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Review Paper

INFORMATION SCIENCE

Artificial Intelligence and Smart Society: Educational Applications, Emergences and Issues – *A Scientific Review*

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ABSTRACT

Artificial Intelligence is one of the alarming and important term and concept these days, and dedicated in advancing general Information Technology operations, it is dedicated to developing intelligence in the systems and the same can be applicable in various products and services. Artificial Intelligence in short called as AI and basically performed by various kind of machines and systems, in general using AI machine act like humans and also able to mimic their actions; further, it is able to learning and problem-solving affairs. As far as core types are concerned Weak Artificial Intelligence is needed in designing of the system for a particular job whereas Strong Artificial Intelligence is able to perform duties like humans and able in more complex and complicated system development. Thus Strong AI complex and complicated and basically solve the problem without having a person. Machine Learning is important sub set of Artificial Intelligence and also depends on various statistical techniques and other parts of computation, decision making, etc. AI and allied technologies such as Robotics, Deep Learning, Machine Learning, etc., are important sub-components and fields helps in educational development and process. Today face-to-face education i.e. traditional education including online education highly depends on AI and Allied Technologies.

Keywords: Computing, Information Technology, Smart Education, Education Technology, Education 4.0, Digital Society

Artificial Intelligence (AI) is able in rationalize and also in taking actions to achieve a desired goal and initially this was treated as a technology and gradually it is now become a technology and applicable in various areas and sectors as well as industries (as depicted in Fig. 2, source 360DigiTMG). In a wide

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range of areas like education, healthcare, governance, administration, transportation and education, etc. [5],[9],[10]. Artificial Intelligence is not only applicable but also emerging. The allied technology such as Robotics bases tools, and systems are increasing day by day and also allowing of new perspectives. The advanced and intelligent robots are making lives easy and advanced. As far as the latest trend is concerned robots and robot-based systems including wireless sensor network (WSN) considered as important and vital supported by various automated machines, intelligent devices, etc. are the major examples of Artificial Intelligence[11],[29],[31]. Information Technology plays a leading and vital role for the development of the society and different emerging sub-technologies (as depicted in Fig. 1) playing important role in developing a society into a Digital Society.

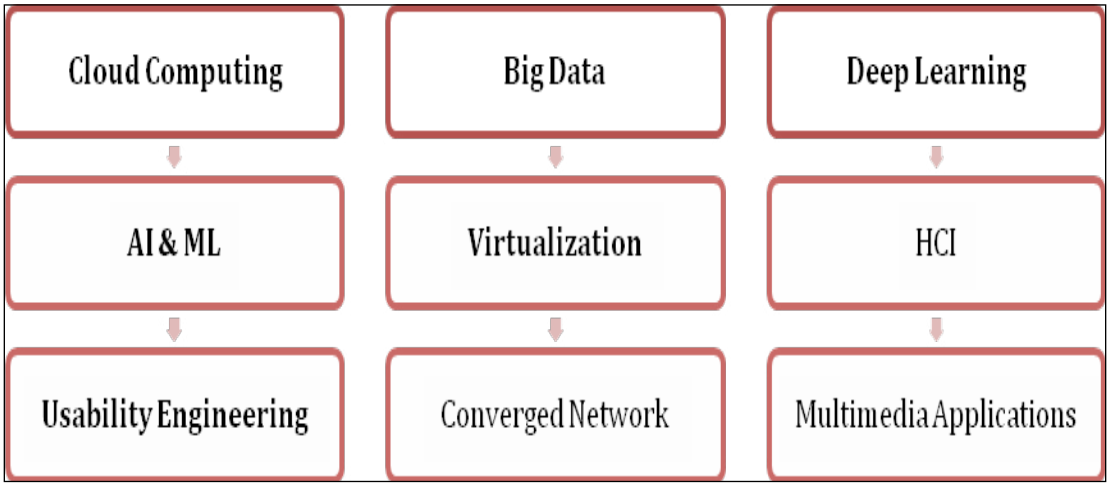

Fig. 1: Some of the emerging subfields of Information Technology including AI

Artificial intelligence is highly depends on simulation and also act like human intelligence and other devices and machines. Artificial Intelligence is also associated with the learning, reasoning, and perception. Weak Artificial Intelligence and strong Artificial Intelligence both are important and crucial in AI and allied areas[12],[26],[27]. Arthur Samuel, in the year 1959 coined the term and also exploring the study and construction of algorithms. Moreover various kind of approaches are important in AI such as —

- Decision and Association Tree Learning
- Artificial Neural Networks
- Deep Learning and Clustering
- Inductive Logic Programming

Deep Learning is an advanced level of Machine Learning and emerging sub-fields of Artificial Intelligence. Further here various architectures treated as valuable for better job and execution. It is important to note that, deep learning like deep neural networks, deep belief networks, recurrent neural networks, etc.[4],[13],[14]. are important and applicable in some of the areas such as —

- Computer vision and NLP
- Automatic speech and Image recognition
- Visual art processing

- Bioinformatics
- Mobile advertising
- Image restoration, etc.

Thus Artificial Intelligence including Robotics, Machine Learning, etc. are well applicable in Higher Education, Educational Management, E-Learning and Online and Digital Education systems. There are specific uses and areas where Artificial Intelligence are widely useful and emerging.

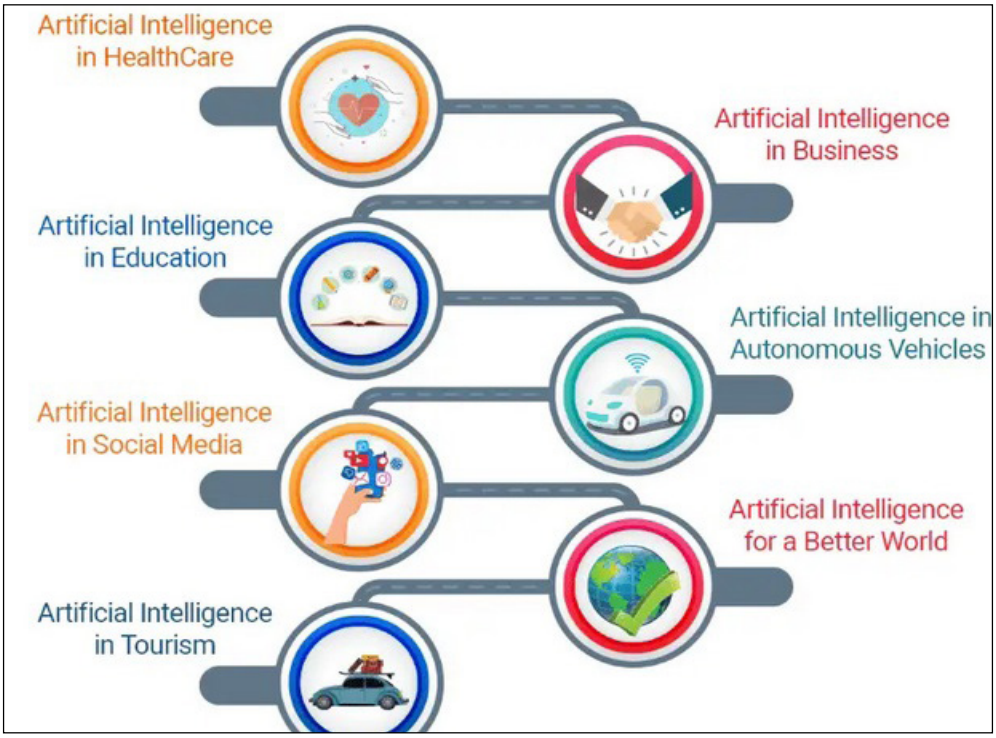

Fig. 2: Emerging areas where AI is applicable

Objective of the Paper

The Paper titled 'Artificial Intelligence and Smart Society: Educational Applications, Emergences and Issues-*A Scientific Review'* is a theoretical review work and mainly deals with following aim and objectives —

- To know about the basics of Artificial Intelligence and allied systems including its types and emergence, robotics and fundamentals, etc.
- To learn about the Existing works related to the Artificial Intelligence applications in the Education and allied sector.
- To know about the basic areas where Artificial Intelligence is applicable with a strong focus on Educational Systems, Online and Distance Learning, etc.

- To learn about the fundamental and alarming issues in regard to applications of Artificial Intelligence in Education and allied sectors.
- To find-out basics of future potentials regarding Artificial Intelligence applications in Education and Teaching-Learning Process.

Methods Adopted

The present work entitled 'Artificial Intelligence and Smart Society: Educational Applications, Emergences and Issues-*A Scientific Review'* is a theoretical work focused on Artificial Intelligence applications in Education, and Teaching Learning Process. This work basically prepared from the existing sources of information and specially consulted various existing journals, books and other sources of information. To prepare this work 'Google Scholar' basically was used to select and collect relevant journals, and other publications and top seven search results being noticed and out of such results fifteen work directly consulted and reported here in existing works and review section and rest have used in other parts in this paper formation.

Existing Works and Reviews

As mentioned before this work is theoretical therefore various existing works have been consulted from the journals and other sources. Here in this section selective papers and their major finding are mentioned and listed them alphabetically. Further all the references are listed in reference section of this paper.

Alvarez, F., Bote-Lorenzo, M.L., Gómez-Sánchez, E. and Asensio-Pérez, J.I. (2011)[1] in their paper titled "*Adapting Artificial Intelligence planning techniques to personalize the learning process in a web-based learning system*" present a study focused on adapting Artificial Intelligence (AI) planning techniques to personalize the learning process in a web-based learning system. The authors examine how AI planning techniques can be used to customize educational content and activities for individual learners since they understand the value of personalized learning experiences. The study emphasizes the potential for AI planning algorithms to dynamically modify the learning path, content sequencing, and pacing to suit the particular requirements and preferences of each learner. The results highlight how personalization enhances student motivation, engagement, and ultimately learning outcomes. The authors also talk about the difficulties in scaling and adapting AI planning algorithms to a variety of learner profiles and circumstances. Overall, by illuminating the potential and ramifications of employing AI planning approaches to tailor the educational experience in web-based learning systems, this research makes a contribution to the field of AI in education.

Anohina, A. and Znotiņš, A. (2020)[2] explore "*The role of artificial intelligence in personalized learning*" in their paper published in the Journal of Artificial Intelligence and Soft Computing Research. The authors look into how personalized learning experiences can be supported and improved by artificial intelligence (AI). They talk about the possibility of modifying educational content, offering personalized feedback, and facilitating adaptive learning paths using AI techniques including machine learning, natural language processing, and intelligent tutoring systems. The study emphasizes the advantages of personalized learning, such as improved learner motivation, engagement, and knowledge retention. The writers also discuss the difficulties and moral issues around algorithmic bias and data privacy. Overall, by offering insights into how AI may support personalized learning and highlighting the need for more research and development in this field, this work adds to the body of knowledge.

Arroyo, I., Woolf, B.P., Burelson, W., Muldner, K., Rai, D. and Tai, M. (2014)[3] investigate "*The impact of personalizing the learning experience with virtual tutors in algebra*" in the Journal of Educational Psychology. In the context of algebra instruction, the authors concentrate on the efficacy of personalizing the learning experience via virtual tutors. They use intelligent teaching systems (ITS) that adjust to the demands of certain students and offer specialized feedback and direction. The study's findings are encouraging, demonstrating that pupils who interacted with virtual tutors learned more than those in conventional learning environments. The results imply that individualized instruction delivered by virtual tutors can raise student engagement, learning effectiveness, and self-efficacy. The authors talk about how their research has consequences for the creation and use of educational technology that supports individualized learning. By showing the potential of virtual tutors to enhance algebra instruction, this study adds to the body of literature and encourages further research into ITS in other subject areas.

Baker, R.S. and Inventado, P.S. (2014)[4] worked on "*Educational data mining and learning analytics*" in the book Learning Analytics: From Research to Practice. The authors give an overview of learning analytics (LA) and educational data mining (EDM), two new domains that use data-driven methods to improve teaching and learning. They go through important procedures and strategies employed in EDM and LA, including data preprocessing, classification, clustering, and prediction. The study looks at how these techniques might be used in areas like assessment, student modeling, and adaptive learning. Additionally, the authors draw attention to the difficulties with data collecting, privacy, and scalability. A foundation for researchers and practitioners interested in using data analytics to inform educational practices and decision-making is provided by the chapter's synopsis of the state of EDM and LA in the literature.

Basu, A., Kempka, S.E., Ali, K., Ahuja, R. and Beck, J.E. (2020)[5] focus on "*Artificial intelligence and educational assessment*" in the journal Nature Human Behavior. The authors look at how artificial intelligence (AI) is changing how students are assessed in schools. They go over how artificial intelligence (AI) methods, such as automated scoring, machine learning, and natural language processing, can be used to improve the effectiveness, consistency, and fairness of evaluations. The study emphasizes how AI could be used to provide personalized evaluation methods, adaptive testing, and real-time feedback. The writers also talk about ethical issues including data privacy and prejudice in algorithmic decision-making. This study adds to the body of knowledge by illuminating the potential of artificial intelligence (AI) in educational evaluation and encouraging additional research into AI-powered assessment systems.

Blikstein, P. (2013) [6]presents "*Gears of our childhood: Constructionist toolkits, robotics, and physical computing, past and future*" in the Proceedings of Constructionism 2012. The author investigates the application of robotics, physical computing, and constructionist toolkits in educational settings. The paper examines the historical growth and development of these instruments, emphasizing their capacity to involve students in practical activities, encourage creativity, and improve problem-solving abilities. Blikstein stresses the value of giving pupils the chance to experiment, tinker, and develop with technology. The future potential of constructionist toolkits, robotics, and physical computing in influencing educational practices and preparing students for the digital age is also covered in the paper.

Chen, C.M. and Li, S.C. (2019)[7] investigate "*Data mining in educational technology*" in the Handbook of Educational Technology edited by A.J. Kung. The authors delve into the field of educational data mining (EDM) and its applications in educational technology. They go over several data mining procedures and techniques, like clustering, classification, and sequential pattern mining, that are used to glean insights from educational data. In the study, learning analytics, personalized instruction, and adaptive learning

are some of the data mining applications in educational technology that are explored. The problems and moral questions related to data mining in education are also discussed by Chen and Li. The chapter offers a thorough introduction to data mining in educational technology and emphasises the advantages of using data-driven strategies to improve teaching and learning.

Heffernan, N. and Heffernan, C. (2014)[8] present "*The ASSISTments ecosystem: Building a platform that brings scientists and teachers together for minimally invasive research on human learning and teaching*" in the International Journal of Artificial Intelligence in Education. The authors introduce the ASSISTments ecosystem, a platform that enables minimally intrusive research on human learning and teaching by bridging the gap between scientists and teachers. The ASSISTments system, which combines intelligent teaching, evaluation, and research capabilities, is discussed in the study along with its characteristics and design. The study emphasizes how the ecosystem facilitates extensive educational research while minimizing interference with classroom instruction. The authors also stress the value of researcher and educator cooperation in advancing the subject of artificial intelligence in education. The research adds to the body of literature by demonstrating the ASSISTments ecosystem's potential to promote practices in education that are founded on evidence.

Holmes, W., & Bialik, M. (2016[9] present "*Education and artificial intelligence: A roadmap for AI in education*" in a report published by the Center for Universal Education at the Brookings Institution. For implementing artificial intelligence (AI) in education, the authors offer a road map. The potential of AI technologies, such as machine learning, natural language processing, and intelligent tutoring systems, to improve teaching and learning processes is covered in the report. It examines many application areas, including individualized instruction, evaluation, and teacher assistance. The writers also discuss the difficulties and issues surrounding the application of AI in education, such as ethical issues, equity concerns, and the function of instructors. The roadmap includes advice for policymakers, educators, and researchers to traverse the AI landscape in education and provides insights into the opportunities and problems of incorporating AI into educational institutions.

Hsiao, I.H., Chen, C.H. and andi, C.J. (2017)[10] investigate "*Exploring the effects of an intelligent tutoring system with appropriate feedback on students' learning achievement and motivation in mathematics*" in the journal Interactive Learning Environments. The authors investigate how an intelligent tutoring system (ITS) with suitable feedback affects students' mathematical learning achievement and motivation. The study looks at how students' performance and motivation are affected by the personalized feedback provided by the ITS. The results show that ITS use along with proper feedback improves students' learning outcomes and intrinsic motivation in mathematics in a good way. The authors go over the implications of their research for the creation and use of intelligent tutoring programs that successfully encourage and support students' learning. The study advances knowledge on the potential of ITS with tailored feedback to increase student achievement and engagement in mathematics teaching.

Huang, Y.M. and Liang, T.H. (2018)[11] present "*Building a personalized recommendation system for supporting programming learning*" in the Journal of Educational Technology & Society. The authors concentrate on creating a custom recommendation system to aid programming learning. The study investigates how student traits, preferences, and performance data can be analyzed using data mining and machine learning techniques. The suggestion system offers students personalized tasks, learning tools, and feedback based on this research. According to the research, a personalized suggestion system improves programming trainees' motivation, engagement, and learning outcomes. The authors talk

about how building adaptable learning environments that accommodate learners' various requirements and preferences would be affected by their research. By demonstrating the value of personalized recommendation systems in programming instruction, this study advances the discipline.

Johnson, W.L., Rickel, J. and Lester, J.C. (2000)[12] investigate "*Animated pedagogical agents: Face-to-face interaction in interactive learning environments*" in the International Journal of Artificial Intelligence in Education. The authors explore the use of animated pedagogical agents (APAs) in interactive learning environments. They discuss how APAs can engage learners in face-to-face-like interactions, providing guidance, feedback, and social presence. The study emphasizes how APAs may improve student learning results, motivation, and engagement. The writers also discuss design factors such as agent demeanor, behavior, and instructional methods. The results highlight the significance of developing strong and convincing APAs to promote beneficial learning experiences. This study adds to the body of knowledge by highlighting the advantages and difficulties of APA integration in educational contexts.

Lane, H.C., Core, M.G. and Lierheimer, K. (2015)[13] explore "*AI in education: Automatic classification of tutoring dialogues*" in the Proceedings of the 8th International Conference on Educational Data Mining. The authors' main area of interest is the automatic classification of tutoring dialogues using AI approaches. They talk about how AI algorithms may examine and categorize tutoring exchanges to learn more about how effective tutoring systems are and to offer tailored feedback. The study emphasizes how AI could automatically classify tutoring conversations based on their pedagogical characteristics and patterns. The authors also talk about the advantages and disadvantages of using AI to study tutoring relationships. The study advances the area by demonstrating how AI may be used to comprehend and enhance tutoring procedures in academic settings.

Liu, D.Y., Chang, C.K. and Liao, Y.K. (2016)[14] provide a "*Review of language learning using educational data mining and learning analytics*" in the Journal of Educational Technology & Society. The authors explore the application of educational data mining (EDM) and learning analytics (LA) in the context of language learning. They go over how data mining and analytics methods can be used to examine student performance, engagement, and behavior in language learning environments. The study explores how to assess learner proficiency, personalize language training, and give feedback using data-driven methods. The results imply that by determining individual needs, monitoring development, and modifying teaching tactics, EDM and LA can efficiently enhance language learning. To fully realize the potential of EDM and LA in language learning, the authors stress the significance of ethical considerations and the need for additional research. By shedding light on the benefits and drawbacks of employing data-driven methods to improve language learning experiences, this review adds to the body of literature.

Penas, M. and Verbert, K. (2014)[15] provide an "*Educational data mining and learning analytics: An overview*" in the book Educational Data Mining: Applications and Trends edited by M. Penas and K. Verbert. The authors provide a summary of the interdisciplinary topics of educational data mining (EDM) and learning analytics (LA), which seek to enhance teaching and learning procedures through data analysis. They go through important procedures and strategies employed in EDM and LA, including clustering, categorization, and visualizations. The study looks at how these approaches might be used in areas including student modeling, evaluation, and individualized instruction. The writers also discuss the value of interpretability and transparency in data-driven educational research, privacy issues, and ethical issues. By giving readers a thorough grasp of the subject, showing how EDM and LA are doing right now, and providing suggestions for future research and practice, this overview adds to the body of literature.

Artificial Intelligence in Educational Systems: in the context of Smart Education

Smart Society refers in terms of technology applications in societal development. Digitalization makes the society smart and it refers the digital society. Digital society also called smart society makes the life easier. People can stay connected from anywhere and communicate with each other in the digital society using Internet connectivity[18],[20]. ICT including computer system and Internet connectivity forms the society as a digital society. Cloud Computing, Big Data, Internet of Thing (IoT), Artificial Intelligence, Machine Learning, Block Chain, Augmented Reality, and Virtual Reality are the current technology trends. Therefore, all these advanced technologies enrich the digital society as smart society.

Nowadays, nature of the education system transformed into new form as *Smart Education* and among other technologies AI play a leading role (as depicted in Fig. 3, source ezeetest) Due to the technological involvement, mode of the education is changing into the physical, online, and blended modes. Advance Information Technologies applied in education to make education smart and intelligent. Smart education has impact on the students, teachers and scholars due to its benefits. Students learn or study from any remote location with aid of online education. Today, classrooms become smart due to the latest technologies and smart technological applications. Online examination also implemented in education system for transparency and conduct fast evaluation process[19],[28]. Teaching pedagogy methodology transformed rapidly due to the technological advent. Therefore, Smart education not only a technology based education it being intelligent and effective education. AI and ML technology involvement improve the quality of education.

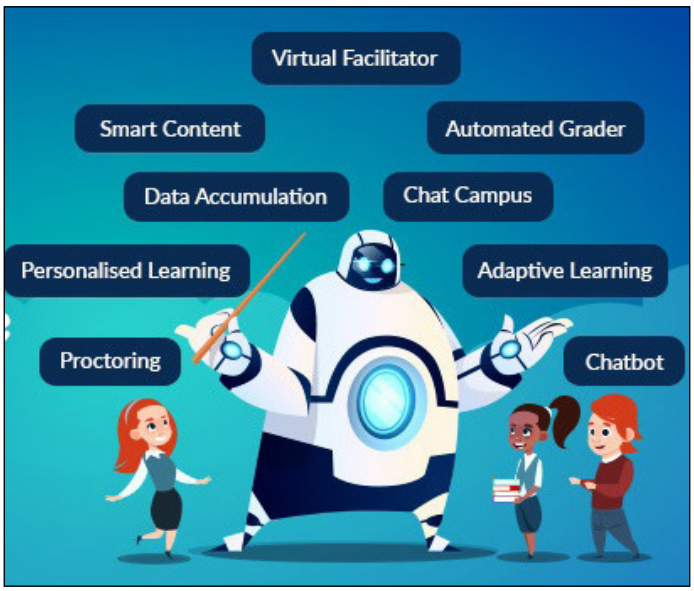

Fig. 3: Some of the emerging AI applications in Education and allied sector

Applications of AI and ML in Smart Education

In this smart edge, Artificial Intelligence and Machine Learning are in everywhere and both are connected with life. AI and ML are essential in social sector, healthcare, education, industry development, economical

sector, business or commercial sector and so on. Inclusion of AI and ML in every sector makes changes in the system and converts to the intelligent system. AI and ML include in smart education to develop smart society. AI and ML are implemented in areas of education. AI and ML used in education are categorize in following areas in this work.

Teaching and Learning

Smart classroom is the intelligent education system where teacher interact with students for teaching through AI based tools or application. Alexa, google home, types application utlize in class room teaching and learning. Artificial Intelligence techniques known as NLP applied to get solutions of questions in class room[12],[23],[24]. Game oriented learning is also implemented in teaching and learning using AI and ML.

Examination

Examination or evaluation process conducted using AI and ML based automated applications or tools. Online evaluation is the application in examination system. Online evaluation system implemented using AI and ML to provide online platform of examination where students appeared for the exams from home. Automatic invigilation implanted in online examination with the help AI. Therefore, examination system become smart due to the utilization of intelligent technologies.

Library

Smart Library implemented using AI and ML where students can access the books without physically searching the book in library. AI automated application helps to find out books from library book racks. Library system being smart or intelligent with the aid of AI and ML technologies.

Different types of AI software applications and tools are presents to make study and learning easier and effective. Following are some latest and emerging AI based learning tools in smart education.

- *TutorMe*- online AI based tutoring application that provide teaching and learning platform for the students. Students can get tutorial help from this application from any time and any place .
- *Querium*- AI based chatbot that provide facilities to the learner. Learner can get the answers for individual question from those chatbot applications automatically without help of any tutor.
- *Speechify*- AI application where students can learn from the books through voice without reading books. Pragraphs translated into voice data by AI based application.
- *Quillbot*- It is a automated learning tools developed using AI and ML. It helps researcher and learners use to modify the phrases in paragraph or sentences.
- *StepWise Math* -is the AI based application which provide online platform to learn mathematics without any teacher.
- *Smart Sparrow*- Smart learning platform in online apply AI based techniques to prepare course curriculum and driving evaluation process very smartly.
- *ChatGPT*- Most latest and emerging AI enable application as search engine but it provides the solutions of the problem. ChatGPT is the emerging and innovative AI application that very useful in education.

- *Grammarly*- Grammarly application is one of the latest AI tools that used to check grammatical error and correct errors to write sentences and paragraph in English or any other languages.
- *Online Plagiarism checking tools*- Online plagiarism tools or software applications used for plagiarism searching and correction. These tools or applications use AI and ML techniques to search plagiarism from the databases of online sources of contents[4],[25]. These tools applied in research and development purposes or any other educational purposes.

Challenges and Issues of AI in Education

The education system of the future may be completely transformed by the use of artificial intelligence (AI). AI based smart education system could provide many new dimensions of learning for the learners. Although there are many advantages and benefits of using artificial intelligence in the education system, there are many challenges to be faced in its implementation. It could be used in different parts of education system. The stakeholders could also face little difficulties in using AI based education system. The teachers and the learners are not familiar artificial intelligence based education. The teachers face lots of difficulties due to lack of *technical expertise*. The teacher face challenges to integrate the AI Technologies into their teaching practice[15],[26]. The teachers need proper *technical support* and *training* to overcome the challenges of using the AI based education system. The learners also feeling some challenges to use the artificial intelligence based system. The students could get *less chance of interaction* with the teachers directly. The campus based face to face mode learning has the potentially to understand the learners emotional attachment. Artificial intelligence based system will not able to detect the students' *emotional condition*. All the students are unique, therefore their attention span also different. It is very difficult to control the *attention span* for the all students and make them help to focus on the study. The first step of student socialization starts from the institution. The AI Based system will not able to provide the right way of socialization to the students. The AI based system may help the cognitive development of the student, the concept building of the student, easy understanding of the student, and so on, but the artificial intelligence base system would never be able to *all round development* of any learner.

One of the major challenges of incorporation of artificial intelligence in *classroom* is that the existing classrooms are traditionally designed classrooms. Even the smart classrooms have only restricted in projectors and interactive blackboard. Therefore to implement the artificial intelligence in existing classroom will be a major technical challenge. The existing ICT infrastructure will not be able to provide the high speed, IoTenabled, wireless Technology based Smart class rooms. Therefore it is very difficult to implement the AI based education system in traditional class room scenario.

Curriculum is one of the important parts of education system. Curriculum is the plan for the students about what they will learn and how they will learn anything. It refers to the lesson and academic content for the students. Thus it plays an important role in the students over all development. Artificial intelligence base system helps in development of the curriculum for the students. In designing of the curriculum, there is some real time situation occurs. At the time of designing the curriculum for the students, psychological condition has to be keeping in mind. It is very difficult for the artificial intelligence base system to consider the *psychological situation* of the students. A student could learn many new things from the institution apart from the curriculum and syllabus. Cultural development, psychological development and socialization are important part of the institution based education. Thus, it is very difficult to consider

different kind of social values among the students why the artificial intelligence base system. It is very challenging task for the AI system to design the hidden curriculum for the students.

Study material is one of the important parts of learning. The study material should be concise, point wise defined, clearly written, easy to understand, and so on. It should maintain the quality of learning. It is one of the challenging task for the artificial intelligence based education system to generate *customize learning material* according to the need of the student. The study material should consider the students cognitive perspective as well as psychological situations. Some students would like to get description type study material whereas the others would like to get point wise, short type study material. It is very difficult for the AI based system to satisfy the need of the all kind of students. It is also a challenging task of the AI system to maintain the *quality* of the study material. There is no parameter which could measure the quality of the study material. One study material may like by one learner which may not be like by another. There is no particular method to generate a study material which could like by everybody.

AI based education system is completely dependent on the Technology. It is one of the major challenges to reduce the *technological dependency*. Information technology (IT) and Information and Communication Technology (ICT) play a vital role in AI system. If there is any problem occurs in any part of the system, then the whole system may collapse. *Space maintenance* is one of the challenging tasks for the AI based system. The system will generate huge amount of data so its needs smart mechanism to manage the big data. The AI base education system application should also be smaller in size[27],[30]. If it sizes large then it would be very difficult to install in any computer or in any smartphone.

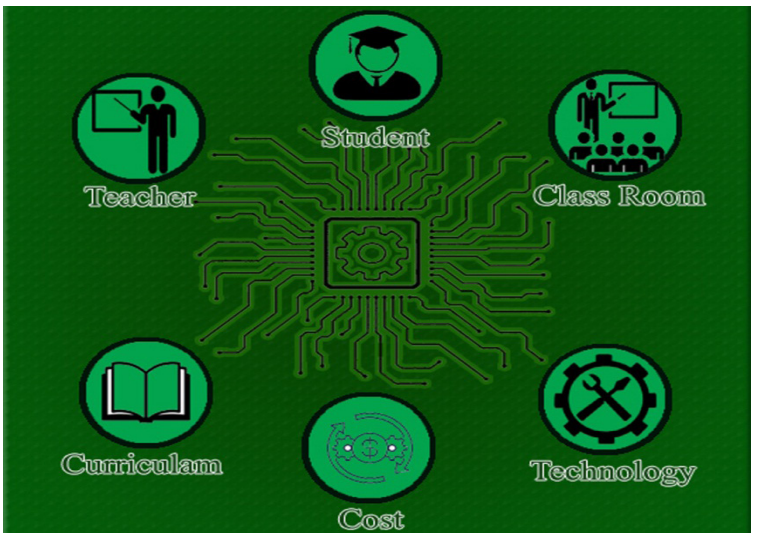

Fig. 4: Challenges and Issues of AI in Education

Cost effectiveness is another concern for the AI based education system. If the cost of the system is too high then the educational institutions would not like to purchase or may not show the interest to get the services. It is also challenging task to maintain the cost of the system. There is associated with different types of cost like hardware cost, various tools cost, server cost, application cost, resource person cost, maintenance cost and so on. *Data privacy* and *data security* is another threat for the system. As the system is completely network dependent and the data has been stored in remote place. Therefore it is very tough

to maintain the data privacy and data security. It also needed a reliable *AI service provider*. As the data stored in the service providers server, so it needs a reliable AI service provider. It is also challenging task to maintain the *ethical issues*. Data are very valuable; therefore it would be a very challenging task for the AI based education system to deal with the data properly. Fig. 4 shows the Challenges and Issues of AI in Education[30],[31].

CONCLUSION

Information Technology Sector is changing rapidly and different organizations and institutions are changing their business operation using various benefits of Information Technology. Education Sector is one of the important which is significantly changing its uses and operation. Traditional Education models now been changed and significantly moved towards integrated with ICT based Systems. Higher Education sectors are using various emerging technologies for the teaching and learning process. Advanced technologies specially AI, Deep Learning and Machine Learning including Robotics are effective in Educational Operation including teaching-learning process and development. Blended Learning, Intelligent Learning, Online Learning is the need of the hour, and today AI based systems gives more input in advancing such systems so that Education also could be more developed and socially intelligent and advanced. There are various lacuna and issues are important in developing and designing Educational Systems and therefore proper efforts and steps highly essential in order to avoid the issues and challenges.

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