DIGITAL LITERACY AND CRITICAL AI USE

Mrs. Minal Satish Bhoyar
Librarian
D. D. Bhoyar College of Arts and
Science, Mouda , Dist :- Nagpur(MS)

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Abstract :

This thorough analysis looks at how important and changing digital literacy is in the age of artificial intelligence (AI). It examines how the widespread use of AI technology in a variety of industries calls for a fundamental redefining of digital literacy that goes beyond simple technical competence to include a wide range of skills. In order to determine the essential components of digital literacy in the AI era, the paper synthesizes existing literature. These components include critical comprehension and assessment of AI-generated content, awareness of AI's societal and ethical implications, practical application of AI tools, ethical behavior regarding data privacy and algorithmic fairness, and adaptability to ongoing technological advancements. With the potential to revolutionize traditional teaching and learning methods, artificial intelligence (AI) brings new tools to the classroom. This paper provides a thorough overview of AI technologies, their prospective uses in education, and the challenges associated with them. Modern chatbots like ChatGPT have many benefits. In addition to encouraging appropriate and ethical use, the authors hope to offer valuable information on how AI might be successfully integrated into the educational context to benefit instructors and students.

Keywords : Artificial Intelligence, Digital Literacy, AIEd, ChatGPT, Duolingo.

Introduction :

The capacity to locate, assess, and convey information using digital devices or digital media platforms, as well as to navigate, assess, produce, and transmit information in digital settings, is known as digital literacy. Combining technical and cognitive skills, digital literacy encompasses the creation, assessment, and dissemination of information utilizing information and communication technologies as well as the critical analysis of its social and political implications with the development of the internet and the usage of social media, digital literacy has switched part of its emphasis from digital skills and standalone PCs to mobile devices. While it differs from other types of literacy, digital literacy is connected to them. The capacity to find, assess, and use information in a variety of media is the main emphasis of information literacy. The capacity to evaluate and comprehend media messages and their impact is referred to as media literacy. Digital literacy, on the other hand, combines these skills with the ability to create digital material, participate in online settings, and utilize digital technologies practically. This wider reach emphasizes how digital places are

interactive and participatory. Digital literacy relates to the digital platforms and how information and messages are interpreted and communicated, while media literacy and information literacy can also be important. Digital literacy and AI literacy are essential for autonomous learning outside of the workplace, and studies have indicated that they have a significant impact on students' ability to study on their own. These sub-factors of critical perception, comprehension of the societal effect of AI, technology usage, and ethical behavior allow college students to define digital literacy in the context of the AI era. In the era of artificial intelligence, the concept of digital literacy is constantly changing and encompasses not only technical application but also the development of critical thinking skills and the ability to stay up to date with the always changing dynamics of AI technologies.

Artificial Intelligence (AI) :

Artificial intelligence (AI) has become a commonplace aspect of daily life. A wide range of examples show how AI has influenced many facets of human life, such as using the Internet to access information, consuming news and entertainment, identifying people through surveillance systems, financial market performance, citizens receiving welfare payments, and how pedestrians and drivers navigate .The possibilities that were previously merely theoretical might soon become real as AI develops. It has the power to completely transform a number of facets of society, including business, healthcare, and education. Even while AI can distinguish between an image of a car and one of a rainbow, it lacks an innate comprehension of the ideas of cars and rainbows. Algorithms and programs with large data as its essential foundation make up the operational core of artificial intelligence. As a result, artificial intelligence (AI) is also defined as a branch of computer science that focuses on examining the fundamental characteristics of intelligence by employing a series of algorithmic processes to produce intelligent artifacts that mimic human intelligence. Nevertheless, AI has developed into a cutting-edge multidisciplinary and interdisciplinary science that incorporates a variety of knowledge and technologies, including computer science, statistics, information theory, and mathematics.

Interactive AI Tools :

Chatbots, virtual assistants, and intelligent tutoring systems are examples of interactive AI technologies that are being utilized more and more in educational settings. By providing real-time feedback that includes answers, suggestions, and explanations, artificial intelligence is utilized to initiate dynamic, customized interactions with pupils. According to recent research, integrating collaborative dialog in computer-mediated conferencing with artificial intelligence-driven interventions improves group performance and collaborative knowledge creation in educational settings. argue that a teaching system powered by AI can offer tailored advice to pique students' interest in studying.

Digital Literacy And AI :

Literacy used to refer to the capacity to read and write on paper. As technology developed, this term was broadened to encompass digital literacies, which include abilities

such as accessing the internet, assessing digital content, and comprehending multimedia. Now that AI has emerged, literacy is changing once again. AI technologies are more than simply tools; they demand that people interact with data in novel ways.

1. Effective AI use : Use AI tools to solve issues and communicate concepts, enhancing timely dialog.
Determine and evaluate AI: Acknowledge its function in digital tools, comprehend how it affects information, and confirm the veracity of content produced by AI.
2. Use AI ethically : Recognize the ethical issues surrounding AI, such as its influence on society privacy and biases. Critically analyzing AI-generated material, dealing with AI-driven technologies, and comprehending AI algorithms are becoming crucial literacy skills. To properly teach and evaluate these emerging literacies, educational systems must change.

Use of AI tools and AI assisted learning process :

Humanity is moving from an information-based civilization to an AI-powered intelligent society. Artificial intelligence (AI) is now at the forefront of human research into machine intelligence due to the rapid advancements in computer and information technologies in recent years. John McCarthy coined the phrase "Artificial Intelligence" in 1955, which sparked discussions on the subject. Over the next fifty years, advances in computing technology have made it possible to create reliable computer-assisted learning systems. The emergence of Computer-Assisted Learning (CAL), which uses technology to personalize learning experiences, was a huge shift for education institutions. Following the Covid-19 epidemic, artificial intelligence (AI) technologies actually took over CAL systems, redefining the learning process with deep learning tools like ChatGPT, Bard, Duolingo, EdX, audio-video-text creating and editing tools, etc. Deep learning approaches with advances in computing techniques are often used to describe artificial intelligence, and their results have the potential to closely resemble human-like skills. AI integrates developments in quantum computing, machine learning, and neural networks for deep learning. AI-assisted learning uses artificial intelligence to transform the field of education.

Potential Benefits of AIEd :

Through specific technologies like Smart Sparrow that encourage student interaction with instructional information, it enhances their enthusiasm in studying and creates engaging learning environments. AI technologies have also been shown in several studies to significantly boost academic achievement. It maximizes students' learning potential and accomplishment while greatly improving learning outcomes and student satisfaction. Promoting and improving individualized learning experiences may be one factor contributing to this high level of motivation and accomplishment. Students are given customized assignments in AI-enabled settings, and their work and learning process are analyzed to provide them with immediate, tailored feedback. For instance, learners may receive customized feedback on their written assignments from Grammarly, Insta Text, and Quill Bot, and on coding challenges from Codec ademy. Additionally, it helps students make important judgments about their numerous academic programs or activities by offering

guidance on academic matters. The use of AI technology also equips students with 21st-century abilities, such as creativity and critical thinking, making it easier to evaluate and analyze complicated skills and encouraging deep thought.

Ethical Issues :

While using AI technology is strongly advised, it is important to take into account their limits. It doesn't appear to be enough to evaluate a chatbot just on the basis of its usefulness, efficacy, and capacity to satisfy and engage users. First of all, it brings up moral questions about possible misuse and dishonesty. Instead of speaking with chatbots, users can erroneously think they are speaking with actual people. The European Consumer Organization's (BEUC) Deputy Director General raised grave worries about ChatGPT's potential to "manipulate and deceive people. The development and programming of chatbots presents another significant challenge. Computational linguistics and natural language processing (NLP) systems also bring up some of the most important possible problems, including dialog system failure, the effect of social chatbots on interpersonal communication, and system performance issues. The input data determines how accurately a chatbot can offer information. Users want the chatbot system to provide accurate answers to their questions, but this is only possible if the input data is correct.

Concusion :

Using AI in education has a number of benefits as well as some challenges. By creating new opportunities for tailored instruction, feedback, and support, AI may enhance learning outcomes, productivity, and student engagement. However, the practical and ethical concerns surrounding the use of AI in education cannot be ignored. The potential for prejudice in AI algorithms and the need for adequate teacher preparation and support are significant issues that need to be resolved. In particular, the use of chatbots and ChatGPT demonstrates the potential for personalized learning, language training, and feedback applications in education. The comprehension and practical implementation of AI-integrated learning and teaching environments have advanced significantly

In recent literature. These settings make it possible to use AIEd technologies as partners, trainers, facilitators, or tools in a variety of contexts and roles. However, these scenarios have grown more extensive, raising the question of how much ChatGPT can transform education and calling for

Greater research Ultimately, to guaranty the moral and appropriate application of AI in education, educators, researchers, and legislators must work together. By resolving the issues raised by AI technologies and leveraging their benefits, we can create a more equitable and effective educational system that provides children with the tailored instruction, feedback, and support they require.

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