Date: 31/07/2019

Certificate of Publication

This is to certify paper titled "**ARTIFICIAL INTELLIGENCE IN EDUCATION**" submitted by **Dr. Viral B. Jadav** has been published for Volume-7 Issue-2, April-2019 SPECIAL ISSUE online publication under ISSN 2320-7566.

Signed by:

[Dr. Hiralkumar M. Barot]
Editor in chief,
Indian e-Journal on Teacher Education
www.iejte.org

INDIAN E-JOURNAL ON TEACHER

EDUCATION (IEJTE)

SPECIAL ISSUE

for

A. G. Teachers College - CTE

Organized a

Conference

ON

LEARNING BEYOND THE CLASSROOM

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ARTIFICIAL INTELLIGENCE IN EDUCATION

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Artificial Intelligence has opened the door to infinite possibilities in the field of education. At present, the use of artificial intelligence in the classroom is very rare but in the near future, it will be widely used in the classrooms. Revolutionary changes will take place in the field of teaching and learning.

What is artificial intelligence?

Artificial intelligence means to make intelligent machines i.e. intelligent computers. Artificial intelligence is an area of computer science. AI computers act like human minds. John McCarthy, the father of AI coined this term in 1955. John McCarthy and his co-researchers designed a computer that could independently program themselves and they named it as artificial intelligence.

In the traditional method of computer programming data and algorithms are provided as input and computer generates results as output while in AI computers as input lots of data and results are provided and it generates algorithms based on it. Thus a computer learns to prepare new algorithms and patterns. With the help of such algorithms and patterns computer can classify data, can interpret the data, do predictions and make decisions.

Humans can recognize, interpret, can solve the problems, and with inductive thinking can generalise and decide. Same functions can be done by such computers so they are known as intelligent machines.

In present are AI is widely used and many of us are not aware of its uses. Apple's Siri, Google assistant, Self-driving car, Facebook friends' suggestions, Face recognition, Age suggestions in a camera, Speech recognition, Spam filters etc. are examples of AI technology.

The use of Ai in the medical field in recent times has proven to be very revolutionary, and the presumption of the disease has proved to be accurate in the

diagnosis of the disease. Apart from this, it is also useful in industries like robotics, military and education. Soon it will be useful in every field of life.

Use of AI in Education:

Use of AI in education is a multidisciplinary field. AI is related to different branches of knowledge like Computer science, education, game designing and psychology.

AI will be useful for tutoring, personalised education, grading, evaluating curriculum, giving feedback to student's responses, creating smart content, creating digital books and reference books etc.

Tutoring and personalised education: Intelligent computer-assisted instruction (ICAI) can provide the best tutoring service to students. With such smart programme, it is possible to identify each student's personal needs and week areas. ICAI presents different problems to the students and evaluates how student solve these problems. Based on this analysis ICAI identifies the week areas of student's understanding and provide him/her tutorial as per requirement. Often unconscious thoughts, attitudes, prejudices etc. in teacher's mind may affect the teaching learning process whereas AI can fairly take decisions and use proper technique to teach without any bias.AI based CAI can decide what to teach next, it can diagnose student's mistakes and misconceptions, it can modify its teaching strategy and learn new ones.

Smart Content and Digital Books and Reference Books: With the help of Virtual reality and augmented reality digital books and reference books with smart content can be prepared. This includes audio, video, animation and virtual reality. With such smart content, learning becomes fun. Meaningful learning, joyful learning, deep understanding and better memory can be developed.

AI for children with special needs: AI is a boon for students with disabilities. For example, blind student can see, recognise and take decisions regarding the things or person in front of him/her with SEEING AI technology. Microsoft has developed such a tool to provide vision to the blind people. Special gadgets are developed with AI technology for deaf and dumb with which they can listen and give voice commands.

Grading and Evaluation: Evaluation of student's feedback, Evaluation of the textbook and evaluation of curriculum can be done with the help of AI technology. Immediate feedback to students' response can be generated. Grading of students is done by AI technology, so teachers can quit grading and can spend more time on students. Automated grading for objective type questions are possible now and grading of essay type questions are still in its infancy.

Sometimes teachers are not aware of the gaps in their teaching lectures and even the reading material can leave students confused about certain concepts.AI have the solution to such problem. Coursera, a massive open online course provider, is already putting this into practice. When a large number of students are found to submit the wrong answer to a homework assignment, the system alerts the teacher and gives future students a customized message that offers hints to the correct answer.

Mika, Brainly, Thinkster math, Netex learning are examples of use of AI in the classroom. Carnegie Learning's Mika offers AI based tutorial tools. Thinkster Math is an AI based tutoring app which provides personalised instructions to teach mathematics. It also provides real-time feedback. Brainly is a social media website for the solution of classroom questions. It uses Machine learning algorithms to filter out spam, it allows users to ask questions and automatic verified answers are provided back to them from fellow students. Netex learning is a website which provides digital platforms and devices to teachers to design curriculum, prepare customised student materials and prepare personalised assignments. It also provides audio, video and self-assessment tools for their digital lesson plans.

Limitations of Artificial Intelligence:

There are many benefits of AI, but there are some limitations too. For example lack of human emotions. AI can't create the emotional environment in the classroom which a teacher can do.AI technology is expensive. It requires a high speed internet connection. While using AI there are possibilities of data theft by third party websites. So that student's personal data is no secure. AI is not useful for students who are less self-disciplined. AI demands education professionals who can design and create such AI based personalised learning programmes.

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