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THE VIEWS OF THE TEACHERS ON ARTIFICIAL INTELLIGENCE'S EFFECTS ON EDUCATION PROCESS

A OPINIÃO DOS PROFESSORES SOBRE OS EFEITOS DA INTELIGÊNCIA ARTIFICIAL NO PROCESSO EDUCATIVO

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Abstract: It would be tedious and ineffective for students to try to learn from a teacher who constantly dumps knowledge into their minds while they are in class. The students are full of challenges as a result of their use of technology, particularly artificial intelligence. Incorporating technology is crucial for engaging modern students, as traditional teaching methods are no longer effective. Therefore, teachers must use innovative techniques to overcome the challenges of integrating AI in the classroom. In recent years, there has been a growing inclination towards utilizing modern technologies and methodologies to enhance the overall learning experience. Examples of such technologies include learning management systems, video-assisted learning, and virtual reality, all of which can aid in improving student engagement and educational planning. Today, it has evolved to use embedded computer systems and other technologies such as robots with human features using online chatbots to carry out instructors' tasks. responsibilities and autonomous actions or in collaboration with instructors. The purpose of this article is to explore the positive impact of artificial intelligence (AI) on education. The application of AI in education (AIED) provides new opportunities, challenges, and possibilities for educational practices. The goal of this study is to investigate the influence of AI on the educational process of female eighth-grade pupils aged 13 to 14 and to identify strategies for overcoming the drawbacks of technology use.

Keywords: Artificial intelligence. Application. Cognitive abilities. Education. Modern technologies.

Resumo: Seria tedioso e ineficaz para os alunos tentarem aprender com um professor que constantemente despeja conhecimento em suas mentes enquanto estão em aula. Os alunos estão cheios de desafios como resultado do uso da tecnologia, principalmente da inteligência artificial. A incorporação da tecnologia é crucial para envolver os estudantes modernos, uma vez que os métodos tradicionais de ensino já não são eficazes. Portanto, os professores devem utilizar técnicas inovadoras para superar os desafios da integração da IA na sala de aula. Nos últimos anos, tem havido uma inclinação crescente para a utilização de tecnologias e metodologias modernas para melhorar a experiência geral de aprendizagem. Exemplos de tais tecnologias incluem sistemas de gestão de aprendizagem, aprendizagem assistida por vídeo e realidade virtual, que podem ajudar a melhorar o envolvimento dos alunos e o planeamento educacional. Hoje, evoluiu para usar sistemas computacionais embarcados e outras tecnologias, como robôs com características humanas que utilizam chatbots online para realizar as tarefas dos instrutores. responsabilidades e ações autônomas ou em colaboração com instrutores. O objetivo deste artigo é explorar o impacto positivo da inteligência artificial

(IA) na educação. A aplicação da IA na educação (AIED) proporciona novas oportunidades, desafios e possibilidades para práticas educativas. O objetivo deste estudo é investigar a influência da IA no processo educacional de alunas da oitava série com idades entre 13 e 14 anos e identificar estratégias para superar as desvantagens do uso da tecnologia.

Palavras-chave: Inteligência artificial. Aplicação. Habilidades cognitivas. Educação. Tecnologias modernas.

1. Introduction

Since ancient times, people have been educating and learning. Numerous factors are taken into consideration while estimating the performance of teachers and students. Teachers generally assess their students based on established standards, such as discipline, creativity, involvement, learning pace, and teacher adherence. First on the list are the student's focus on the material and their ability to reproduce their knowledge on the test. Marks or grades that place the student's subject-matter expertise at the top of the list for various reasons. The most important factor is the suitability of a teacher to assess a pupil based on their responses to questions within a specified time frame.

Artificial intelligence is a field that is expanding quickly and has the potential to revolutionize our social connections. In education, AI is being used more often to create new innovative teaching and learning techniques that have been tested in diverse settings. Using AI in educational processes yields various benefits depending on who benefits the most; students, teachers, parents, heads of schools, and local governments (Khanzode, & Sarode, 2020).

The utilization of AI technologies and customized training programs based on data analytics have significantly improved the learning process. It has been discovered that the primary benefit of utilizing artificial intelligence in education is the ability to customize and individualize the learning process (Chen & Chen, 2020).

AI is often associated with supercomputers that have immense processing capabilities and adaptive behavior, including sensors that allow them to interact with humans in a human-like manner. In the education sector, AI has been increasingly used and embedded into computer systems, going beyond the conventional understanding of AI, which involves a supercomputer.

AI has diverse applications such as in smart buildings and the education sector where it is embedded in computer systems. The research paper seeks to investigate the effects of AI in education, its advantages and disadvantages, and ways to improve its development and implementation (Köprülü, 2021).

Artificial Intelligence (AI) integration in educational environments has numerous benefits, but teachers face several challenges to make it work. The most significant challenge is the need for

Teachers who lack technical expertise in AI may face challenges in integrating this technology into their teaching practices. To get started, they may require support and training. Additionally, Chen, X., Zou, (2022) indicated that the cost of AI tools and applications can be a hindrance for many schools and universities, which may require external funding or partnerships to incorporate AI into the classroom. There are also ethical concerns associated with AI in the classroom, such as the potential impact on privacy, security, and job markets. Teachers must be aware of these worries and take the necessary precautions to keep their pupils safe while exploring this exciting and rapidly evolving technology.

The paper intends to respond to the following research question to meet the study's objectives:

What do teachers think about the effect of AI on education? What are the negative sides and benefits of AI in the education sector?

What steps should be taken to enhance the development of AI and improve the education process?"

2. Literature Review

More than 60 years have passed since the introduction of artificial intelligence in education (AIED) Crisp, E & Hardman, P., (2023). A computer was trained to distinguish between a dog and a cat in an image in the 1960s by computer scientists. To accomplish this, they fed the computer pictures of dogs and cats and trained it to identify the distinctive features of each species.

Recent studies on artificial intelligence (AI) in education have concentrated on developing robotic systems intelligent tutoring systems, and chatbots (Smutny and Schreiberova, 2020). Graesser et al., (2005) reported that with the advancements in information technology in the last decade, this field has seen significant development.

There have been discussions about the necessity of using AI in education, which has recently attracted the interest of researchers. There is a continuing challenge to the difficulties of gathering, storing, utilizing, and sharing students' private and sensitive data when using AI technologies. Since AI technologies are being actively used in all sectors, education is not an exception.

The education sector can gain greatly through the application of intelligent technology, providing easy access to information. In the past, searching for information in libraries was a time-consuming task that required sifting through numerous volumes. With the growth of technology,

obtaining the necessary information has become quicker and simpler with just a few clicks. The use of voice commands and virtual assistants on phones has made it even faster to access required information. Furthermore, AI allows every student to have a personalized education by replaying unclear parts (Khanzode & Sarode, 2020).

Koprulu, F. (2021) stated that the advancement of technology has made remote learning possible, preventing the spread of COVID-19 while ensuring education continues. AI systems can translate instructions given in a foreign language into our language, allowing us to quickly gain knowledge and learn languages we have no prior knowledge of. Additionally, texts written in other languages can be translated and adapted to fit our language. The school's attendance system can now easily record student attendance through sensors at the entry and exit points, eliminating the need for teachers to manually take attendance and track absenteeism.

AI significantly reduces errors and makes the fewest mistakes possible. AI programs can make more factual and professional conclusions because they are free of human emotions. For instance, a teacher might misread the exam paper, assign the wrong project, or grade an assignment incorrectly, but AI programs minimize such errors (Nalbant, 2021). Artificial Intelligence (AI) has certain limitations and challenges when it comes to the process of learning. One of the significant drawbacks is the absence of creativity. Creativity and imagination are qualities that are inherent to humans, but not to machines. Even though Flogie & Aberšek, (2022) reported that machines can design, they cannot match the human brain's creativity.

Another disadvantage of AI in education is technology addiction. Instead of interacting socially, students communicate with each other via social media platforms. This addiction to technology can prevent students from devoting enough time to their education, lessons, or motivation. Moreover, machines lack experience and cannot learn from their mistakes like humans do. Even if machines have the same information as humans, they cannot use it in the same way, and they cannot feel anxiety or worry. Chassignol, (2018) indicated that Machines cannot act like humans because they lack a sense of unity, belonging, and connection that humans have.

3. Methodology

A qualitative method has been applied in this study. One approach that makes use of observations, document analyses, and interviews is called qualitative research. Qualitative research offers useful insight into attitude and perception. The opinions of educators and learners regarding

artificial intelligence's impact on education form the basis of this study.

Study Group

The study group of the present research comprises 2 private schools, 10 teachers, and 30 students from high private schools in the academic year of 20118-2019. The participants were all volunteers.

Data Collection Process

The study data was gathered by conducting one-on-one interviews with the participants in my office. These interviews took place between November 15, 2021, and February 5, 2022. Thanh, T. T. (2015) said that the best technique for gaining insight into people's perceptions is the interview.

To assess how important teachers and students thought using AI in the classroom would be, face-to-face interviews lasting about 20 to 30 minutes were conducted with the participants as part of the research. The in-person interviews were conducted in a calm, conversational setting to gather relevant information. Every interview took place in the English language.

Data Collection Tool

Making sure the questions on the interview form were understandable to the participants was the main goal of preparation for this study. Two different participant types received the interview form to be examined to guarantee internal validity. After removing certain questions from the list because their substance was unclear and difficult to understand, and after improving the clarity of some questions, the form was finally completed. Ultimately, 30 pupils and 10 teachers were interviewed.

Written transcripts from participant interviews serve as the study's primary source of data. One-on-one interviews were conducted at a time that worked for each participant after the participants were contacted in advance to confirm the time and day of the interviews.

Model of the Study

Qualitative research methods have gained popularity in the social sciences recently. According to Özdemir, (2010), qualitative research is used to explore the depths of the social system shaped by individuals' limits and experiences. This approach takes an interdisciplinary holistic perspective and interprets cases and events investigated in their context and meaning.

This study used a semi-structured interview format to determine the opinions of teachers and students on the level of organization in schools. The semi-structured interview consisted of three open-ended questions (Fidel, 1984).

Population and Sample

The researcher used qualitative methods as they were best suited to the study objectives. The study involved a sample of 40 students and their teachers from a private school. An interview was developed to investigate the influence of AI in the classroom. The results indicated that most teachers believed AI could improve personalized learning experiences, process large amounts of data, and enhance task management. However, opinions varied on AI's ability to control student behavior and learning, improve the efficiency of the education system, provide notes and reviews, reduce teacher dependency, and enhance social interaction. Additionally, some students expressed concerns about the potential loss of traditional teaching jobs, the costs of implementing AI systems, programming and processing errors, and the absence of human relationships in the classroom (Sofaer, 1999).

Data Analysis

In this study, the data collection method used was interviews, which were then analyzed using qualitative data analysis. De Casterlé, B. D., et., al., (2012) said that when conducting a qualitative study, the most common way to analyze the data is through simultaneous analysis alongside data collection.

The content analysis method was used in this research. The summarized and interpreted data was analyzed through descriptive analysis, leading to the emergence of new concepts. Semi-structured interviews were conducted with 10 teachers and 30 students from each school in a quiet and suitable location.

4. Findings

Table 1. The importance of using AI in the educational process

Theme	f	%
A. students		
Incorporating artificial intelligence into the learning process is crucial.	20	38.4
AI can help us improve our interactive skills.	5	9.6
Traditional methods are more effective than using technology in the classroom.	3	5.7
I don't believe that learning will be unproductive and dull by using AI	10	19.2
B. teacher		
AI has the potential to simplify the teaching process.	7	13.4

AI makes the teaching process more fruitful.	2	3.8
AI can assist me in saving time and effort."	5	9.6
Total (teacher+ student)	52	100

According to the findings presented in Table 1, there are four sub-themes related to the use of artificial intelligence in the learning process. Among these sub-themes, the one that received the highest frequency of opinions (38.4%) is "I believe that artificial intelligence in the learning process is important." On the other hand, the sub-theme "I don't believe that AI makes the teaching process more fruitful" was the least frequently reported opinion.

Table 2. Disadvantages of using artificial intelligence during the educational process

Theme	f	%
A. student		
Spending excessive time using technology may not have sufficient time to devote to their studies.	18	37.9
Utilizing Chat GPT to complete all assignments and tasks.	25	48
Relying only on artificial intelligence for learning can limit creativity.	4	7.6
B. Teacher		
The efficiency of Artificial Intelligence (AI) relies heavily on how it is regulated and managed.	9	17.3
To effectively operate AI, a high level of technical expertise and qualifications are needed.	3	5.7
Total (teacher+ students)	52	100

Table 2 shows that the second sub-theme related to students' use of Chat GPT to complete assignments and tasks received the highest frequency of opinions (25%). In contrast, the second sub-theme with the least reported opinions (5.7%) among teachers was the statement.

Table 3. The effectiveness of Artificial intelligence in the education process

Theme	f	%
A. student		

Artificial intelligence can provide students with more accurate information than teachers.	22	37.9
The student's interaction with the teacher is better than their interaction with artificial intelligence.	3	5.3
The evaluation of students' performance by teachers is more flexible than the evaluation by artificial intelligence.	8	13.8
B. Teacher		
The teacher requires the assistance of artificial intelligence in all his \her tasks and activities.	18	31
The teacher is capable of managing the educational process without the use of artificial intelligence.	7	12
Total (teacher+ students)	52	100

In Table 3, the views regarding "The effectiveness of Artificial intelligence in the education process". When sub-themes are examined, the sub-theme of teachers(31%) have agreed on the 1st theme which is "The teacher requires the assistance of artificial intelligence in all his \her tasks and activities.". The 2nd theme, which is "The student's interaction with the teacher is better than their interaction with artificial intelligence." is the least reported opinion.

5. Results

Through a questionnaire, structured questions, analysis, and follow-up on learning outcomes, we employed qualitative methodologies on a sample of teachers and their students to arrive at significant findings that support and enhance the educational process.

AI can be used to improve accessibility, complement different learning styles, make education more engaging and individualized, and enhance the process of learning for both students and teachers. Roll & Wylie, (2016) reported that artificial intelligence (AI) can potentially enhance student learning while also saving teachers time and effort by automating administrative and labor-consuming activities like grade sheet verification.

According to the questionnaire results, 38.4 % of the students strongly agreed that artificial intelligence is important for learning, while 13.4 % of the teachers agreed. I believe that AI has

"The teaching process can be simplified by utilizing its potential.". "The efficiency of Artificial Intelligence (AI) relies heavily on how it is regulated and managed." the teachers strongly agreed that artificial intelligence is crucial for education.

However, further research is required to discover effective and efficient solutions that can eliminate weaknesses in utilizing artificial intelligence in the teaching and learning process to enhance the quality of education. Renz, Krishnaraja, & Gronau, (2020) informed that this will enable it to become a successful tool through which goals can be achieved faster, better, and in a more enjoyable manner.

6. Discussion

There aren't many variations between our learning environment and our prior experiences after doing an overview of the available options and alternatives. Even if artificial intelligence won't replace our current educational system, it is still transforming and redefining the educational environment. It is incorrect to attempt to replace social interaction with AI completely. As was done with gamification and is being done with VR and AR technologies, it ought to be included in the conventional learning process (Chassignol & Bilyatdinova, 2018).

The participants shared their hopes for superior educational results and products under this heading. Under the product dimension they anticipate, we have discovered possible items and educational results. In addition to useful tools, the product line also consists of models, methods, systems, and software. Here is a list of notable or important products that education assisted by artificial intelligence may find very helpful such as smart software, robotic teachers, Educator-focused classrooms, and Personal teaching tools (Kengam, 2020).

Students can utilize Chat GPT to get assistance with their homework, get ready for an exam, or just to quench their curiosity while they're studying. Teachers can create lesson plans and proofread papers for accuracy and grammar using Chat GPT. An increasing number of pupils are utilizing this resource as the software has grown in popularity. Additionally, even though this technique appears to have no drawbacks.

According to this study, Teachers and students should not view Chat GPT as a final decision on human knowledge or as the solution to every homework question. It is better to think of it as technological assistance that adapts to the requirements and values of society. Flogie, A., & Aberšek, (2022) stated that there are further issues as well, including bias, incorrect data, plagiarism, and the use of the information to support dishonest behavior.

Over the past few years, immersive technological tools like Virtual Reality (VR) and Augmented Reality (AR) have become increasingly popular in recent times. Augmented reality (AR) is an immersive technology that modifies a user's sense of reality by superimposing computer-generated content over real-world objects. VR, on the other hand, allows users to experience a simulated virtual environment as though it were real. These technologies have enormous potential in the field of education, yet they are primarily employed for gaming and metaverse.

Enriching the learning process overall and helping students grasp difficult topics better are two benefits of using immersive technologies. Particularly for VR, there are a plethora of exciting possibilities. For example, it can be used to create virtual labs where students can perform science experiments or perform animal dissections. Through Chassignol, (2018) the use of augmented reality (AR), students can examine stars and galaxies up close, gaining more experience and hands-on learning opportunities.

7. Conclusion

While AI has many benefits for educators and pupils alike, it's important to remember that it also has certain drawbacks. One of AI's disadvantages is that it cannot take the role of empathy and human connection, both of which are crucial to the teaching and learning process. Furthermore, AI algorithms have the potential to reinforce biases, as already mentioned in the essay (Ahmad & Rahmat, (2021). And lastly, when it comes to AI, there are always worries regarding data security and privacy. AI must therefore be carefully considered when integrating it into education, taking into account both its potential benefits and downsides. We need to conduct continuous research for students of different categories, ages, and schools along with participation from administrators and parents.

Recommendations

Despite the progress made so far, there is still a lot to be done to fully integrate AI into the education sector. Some potential ideas for the use of AI include improving accessibility, catering to different learning styles, providing personalized and engaging learning experiences, and streamlining administrative tasks such as grading. By automating time-consuming procedures like grade sheet verification, AI can improve student learning while also saving teachers valuable time and resources.

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