



DATE & DAY	: 24th,25th and 26th JUNE, 2021 (THURSDAY,FRIDAY & SATURDY)
TIME	: 3.00PM TO 5.00PM
ORGANISED BY	: CBSE WORKSHOP
THEME	: AI INTEGRATED MULTI-DISCIPLINARY PEDOGOGIES
RESOURCE PERSON	: MS.SAVITA MA'AM,MS.SAPNA BISHT,MS.SHILPA SHETI ,MR.SHIVAM AGRAWAL(EDUCATIONIST)
ATTENDED BY	: ANIL KUMAR TIWARI

Webinar report on topic” **AI INTEGRATED MULTI-DISCIPLINARY PEDOGOGIES**” organised by **CBSE** by resource person **MS. SAVITA MA'AM, MS. SAPNA BISHT, MS. SHILPA SHETI , MR.SHIVAM AGRAWAL(EDUCATIONIST)** in three days periods of durations 2 hours each.

Agenda of Workshop-

Day-1

- workshop overview
- understanding artificial intelligence
- introduction to artificial intelligence integration across curriculum

Day-2

- Getting familiar with artificial intelligence project framework and artificial intelligence activities and games.

Day-3

- visiting artificial intelligence integrated lesson plans
- summing up and conclusion

AI in EDUCATION?

An effective education system has the dual responsibility to develop the most critical resource (i e the human resource) of a nation.

- that the younger generations must be educated in a way that they are ‘ready for life’ and are positive contributors to the advancement & enrichment of their nation.
- they must be exposed to such learning environments with the help of updated tools and enlightened teachers so that their learning outcomes can be maximized

Integration of artificial intelligence across education-

- Artificial intelligence is a cognitive science and the history of its evolution suggests that it has grown out of the knowledge derived from disciplines such as Science Mathematics, philosophy, sociology, computing and others.

- All cognitive domains of education relate very closely to the concept of AI, it offers ample opportunities for student engagement that cannot be found in lecturing out of the textbooks within the fixed the four walls setting of the classroom.
- Integration of AI with other school disciplines where two different approaches are possible:
- AI as a tool to learn Mathematics, English, science or social science.

AI Integrated lesson plan in class-

- involvement and willingness to learn
- curiosity and excitement towards a new learning approach
- extremely focused on the aim
- sense of achievement on providing feedback

AI integration in Education promote 'Effective Pedagogy' in the classroom?

Since all cognitive domains of education relate very closely to the concept of AI, it offers ample opportunities for student engagement that cannot be found in lecturing out of the textbooks within the fixed four walls setting of the classroom.

ARTIFICIAL INTELLIGENCE CONCEPTS PERVADE MAINSTREAM DISCIPLINES

Artificial Intelligence cannot be divorced from other disciplines; its evolution and development is mutually interlinked as shown in the table given below. Hence both the fields need to be linked for mutual benefit. As educators, it is the right step to consider integration of AI with the other school disciplines where two different approaches are possible.

Artificial Intelligence related Terminologies

- Algorithm. An algorithm is a formula representing the relationship between certain variables
- Chatbots (or "bots")
- Cluster
- Cognitive science
- Machine learning and Deep Learning
- Image recognition (or "computer vision")
- Natural Language Processing (NLP)

ARTIFICIAL INTELLIGENCE TOOLS REQUIRED TO EXPLAIN VARIOUS ACTIVITIES IN TEACHING -LEARNING PROCESS PROVIDED ALONG WITH LINKS-

S, No.	AI Tool	Explanation	<u>Link</u>
1	Autodraw	Autodraw is an AI enabled tool which is based on the domain of Computer Vision in which the machine identifies the pattern of your drawing and accordingly maps it with the most similar image..	https://autodraw.com

2	Quickdraw	Quickdraw is a google experiment, an AI tool based on neural network in which the machine learns to recognize doodles/objects from the user's drawings. By playing this game, you will be adding your drawings to the world's largest doodling data set	https://quickdraw.withgoogle.com/
3	Rock, Paper & Scissors	In this game, an artificially intelligent system learns to identify patterns of a person's behaviour by analyzing their decision strategies in order to predict future behaviour.	https://www.afiniti.com/corporate/rockpaper-scissors

6	Data Exploration	After acquiring data comes the need to analyze the data. For this, they need to visualize the acquired data in some user-friendly format so that they can: <ul style="list-style-type: none"> . 	https://datavizcatalogue.com
7	Inkle Writer	Inkle writer is a free tool designed to allow anyone to write and publish interactive stories. It's perfect for writers who want to try out interactivity, but also for teachers and students looking to mix computer skills and creative writing.	www.inklewriter.com
8	Kuki Chatbot	Mitsuku, or Kuki the world's best conversational chat bot It can be used to chat on any topic and see the visualized form of the subject.	https://www.pandorabots.com/mitsuku/
9	GoArt AI Photo Effects	It uses an algorithm inspired by the human brain. It uses the stylistic elements of one image to draw the content of another.	https://goart.fotor.com/

10	Mystery Animal	An AI experiment developed by Google based on the AI domain " NLP " In this game, the computer pretends to be an animal and the player needs to guess the animal by asking 20 yes/no questions.	https://mysteryanimal.withgoogle.com/
12	Ethics in AI	Artificial intelligence is a field that is boundless in today's time. There are a lot of scenarios that tell us that ethical issues exist around AI. Hence, it is important to have an understanding of ethics in AI .	https://www.moralmachine.net/
15	AI Modelling	Data is the fuel of artificial intelligence. A machine is said to be artificially intelligent if it gets trained and can make decisions/ predictions on its own and learns from its own experience and mistakes. In the modelling stage, data is split to training set and testing set.	https://teachablemachine.withgoogle.com/

16	Classification	<i>Classification is a part of supervised learning model. Classification models work on labelled dataset and are used to predict the label/class of the testing dataset which is unknown to the machine.</i>	https://teachablemachine.withgoogle.com/
17	Possibilities in AI	To understand the possibilities that AI has to offer to us, an activity to research about various companies or organizations who are working towards incorporating AI into their respective fields.	Research Template
19	My Story Time:	My Story time is a new Google Experiment web application which allows users to record stories to play back on Google assistant devices. Record stories from anywhere and play them back at home with Google assistant	https://experiments.withgoogle.com/mystorytime
20	Google Lens	Google Lens is an image recognition technology developed by Google, designed to bring up relevant information related to objects it identifies using visual analysis based on a neural network.	https://lens.google.com/
21	Emoji Scavenger Hunt	Emoji Scavenger Hunt is a browser-based game built with machine learning that uses your phone's camera and a neural network to try and guess what it's seeing. ... js, the game is built to run efficiently on your phone's web browser without needing to access backend servers.	https://emojiscavengerhunt.withgoogle.com/

22	Akinator	Akinator is a computer game and mobile app. During gameplay, it attempts to determine what fictional or real-life "character" the player is thinking of by asking a series of questions. It uses an artificial intelligence program that learns the best questions to ask through its experience with players.	https://en.akinator.com/
23	Google Earth	Google Earth , formerly Keyhole Earth, is a computer program that renders a 3D representation of Earth based primarily on satellite imagery	https://www.google.com/earth/
24	Photo Creator	Photo Creator is AI enabled tool that lets creators make custom photos for their specific stories instead of searching for the ready-made images that suit their goals more or less.	https://photos.icons8.com/creator

26	Loopy	Loopy is an opensource tool to understand the concept of system maps. A system map shows the components and boundaries of a system and the components of the environment at a specific point in time.	http://ncase.me/loopy/
29	Infinite Drum Machine	Infinite Drum Machine is an AI experiment developed by Google to understand how unsupervised learning works. In this experiment, thousands of known sounds are fed to the machine	https://experiments.withgoogle.com/ai/drum-machine/view/

30	Quillionz	For assessing and improving the efficiency of question generation (except HOTS), this software can be used to generate questions efficiently.	https://www.quillionz.com/
31	swiggy.com	Swiggy is India's largest and most valuable online food ordering and delivery platform. Once you enter your preferences,	https://www.swiggy.com/
32	VOKI	Voki is an AI based educational tool for teachers and students, that can be used to enhance instruction, engagement, and lesson comprehension.	https://www.voki.com/
33	AI Dungeon	The learner should enter the link, start a new game, as a single player, with custom settings. They may not begin conversing with the AI.	https://play.aidungeon.io/
34	Virtual Mirror	Virtual mirror/Virtual trial room: Globally, the fashion industry is a huge industry so it's no surprise that AI technologies are being used across a wide range of applications from helping design clothes, optimizing manufacturing, and hyper personalized marketing.	https://www.veromoda.in/upto-50vm?gclid=CjwKCAjwk dL6BRAREiwAkiczPCPI0wlaRgEZEsk1Wvl4r6jq6vPVCu KEf0PI1GNOB7ruNT Ur0e5KhoCcXEQAvD_BwE
35	AI Thing Translator	This experiment lets you take a picture of something to hear how to say it in a different language.	https://thingtranslator.appspot.com/
37	Quizlet	It can be used to display hints about a pet animal and the children have to guess it and then the correct option may be viewed by them to check.	https://quizlet.com/en-gb/features/live
38	Poem Portraits	POEMPORTRAITS is an experimental, collective artwork, woven at the intersection of AI and human creativity - combining poetry, design and machine learning - conceived by artist and designer	https://artsexperiments.withgoogle.com/poemportraits

39	Imaginary Soundscape	“Imaginary Soundscape” is a web-based sound installation, focusing on this unconscious behavior, where viewers can freely walk around Google Street View and immerse themselves into imaginary soundscapes generated with deep learning models.	http://www.imaginarysoundscape.net/
40	Scribbling Speech	Language and images are closely intertwined:	https://experiments.withgoogle.com/scribbling-speech

Take home activity also provided.

The given activity assigned to teachers-

- go to through 2 to 3 lesson plans of the class that you teach.
- go to the AI tools given in the ready reference using the link shared in the chat session and then asked for submission.

Really, it was totally knowledgeable session which has given the Knowledge of application of AI in education specially in science.

Report presented by

ANIL KUMAR TIWARI