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The Effects of AI on Students & Teachers and Value to Classrooms and School Libraries

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ABSTRACT

Artificial Intelligence has gradually become more essential aspect of our daily lives, and it does, have the potential to transform the way we work, exchange ideas, and gain knowledge. Based on this, the paper seeks to examine its effects in education, as well as the challenges both teachers and students face while using the AI. Media Ecology theory was used to guide the study. Findings from the study revealed that AI has provided students with a more personalized and engaging learning experience in education, and also facilitate instructors to meet the students need. The paper however concludes that the incorporation of Artificial Intelligence into the classroom has the ability to revolutionize the way students gain knowledge and how educators train. And thus, recommends that; libraries should work intimately with artificial intelligence developers to guarantee that the statistics used for training algorithms is assorted and diplomatic to all library consumers.

Keywords: Artificial Intelligence, students, teachers, libraries, Library users. Classrooms

1.0 INTRODUCTION

Artificial Intelligence (AI) has made waves in diverse ways including industries and the educational sector (Linder, 2020, p.98). It has provided students with modified knowledge and teachers with influential tools to follow student improvement and become accustomed to their teaching methods (For example, AI-based learning platforms, like Chat GPT, have gained popularity due to their capacity to engage students in a conversational style, similar to that of a individual tutor).

One other latest trend we have seen is where technology has made many people wary of the results that the use of Artificial Intelligence in the classroom will be of great benefits (Chen and Liang, 2020).

Thus, AI been one of the most promising technologies will help libraries to computerize processes, provide individual services, and also improve the user knowledge, and at the same time provide the students with additional well-organized and successful ways of learning. (Panda and Chakravarty, 2021). This is very true of AI hence its application in learning is concerned with the potential unenthusiastic impact it might have on learners. A number of authorities have argued that AI-based learning platforms may perhaps hinder serious thoughts dexterity and decrease individual interface, which is an important part of education (Partridge and Piccoli, 2018). This negates to the research "***effects of AI in education***".

It should be noted however that incorporating Artificial Intelligence in education would permit instructors to hand off every assignment to Artificial Intelligent for grading so the teachers can spend more time with students individually and modify the curriculum to be more relevant for every group of students (Wu and Liang, 2019, p.146). A number of students just require a little small piece of assistance in certain Subjects. Therefore, operating with an AI instructor might aid students with either social or academic anxiety gain self-confidence needed to for academic pursuit. Thus, the advancement in digital technology would increase students' aptitude to become completely absorbed in a tutorial.

1.2 STATEMENT OF PROBLEM

Nowadays, libraries have become a storehouse of knowledge globally; where a lot of people from all walk of life especially students who usually come to study in other grow in knowledge. Today, education has gone beyond merely lodging books as well as offering calm learning sitting rooms. Libraries are tied to technology and are now at the front position of empowering consumer via evenhanded utilization of artificial intelligence. AI has made the life of instructors easier, by providing additional enlightening support. In as much AI tries to improve the standard of learning there are also some draw backs. However, pertinent question is; how realistic is it to say that AI has the potentials of influencing learning? This therefore means that, the broad objective of this research shall be to examine the effects of artificial intelligence (**AI**) on students and teachers and its value to classrooms and school libraries.

1.3 OBJECTIVE OF THE STUDY

1. To examine the extent to which Artificial Intelligence has gone to improve academic performance of students and teachers.
2. To identify the relevant of incorporating Artificial Intelligence into school libraries.
3. To explore the possible ways of connecting the students to AI in school.
4. To identify the Challenges of Incorporating AI into the Classroom.

1.4 SIGNIFICANCE OF THE STUDY

This study is significant in many ways:

First, the study will add to the increasing body of knowledge and a veritable source of document from which future researcher in the relevant field could draw background information (Wang and Daniel, 2022).

Secondary, various areas by which artificial intelligence (AI) have improved the academic performance on both students as well as teachers will be identified.
Finally, students of library and information technology will find this material useful when carrying out research of this nature.

1.5 DEFINITION OF KEY TERMS

Artificial Intelligence:
This is the imitation of human intelligence progression by means of machines, like computer systems with definite applications of professional system, normal language processing, and dialogue recognition as well as machine visualization. In this study therefore, AI is refers to a set of know-how which allow computers to perform a diverse functions, including that of having the ability to see, know and interpret spoken and verbal communication, evaluate data as well as make suggestions.

Student(s):
In this study student refers to any person who is studying at a university or other place of higher learning

Teachers:
In this study a teacher is a person who teaches or instructs, or helps students to acquire knowledge, competence or virtue, via the practice of teaching.

Library (ies)
A library refers to a structure or a space containing collections of books, publications, films and recorded music for academic purposes or research works by the public or members of an institution. In this study therefore, it refers to a place set apart to contain books, periodicals and other materials for comprehension.

Library users:
In this study, library users are people like researchers, academic staff, students as well as support services staff who make use the services offered by the library

Classrooms:
This refers to space within a structure where learning takes place. In this study therefore, classroom refers to an apartment that serves as venue for the process of teaching and learning within the school premises.

2.1 REVIEW OF RELATED WORKS

Many scholars wrote on effects of AI in education. However, the study adopts few to arrive at findings, for instance, Chen and Liang (2020) argue that "with the integration of Artificial Intelligence, libraries can collect and analyze vast amounts of data to customize services and improve user experiences; hence, "Libraries are entrusted with protecting the privacy of their users and making sure that their personal information remains confidential and protected because the integration of artificial intelligence allows libraries to collect and analyze vast amounts of data to customize services and improve user experiences." He believes that this data-driven strategy poses questions regarding the handling and storage of personal data. The report made several recommendations for resolving these issues, one of which was to give strong data security measures top priority. The danger of data breaches can be reduced by putting encryption techniques, safe storage systems, and frequent audits into place. Examining it from the perspective of targeted instruction is another way to see what it can accomplish.

We prefer to employ the well-known slogan "artificial intelligence" (AI) whenever the situation calls for it. One application of AI is personalizing learning, which aims to adapt instruction to each student's unique needs (Partridge and Piccoli, 2018, P.175). By altering things like the pace at which they learn, the resources they use, the order in which they use them, the technologies they use, the quality of the resources, the way they are taught, and the learning materials they use, personalizing learning also enables each person to meet the goals that have been set. However, without it, significant customization might not be feasible.

Learners can get instruction at their own pace and at the time that works best for them when AI is used for personalized education. You may create content that matches each learner's objectives and prior achievements by using AI technology to forecast how people will acquire knowledge. Every student's education is becoming more individualized thanks in large part to artificial intelligence. Teachers can customize learning experiences to fit each student's unique requirements, interests, and method of learning by utilizing AI technologies.

The advantages of integrating AI into the educational system

Introducing Artificial Intelligence into the classroom offers the advantage of delivering personalized knowledge to students. By analyzing student data, AI algorithms can adjust to their individual learning styles, offering customized feedback and suggestions based on their specific needs and capabilities. This approach can effectively maintain student engagement and motivation, ultimately resulting in enhanced educational performance (Ferrell, 2021).

Incorporating AI into the classroom offers the additional benefit of enhancing students' comprehension of this fast-changing technology. Teachers can assist students in gaining a critical viewpoint on AI and equipping them for the advancements and possibilities of the digital era by including AI in the curriculum

The customization of learning through Artificial Intelligence involves adapting teaching methods to meet individual student needs, providing immediate feedback, and offering guidance. Chat bots like Chat GPT have the capability to engage students, answer their queries, and maintain their motivation. Additionally, AI has the ability to gather and evaluate data on student performance, enabling educators to make informed decisions about teaching methods and curriculum enhancements. Lastly, integrating AI into the classroom can help students develop crucial 21st-century skills, such as problem-solving, critical thinking, and teamwork. These skills are essential for success in the digital age and can be honed through hands-on experience with AI tools and applications. However, it's important to note that while AI can greatly contribute to the classroom, it can never replace individual teachers.

2.2 How Artificial Intelligence sustain Teaching

1) Through various platforms, AI has modernized learning, allowing teachers to connect with a larger number of students and enabling learning materials to make a more lasting impact on learners (Partridge and Piccoli, 2018).
2) Effective integration of AI in the classroom has the potential to ease and support the essential profession of teaching.
3) AI assists, complements, and reduces the stress on teachers. This implies that an advanced AI-enhanced learning platform (MLP) can streamline teachers' workflow by generating sequenced lesson plans, syllabi, reading lists, and rubrics in response to instructions, thereby relieving teachers of repetitive and time-consuming tasks.

4) The prevalence of technology in classrooms, equipped with computers, may have led administrators to view educational technology as a drain on resources. However, when teachers leverage AI, they find themselves more effective, with additional time to dedicate to higher-value tasks.
5) AI, along with data and analytics, can assess each individual's learning progress, adjust the pace of evaluative activities based on their performance, and recommend suitable next-step assignments.
6) AI sustains personalized learning experiences in a way that was previously unattainable. Unlike human teachers, who may have limited time and resources, ChatGPT can engage with learners individually, providing them with a customized learning experience tailored to their needs and interests.
7) AI can provide immediate feedback, which is crucial for effective learning. ChatGPT can swiftly identify areas where learners are struggling and offer them additional support to overcome these challenges. This immediate feedback can help learners stay motivated and engaged in their learning journey.
8) AI can also grant learners access to vast amounts of information that they may not have had access to otherwise. This can assist learners in expanding their knowledge base and discovering new information that may be beneficial in their academic or professional pursuits.
9) AI helps alleviate the workload of teachers or educators, freeing up their time to focus on other important tasks such as lesson planning, grading, and providing additional support to learners who may require more personalized attention.
10) Ultimately, the use of Artificial Intelligence has improved student-teacher relationships.

Therefore, the integration of Artificial Intelligence, also known as 'AI,' in education has enhanced learning outcomes and supported student achievement.

The Difficulties of Using AI in Education

Even though integrating AI into the classroom has many advantages, it's important to remember that there are drawbacks as well. These include bias and restrictions on individualized learning, among other things**:**

I. The difficulty of incorporating this technology into instruction. The requirement for technical expertise is one of the main obstacles because it may be difficult for educators who are not knowledgeable with AI to apply it.
II. The high price of AI tools and apps is another difficulty. Many colleges and universities lack the funding to buy and maintain the equipment needed to integrate AI into the classroom; as a result, they might have to look outside the institution for partnerships or outside funding.
III. This amazing technology has the potential to completely transform education, but there are still issues that need to be resolved. Among the difficulties are teacher fear of losing their jobs, bias in AI models, a lack of personalization, and the possibility of errors.
IV. Errors in AI responses or recommendations may affect the results of learning. Concerns have also been raised regarding AI replacing specific teachers. To guarantee that AI in knowledge acquisition improves outcomes and helps learners, it is imperative to address these issues. In order to minimize biases, enhance personalization, lower error rates, and make sure that AI enhances human teachers rather than replaces them, careful thought and ethical application of AI are required.
V. The possibility of lower motivation and engagement among students when interacting with a machine rather than a human is another drawback. One may feel alone or cut off from the learning process if there is no real-time response or interaction.
VI. Lastly, integrating AI into the classroom raises ethical questions as well. Concerns concerning AI's effects on employment, security, and privacy are growing as technology advances. As students experiment with this fascinating and quickly developing technology, teachers need to be aware of these worries and take steps to protect them (Partridge and Piccoli, 2018).

What are the strategies for addressing the difficulties of integrating AI into the educational setting?

Incorporating AI into the classroom can assist teachers in integrating technology into teaching methods more effectively, while also offering students a more personalized and interactive learning experience. Here are some important best practices to keep in mind:

1. Forming a partnership with a trustworthy AI provider is essential for the successful integration of AI into the classroom. This could involve collaborating with a technology company, a local university, or a non-profit organization that specializes in AI education. The appropriate partner can offer assistance, training, and advice to help teachers effectively integrate AI into their teaching methods.
2. Instead of attempting to incorporate AI throughout the entire curriculum, it is advisable for teachers to begin with small steps and gradually progress. This approach allows teachers to gain familiarity with the technology, build confidence, and refine their teaching techniques over time. For instance, teachers could start by integrating AI-powered educational games into their lessons or utilizing AI algorithms to provide personalized feedback to students on their assignments.
3. The integration of AI into the classroom presents an opportunity for students to cultivate a critical perspective on this technology and its impact on society. Teachers should empower students to think critically about the ethical implications of AI and consider the potential consequences of its widespread usage. This can help students become responsible and well-informed digital citizens who are equipped to navigate the challenges and opportunities of the digital age

Merits of AI in Libraries

ANO AI in libraries offers the advantage of optimizing and enhancing the retrieval of information (Linder, 2020). With a plethora of digital resources available, AI algorithms can effectively sort through this abundance of information to present users with personalized and relevant results. This not only saves time but also improves the user experience by enabling quick and efficient access to needed information.

Artificial intelligence's ability to analyze large datasets and make intelligent predictions has the potential to transform how libraries function and cater to their communities. By leveraging the power of AI, libraries can improve user experiences, customize services, and ensure equal access to information for everyone. Another crucial aspect of empowering library users is improving information discovery.

Through AI algorithms, libraries can suggest pertinent resources based on users' preferences, reading history, and interests. This personalized approach not only saves users time but also introduces them to a broader range of materials they may not have otherwise come across. By tailoring recommendations to individual needs, libraries can empower users to explore new subjects, expand their knowledge, and engage with diverse perspectives. In addition, this new advancement also aids libraries in tackling information overload and enhancing the efficiency of sorting and arranging resources. By being able to handle and classify large volumes of data, AI algorithms can assist librarians in simplifying their work processes, thus allowing them to allocate more time to engaging with users on a personal level and participating in community initiatives. It should be emphasized, however, that the potential of AI in libraries extends beyond just efficiency and convenience. Ethical considerations are crucial in ensuring that AI technologies are employed responsibly and in a way that promotes fairness and inclusivity

The integration of AI tools in information literacy initiatives with ethical considerations is essential for libraries to help users critically assess information and distinguish between reliable and unreliable sources. It is important for libraries to ensure that AI algorithms are transparent, unbiased, and ethical. Additionally, safeguarding user privacy and data protection is crucial, as AI systems depend on large amounts of personal information to provide personalized recommendations and responses.

The potential of AI is vast and could improve the information literacy of library users by utilizing AI tools and technologies. Libraries have the ability to provide personalized recommendations, instant support through chatbots, counter misinformation, and encourage critical thinking skills. It is crucial to maintain ethical standards and prioritize unbiased access to information for all users while addressing privacy and data security concerns in AI-powered library services as we embrace these advancements. AI-powered library services have the potential to improve accessibility, recommend personalized resources, and streamline operations. Nevertheless, as libraries adapts to these technologies, it becomes essential to strike a delicate equilibrium between privacy and data security apprehension.

In libraries, AI-powered recommendation systems have the potential to improve personalized services by analyzing user preferences and behavior. They can recommend books, articles, or other resources based on individual interests, promoting

discovery and helping users explore new areas of interest. AI can also be used to provide immediate support to library users through effective assistants. Thus, AI algorithms can help libraries make data-driven decisions by analyzing patterns and trends in consumer behavior. This can include optimizing collection development strategies and identifying areas where additional resources or services may be needed

2.2 THEORETICAL FRAMEWORK

The relevant theory to this study is media ecology theory, because of its suitability to the topic under study.

Media Ecology Theory

Understanding the social effects of technology and communication is the goal of Media Ecology Theory (MET) (McLuhan, 1964). According to this theory, media directly influence and structure culture. Communication studies are largely the focus of media ecology, which is the study of how media and communication processes influence human perception, feeling, understanding, and value (West & Turner, 2017).

In 1964, Marshall McLuhan highlighted the influence of technologies like clocks, radios, television, movies, and games, emphasizing their significant impact on the culture of society. He observed that electronic media had brought about a revolution in society and that people had become heavily reliant on these communication technologies. McLuhan believed that it was nearly impossible to find a society untouched by electronic media.

As the world has evolved, its technology has advanced as well. From the first printed books to the internet, media has both shaped and been shaped by society. The principles of media put forward by MET - enhancement, obsolescence, retrieval, and reversal - demonstrate how technology influences communication throughout its development. MET revolves around the concept that society cannot avoid the influence of technology, and that technology will always play a central role in nearly all modern-day activities.

The influence of media power and technology on society is based on three assumptions:

- The mass media permeate every aspect of society.
- The media have the ability to shape our perceptions and organize our experiences.
- Finally, the mass media connect the world together

The theory's importance lies in the direct influence of the media on us, as they hold a dominant position in shaping our views of the world and have the capacity to connect people globally, just as they connect students, teachers, and libraries. Consequently, the media can unite individuals worldwide into a singular social, cultural, political, economic, and educational system (Waran, 2018). This results in our ability to instantly access information, thanks to artificial intelligence

3.0 METHODOLOGY

This study adopts survey research method that includes a variety of methods for gathering data and information from the population in order to draw conclusions. The rationale is that open-ended and closed-ended questions are frequently included in surveys. Closed-ended questions require a yes/no response or a choice on a Likert scale, which is the well-known 1 to 5 scale that asks respondents to rate how much they agree with a statement about how human computer interaction affects consumers. Since closed questions are excellent for statistical comparisons of various respondent groups, they were also included. Respondents to open-ended questions were requested to formulate their own answers. For the latter, a methodical coding technique is needed to organize the responses' content across.

4.0 FINDINGS

Findings from the study revealed that:

1. Bring into play Artificial Intelligence enhanced learning outcomes by providing students with more efficient and effective ways to learn.
2. Artificial Intelligence has helped in streamlining and enhancing information retrieval processes in libraries.
3. Artificial Intelligence has provided students with new personalized and engaging learning experience and has also helped most teachers to meet up with the student's demands.
4. With the aid of AI-enhanced modern learning platforms teachers can now connect with several students and as well, share course material in a more lasting way.
5. Artificial intelligence now condensed the workload of teachers and educators.
6. And that, the use of Artificial Intelligent has improved students – staff relationships.
7. Lastly, AI has assisted libraries in dealing with the overload information thus, improving the efficiency of cataloging and arranging resources.

5.0 CONCLUSION

Integrating artificial intelligence into the classroom and library offers a special chance for educators, students, and librarians. Since "AI" has the ability to offer students tailored and captivating learning experiences, it also holds great promise for enhancing information literacy in library users and assisting them in developing critical 21st-century abilities like critical thinking and problem-solving.

5.1 RECOMMENDATIONS

From the findings, the following recommendations are drown that:

1. Libraries should think about implementing AI techniques that protect privacy.
2. To the greatest extent feasible, libraries ought to collaborate closely with AI developers to guarantee that the data utilized to train algorithms is both representative and diverse of all library users.
3. AI should be incorporated into the academic curriculum of higher education institutions in order to help teachers develop a critical viewpoint on this technology and to better prepare students for the opportunities and challenges of the digital age.

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