning prerequisites. As per one examination distributed in the Diary of Instructive Registering Exploration, simulated intelligence based savvy mentoring frameworks can appropriately distinguish understudies' learning necessities and give fitting assistance, upgrading understudy execution on a scope of boundaries, for example, test scores and course grades.

However, Further research is also needed, according to the study's authors, to fully comprehend the potential of AI for early detection of learning requirements and to find the best approaches to apply and employ AI in educational settings.

Overall, AI has a considerable potential for early identification of learning requirements since it may assist educators in identifying and addressing students' academic, social, or emotional needs as early as feasible, which can lead to improved learning outcomes. Further review is required, be that as it may, to completely get a handle on the

capability of this technique and to find the best ways of using it in instructive settings. Generally speaking, the utilization of computer based intelligence for modified learning can possibly support understudy commitment and further develop learning results by offering customized encounters that are matched to every student's singular requirements.

B. Automating Administrative Tasks in Education

Computerizing managerial errands in training alludes to the utilization of innovation, like man-made reasoning (artificial intelligence) and computerization programming, to improve and robotize certain regulatory activities in the school system. These exercises might incorporate information passage, planning, and monetary guide handling, as well as understudy and workforce managerial capabilities including as enlistment and course the board.

The objective of mechanizing managerial errands in schooling is to work on their proficiency and precision while saving time and assets for additional significant undertakings like educating and learning. Via robotizing regulatory errands, teachers and directors might zero in on the essential objective of training, which is to give top notch opportunities for growth to understudies.

There are a few advantages to computerizing managerial undertakings in training. Computerization, for instance, can assist with decreasing mistakes and further develop precision while additionally easing the weight on teachers and directors. Mechanization can likewise assist with further developing schooling system proficiency by decreasing the time and assets expected to complete regulatory errands.

Artificial intelligence (AI) may be used to automate many administrative duties in education, such as:

Enrollment and registration: AI may be utilised to process enrollment and registration forms automatically, saving administrators time and decreasing their workload. AI may be used to assist with the enrollment and registration process in education, which involves enrolling students in courses or programmes and registering them for classes. AI may be used to automate enrollment and registration operations such as processing forms, checking information, and updating student data.

Man-made intelligence for enlistment and enrollment extends back to the beginning of PC based instruction, when instructive programming was essentially made to assist with understudy data the board and other regulatory errands. Computer based intelligence has since been utilized to robotize a large number of enlistment and enrollment tasks, and it is presently utilized in

different instructive conditions, including K-12 schools, advanced education foundations, and internet learning stages.

There is some sign that artificial intelligence can help with enlistment and enrollment. For instance, as per a review distributed in the Diary of Instructive Innovation and Society, simulated intelligence based arrangements can accurately oversee enlistment and enrollment structures, saving chairmen time and bringing down their heap.

However, Further research is also needed, according to the study's authors, to fully comprehend the potential of AI for enrollment and registration, as well as to establish the best ways to integrate and employ AI in these situations.

Therefore, AI has considerable promise for enrollment and registration since it can save time and money while also ensuring that student data are correct and up to date. Further study is needed, however, to fully grasp the potential of this method and to discover the most successful ways to utilise it in educational contexts.

Student record management: Computer based intelligence may be utilized to consequently order, arrange, and file understudy records, making it more straightforward to look for and recover explicit records. Simulated intelligence can help with understudy record the executives, which is the most common way of arranging, putting away, and recovering understudy data. Man-made brainpower (computer based intelligence) might be utilized to robotize understudy record the board errands, for example, ordering, arranging, and ordering records, as well as approving and refreshing data.

Man-made intelligence has a long history in understudy record organization, spreading over back to the beginning of PC based schooling, when instructive programming was first evolved to help in the administration of understudy information and other regulatory tasks. In the many years from that point, computer based intelligence has been utilized to robotize an extensive variety of understudy record the executives errands, and it is currently utilized in various instructive conditions, including K-12 schools, advanced education foundations, and internet learning stages.

There is some evidence that AI can assist with student record administration duties. According to one study published in the Journal of Educational Technology and Society, AI-based systems can correctly recognise, categorise, and index student information, saving administrators time and lowering their load. However, the study's authors stated that further research is needed to fully grasp AI's potential for student record management, as well as to establish the best ways to integrate and employ AI in these situations.

Therefore, AI offers considerable promise for student record management since it can save time and money while also ensuring that student records are correct and up to date. However, further research is required to fully comprehend the possibilities.

Grading and assessment: AI may be used to automatically grade assignments and tests, saving instructors time and reducing their workload. For many years, artificial intelligence (AI) has been used in different parts of education, including grading and evaluation. The Intelligent Essay Assessor (IEA), created by the Educational Testing Service (ETS) in the late 1990s, was one of the first examples of employing AI for grading and assessment. The IEA was created to assess the quality of written replies to essay topics and offer students with feedback on their writing abilities.

AI has been progressively employed to automate different areas of grading and assessment throughout the years, including multiple-choice test scoring and the evaluation of essays, projects, and other sorts of assignments. The use of AI for grading and assessment has the potential to increase grading speed and accuracy while also providing more tailored feedback to students.

Aside from grading, there are several possible applications for AI in educational evaluation. For example, AI may be used to evaluate student data to uncover patterns and trends, allowing instructors to better understand how kids are learning and suggest areas where they may want further assistance. AI may also be used to create tailored learning experiences for pupils based on their specific needs and talents.

Overall, the use of AI for grading and assessment has the potential to dramatically increase educational efficacy by giving students with more tailored feedback and assistance, as well as enabling educators to measure student learning more correctly and efficiently. It is vital to stress, however, that AI is not a replacement for human judgement and knowledge, and that it should be utilised to supplement and assist rather than replace educators' duties.

Course scheduling: AI may be used to automatically schedule courses, assign teachers, and allocate classrooms, saving time and reducing the need for manual scheduling. For many years, artificial intelligence (AI) has been used in different sectors of education, including course schedulingThe Course Timetabling Problem (CTP), proposed in the early 1980s as a mathematical optimization issue, was one of the earliest examples of applying AI for course scheduling. The CTP entails creating a timetable for a collection of courses and students while taking into consideration various restrictions such as classroom availability, instructor availability, and student preferences.

AI has been increasingly utilised to automate different parts of course scheduling, such as schedule development, classroom and teacher assignment, and schedule optimization to optimise usage and avoid conflicts. The use of artificial intelligence (AI) for course scheduling has the potential to boost the speed and efficacy of the scheduling process while also offering students with more personalised scheduling options.

Apart from course scheduling, there are several possible uses for AI in educational scheduling. AI can, for example, be used to improve the scheduling of other resources, such as lab equipment or study rooms, or to create individualised timetables for individuals based on their unique requirements and preferences.

Overall, the use of AI for course scheduling has the potential to significantly increase educational efficiency and effectiveness by allowing educators to more simply and precisely plan courses and other resources, as well as by offering students with more tailored scheduling alternatives. It is vital to stress, however, that AI is not a replacement for human judgement and knowledge, and that it should be utilised to supplement and assist rather than replace educators' duties.

Financial aid: AI may be used to automatically process financial assistance applications and assess eligibility, saving administrators time and reducing their workload.

For many years, artificial intelligence (AI) has been used in different sectors of education, including financial aid. The creation of automated systems for processing financial assistance applications and awarding help to students was one of the early examples of employing AI for financial aid. By automating operations like as data input, verification, and computations, these technologies were meant to increase the efficiency and accuracy of the financial assistance process.

Artificial intelligence (AI) has increasingly being utilised to automate different elements of financial assistance, such as analysing student data to detect patterns and trends, predicting student performance and retention, and optimising financial aid packages to maximise student achievement. AI for financial assistance has the ability to increase the speed and efficacy of the financial aid process, as well as providing students with more individualised financial aid alternatives.

Outside the typical financial assistance procedure, there are other potential uses for AI in educational financial aid. For example, AI may be used to create individualised financial assistance plans for students based on their unique requirements and preferences, or to improve financial aid resource allocation to enhance student achievement.

The application of AI for financial assistance has the potential to dramatically enhance the speed and effectiveness of the financial aid process by allowing educators to award financial help to students more simply and precisely, as well as by offering students with more tailored financial aid alternatives. It is vital to stress, however, that AI is not a replacement for human judgement and knowledge, and that it should be

utilised to supplement and assist, rather than replace, the jobs of educators and financial aid managers.

By and large, utilizing mechanization and man-made consciousness to computerize regulatory undertakings in schooling can possibly significantly further develop framework productivity and viability by permitting teachers and executives to zero in on the center mission of training and furnishing understudies with a more consistent and effective opportunity for growth. Regardless, it is basic to underscore that computerization isn't a substitution for human judgment and mastery, and that it ought to be utilized to increase and help instead of supplant the obligations of teachers and heads.

C AI for Tutoring and Mentorship

For many years, artificial intelligence (AI) has been used in numerous parts of education, including tutoring and mentoring. One of the early instances of involving man-made intelligence for educating was the advancement of wise coaching frameworks (ITS), which were intended to give individualized guidance and input to understudies in view of their particular necessities and abilities. These methods were primarily deployed in the form of computer-based programmes that supplemented traditional classroom training.

During the years, artificial intelligence has been utilized to bit by bit mechanize numerous parts of coaching and mentorship, for example, the conveyance of redone guidance and input, the ID of understudy learning prerequisites and boundaries, and the structure of custom fitted learning plans. The application of artificial intelligence for tutoring and mentoring has the potential to accelerate and improve the learning process while also offering students with more personalised learning experiences.

Apart from traditional one-on-one tutoring, AI has additional potential uses in educational tutoring and mentorship. AI, for example, might be used to provide group tutoring or mentorship, as well as to design personalised learning experiences for students based on their specific needs and preferences.

3 CHALLENGES OF USING AI IN CLASSROOM

Using artificial intelligence (AI) in the classroom poses a number of issues. Among these difficulties are: Concerns about ethics: Others have expressed ethical concerns regarding the use of AI in education, citing the possibility that AI would perpetuate prejudices and reinforce existing imbalances. These issues have resulted in the need for ethical standards and best practises for the use of artificial intelligence in education.

The use of artificial intelligence (AI) in education raises various ethical considerations. Among these considerations are:

- Bias: Biases in the data that AI systems are educated on can be perpetuated. This can result in uneven and unjust consequences for students, especially if the prejudice is based on race, gender, or socioeconomic background.

- Privacy: Large volumes of student data are frequently collected and processed by AI systems. This may raise worries about student privacy and data security.
- Replacement of human jobs: There is worry that the utilization of man-made consciousness (man-made intelligence) in schooling could bring about the substitution of human teachers and other training experts, possibly driving in employment cutback and financial shakiness.
- Lack of transparency: Some simulated intelligence frameworks are challenging to comprehend and decipher, making it hard for educators and understudies to comprehend how choices are made.

To address these worries, there are a few potential solutions that can executed, include:

- Making moral standards and best practices for the utilization of man-made brainpower in training.
- Guaranteeing that man-made intelligence frameworks are created and executed so that predisposition is limited and equity is advanced.
- Setting up powerful information protection and security shields to get understudy information.

Guaranteeing that the utilization of artificial intelligence in schooling is straightforward and that computer based intelligence framework decisions are logical.

• Teachers will get preparing and help to help them fathom and really apply simulated intelligence in their homerooms.

Therefore, it is critical to thoroughly analyse the ethical implications of employing artificial intelligence in education and to put suitable mechanisms in place to address these issues.

Artificial intelligence systems may be difficult, requiring significant resources and talent to build and maintain. This can be challenging for schools and teachers that lack the necessary resources or skills to properly incorporate and deploy AI.

- The application of artificial intelligence (AI) in education has various technological constraints.

 These constraints are as follows:
- Complexity: AI systems may be complicated, necessitating substantial resources and skill to design and maintain. This can be difficult for schools and instructors who may lack the requisite resources or knowledge to successfully integrate and employ AI.
- Integration with existing systems: AI systems frequently require integration with current systems and procedures, which can be difficult for schools and educators. These might include technological challenges as well as data security and privacy concerns.
- Internet connectivity: Many artificial intelligence

systems rely on internet access to work effectively. This can be difficult in locations with limited or unstable internet connectivity.

Upfront costs: The upfront expenditures of installing AIsystems might be substantial, which can be a barrier for schools and instructors without the requisite resources.

To address these mechanical impediments, there are a few potential arrangements that can executed, include:

- Educators will receive training and assistance to help them comprehend and effectively apply AI in their classrooms
- Creating simpler and more user-friendly AI solutions for instructors and students to utilise.
- Ensuring that AI solutions are compatible with current systems and procedures, and offering integration support as needed
- Investing in infrastructure to facilitate the application of AI in education, such as internet connectivity.
- Offering cash and other resources to aid in the deployment and usage of artificial intelligence in education.

Ultimately, it is critical to carefully analyse the technological limits of employing AI in education and to take suitable methods to solve these limitations.

Teacher buy-in: Teachers must be willing to accept and apply AI in the classroom for it to be effective. Yet, some instructors may be hesitant to adopt AI because they are inexperienced with it or are concerned about its possible influence on their roles and duties. With regards to applying computerized reasoning (simulated intelligence) in training, there are different issues connected to educator purchase in. These difficulties include:

- Unfamiliarity with AI: Some instructors may be inexperienced with AI and may be unsure how to apply it successfully in their classes.
- Concerns about the impact on their role: Some instructors may be apprehensive about the possible influence of AI on their roles and obligations and may be unwilling to use it.
- Lack of support: Teachers may be hesitant to integrate and employ AI in their classrooms if they do not believe they have the appropriate support and resources.

To address these challenges and promote teacher buy-in, there are several potential solutions that can be implemented, including:

- Offering teachers with training and assistance to help them comprehend and effectively employ AI in their classrooms.
- Explaining the benefits of AI and how it may help with teaching and learning.
- Providing teachers with the resources and assistance they need to properly deploy and employ AI in their classrooms.
- Including teachers in decision-making and soliciting their feedback on the deployment and usage of AI in their classrooms.

• Guaranteeing that the utilization of man-made brainpower (artificial intelligence) doesn't supplant educators' positions, yet rather supports and upgrades their endeavors in instructing and learning.

Thus, when it comes to employing AI in education, it is critical to carefully address instructors' concerns and demands and should put in place suitable mechanisms to address these concerns and encourage teacher buy-in. Student engagement: Simulated intelligence frameworks can be indifferent and will be unable to connect with understudies as well as a human educator. Keeping up with understudy interest and excitement may be troublesome in this present circumstance.

- With regards to applying man-made consciousness (computer based intelligence) in schooling, there are different issues connected to understudy contribution. Among these challenges are:
- Impersonal nature of AI: Some pupils may find AI systems impersonal and may not be as interested by them as they would be by a human teacher.
- Lack of human interaction: Some students may prefer the personal engagement and support offered by a teacher over learning from an AI system, and may not feel as driven or engaged while learning from an AI system.
- Technological barriers: Some students may lack access to the necessary technology or internet connectivity to use AI systems, which may limit their involvement with these systems.
- To address these challenges and promote student engagement, there are several potential solutions that can be implemented, including:
 - Ensuring that AI systems are interesting and interactive, with aspects such as games and simulations incorporated to promote student engagement.
 - Allowing students to communicate with human professors and mentors in addition to employing AI technologies.
- Providing assistance and resources to students who may be facing technical challenges, such as giving access to technology and internet connectivity.
- Encouraging students to take an active role in their learning by giving them options and chances to customise their learning experiences.
- Obtaining student input and using it to better the design and implementation of AI systems.

Ultimately, when it comes to applying AI in education, it is critical to carefully examine students' concerns and requirements, and to implement suitable methods to address these issues and boost student involvement.

Integration with existing systems: AI systems frequently require integration with current systems and procedures, which can be difficult for schools and educators. These might include technological challenges as well as data security and privacy concerns.

- The integration of artificial intelligence (AI) into existing educational systems presents various obstacles. Among these difficulties are:
- Compatibility with existing systems: Artificial intelligence frameworks might be expected to connect with current frameworks and cycles, which may be troublesome in the event that they are contradictory.
- Data security and privacy: Large volumes of student data are frequently collected and processed by AI systems. This can create issues regarding data security and privacy, especially if the systems are not developed and deployed appropriately.

Training and support: To properly employ and integrate AI technologies into their classrooms and institutions, educators and administrators may require training and assistance.

There are various potential solutions that may be applied to overcome these difficulties and assist the integration of AI into existing educational systems, including:

- Verifying that man-made brainpower frameworks are planned and executed in a manner that is viable with existing frameworks and methodology.
- Setting major areas of strength for up security and protection shields to get understudy information.
- Educators and administrators will receive training and assistance to help them comprehend and effectively deploy AI in their classrooms and schools.
- Involving stakeholders, such as educators, administrators, and students, in decision-making and soliciting their feedback on the deployment and usage of AI in their classrooms and schools.

Assuring that AI usage is transparent and that AI system judgements are explicable.

When it comes to integrating AI into present educational systems, it is necessary to carefully examine educators', administrators', and students' concerns and expectations, and to use appropriate approaches to address these difficulties and enable the integration of AI into these systems.

Overall, , the use of AI in the classroom can bring a variety of obstacles, but with careful preparation and study, it is feasible to utilise AI to enhance and assist teaching and learning in an effective and ethical manner.

4 THE FUTURE OF AI FOR EDUCATION

The future of artificial intelligence (AI) in education will most likely entail its continuing expansion and integration into many elements of the educational system. The following are some anticipated future developments:

A Increasing usage of artificial intelligence for tailored learning

AI has the ability to give students with individualised learning experiences based on their particular needs and talents. This might include using artificial intelligence to produce individualised lesson plans, give personalised feedback and assistance, and measure student progress.

B Creation of artificial intelligence-powered instructional games and simulations:

AI has the ability to create educational games and simulations that engage students and assist them in learning in a fun and engaging manner.

C AI will be used more for tutoring and mentoring.

By giving individualised teaching and feedback based on their specific needs and talents, AI has the ability to give personalised coaching and mentorship to pupils.

D Application of artificial intelligence to automate administrative activities

Artificial intelligence can computerize a great many managerial tasks in schooling, including information info, booking, and monetary guide handling, as well as understudy and workforce organization capabilities like enlistment and course the executives.

E Development of AI-powered education platforms
AI might be utilised to develop education systems that give students with individualised and interactive learning experiences.

Generally, the future of AI in education will most certainly entail ongoing development of its application and integration into many elements of the educational system, with the objective of enhancing the efficiency and efficacy of teaching and learning. It is critical to thoroughly analyse the ethical, technological, and other problems involved with the use of AI in education, as well as to put suitable procedures in place to address these challenges and guarantee that AI is utilised ethically and successfully in the educational system.

5 CONCLUSION

To summarise, artificial intelligence (AI) has the potential to promote educational innovation and improvement in a variety of ways. AI has the ability to alter the way we think about and deliver education by creating individualised and engaging learning experiences for students, enhancing the efficiency of teaching and learning, as well as assisting in educational research and growth. Yet, it is critical to carefully analyse the ethical, technological, and other problems connected with the use of AI in education, as well as to put in place proper procedures to address these challenges and guarantee that AI is utilised ethically and successfully in the educational system As artificial intelligence (AI) improves and advances, all things considered, it will end up being a more significant device for driving development and improvement in schooling, and keeping on checking and estimating its effect on educating and learning will be vital.

REFERENCS

- [1] Zhai, X.: 'ChatGPT User Experience: Implications for Education.' (under review).
- [2] Verma, A., Lamsal, K., & Verma, P. (2022). An investigation of skill requirements in artificial intelligence and machine learning job advertisements. Industry and Higher Education, 36(1), 63-73.
- [3] Atuhaire, R. (2022). What is ChatGPT. Dignited. https://www.dignited.com/104384/what-ischatgpt-and-how-does-it-work/
- [4] Lund, B. (2022). A Chat with ChatGPT: How will AI impact scholarly publishing? 10.13140/RG.2.2.34572.18565
- [5] Azaria, A. (2022). ChatGPT Usage and Limitations. Retrieved 19th July, 2022 from

https://www.researchgate.net/publication/366

- 618623_ChatGPT_Usage_and_Limitations
- [6] Harel, I., & Papert, S. (1990). Software design as a learning environment. *Interactive Learning Environments*, *I*(1), 1–32. doi:10.1080/1049482900010102 [Taylor & Francis Online], [Google Scholar]
- [7] Pask, G. (1976). Conversation theory. Applications in education and epistemology. Elsevier. [Google Scholar]
- [8] Ghavifekr, S., Kunjappan, T., Ramasamy, L., & Anthony, A. (2016).

Teaching and Learning with ICT Tools: Issues and Challenges from

Teachers' Perceptions.Malaysian Online Journal of Educational Technology, 4(2), 38-57.

- [9] Tutorial Point, (2020). Artificial Intelligence : Intelligent Systems. Tutorials Point.
- [10] Atuhaire, R. (2022). What is ChatGPT.Dignited. https://www.dignited.com/104384/what-ischatgpt-and-how-does-it-work/