Syntax Admiration: p-ISSN 2722-7782 | e-ISSN 2722-5356 Vol. 5, No. 11, November 2024

The Impact of Artificial Intelligence on Today's Student Life

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Abstract
AI has profoundly impacted the lives of students by transforming various aspects of their education and daily activities. AI can be a very useful learning tool in a variety of contexts. Students can access learning materials tailored to their needs and learning styles, resulting in more effective learning. AI also speeds up evaluation and scoring. However, there are also issues to contend with, such as the dangers of relying on technology, problems with data privacy, and the possibility of a decline in social interaction. This article discusses the impact of AI on college students and its implications for the future of higher education. The rapid development of technology has made the emergence of the millennial era where technology has become the need of every individual, especially youth and women in the millennial era who are faced with technological advancements, so it is required to always sort out every information obtained, in order to prevent the occurrence of bad impacts because access between the worlds is easy to obtain so that it can be a weapon for irresponsible people to attack an area from the next generation. The purpose of this study is to find out the various impacts of technological developments.

Keyword: AI, Students, Technology

Introduction

Human daily life is greatly influenced by today's all-technological living conditions. The digital era began with a technological shift from mechanical or analog technology to digital technology since around 1980 and the emergence of the internet since the early 1990s. Personal computers with microprocessor technology have undergone a very rapid technological revolution since their creation. Then it expanded to personal computers and mobile phones. This technology has affected all aspects of human life, such as Information and Communication Technology (ICTs) or cyber technology, or better known as digital technology or new digital media (Stodt et al., 2023);(Arly et al., 2023).

It affects interactions in the family, entertainment, work, education, economy, as well as relationships that are presented and consumed through the media (Dewitte et al., 2021). The current learning pattern is quite influenced by technological developments that are growing rapidly in the scope of education, especially lectures (Kaplan & Haenlein, 2019). Initially, learning resources only depended on teachers and textbooks, but with the presence of technological media in the 21st century, it has become an important innovation in the world of education (Farwati et al., 2023).

Today's technology is enough to help students solve problems and do coursework. However, these technological advances can damage people's mindset and their enthusiasm for learning because it makes it very easy to work without thinking much. Additionally, these technological advancements allow people to gather information on various topics online, such as news, law, and politics. As we know, Artificial Intelligence (AI) is starting to enter Indonesia and is developing rapidly, especially in the field of education (Marr, 2019). Chat GPT itself was launched at the end of November 2022 by open AI, with the service initially offered for free. AI itself is a branch of computer science that focuses on the development of computer systems and is able to help solve tasks that require human intelligence (Baihaqi et al., 2021).

With the rapid development, AI can improve the ability of machines to think, learn, and adapt in ways that are increasingly similar to humans (Ahmad, 2017). Additionally, AI can be used in a variety of applications, such as creating tasks and developing technology. Chat GPT is an example of high-tech plagiarism (Uppalapati & Nag, 2024). Additionally, students who use the majority of chat GPT may experience a decrease in critical thinking and loss of the ability to solve problems because they tend to be lazy and do not put in enough effort to complete tasks (Trisno & Raharja, 2023). Actually, if students are smart to utilize and use AI technology properly and correctly, there will be many advantages from Artificial Intelligence (AI) technology. On the other hand, if students or users rely too much on this technology, they will harm themselves. This technology will also make users lazy and not independent. Therefore, the use of chat GPT, or AI, requires a precise understanding and not an exaggeration.

Method Research

This study uses the Literature study method, namely data obtained from examining various sources related to the problem to be discussed. In this paper, the researcher uses sources from journals which of course discuss the impact of technological developments on students. This study employs a literature study method, gathering data from various sources such as academic journals, scholarly articles, and credible publications focused on the impact of artificial intelligence (AI) on student life. This method aims to explore the positive and negative implications of AI on students' learning, social interactions, and academic outcomes by reviewing prior research. The data collection involved searching academic databases, selecting peer-reviewed sources, and extracting relevant information based on themes like learning enhancement, productivity, social interaction, and privacy concerns. A thematic analysis was conducted to categorize and interpret findings, enabling a comprehensive understanding of AI's influence on students. This methodology provides insights that can guide further research and offer practical recommendations for educational institutions.

Resulth and Discussion

The Function of AI for Student Life

The use of Artificial Intelligence (AI) technology in education can improve, improve learning outcomes, and increase learning effectiveness (Cotton et al., 2023). By using digital learning as part of digital transformation, students can quickly adapt to new and innovative things. However, everyone has a different way of accepting something new and innovative, so the process of diffusion of innovation needs to be carried out in order for the innovative product to spread widely. Similar to artificial intelligence technology, the process of diffusion of innovation must be carried out so that innovation is more widespread in response to learning needs (Suariqi Diantama, 2023).

AI is very helpful in data analysis, helping teachers find learning patterns, know the unique needs of students, and adjust learning methods or ways more efficiently (Subiyantoro et al., 2023). This is especially true in early childhood education, where it is necessary to develop the aspects that the child has. Therefore, students must be able to use the insights provided by this AI technology in optimizing learning strategies, how to choose the right learning method, and the ability to adjust the approach to be used in learning activities (Ririh et al., 2020).

The Positive Impact of AI on Students

Facilitate Access to Information and Learning Resources

Artificial intelligence (AI) has brought extraordinary convenience in accessing information for students. In the past, students needed to spend a lot of time looking for references in physical libraries or browsing unstructured websites. Now, thanks to AI technology, students can easily find high-quality academic resources through AI-optimized platforms, such as Google Scholar, Microsoft Academic, and others. AI helps in filtering and recommending articles, journals, and books that suit the specific academic needs of students.

The digital library's smart search system uses AI to help students find the references they need faster and more accurately. This technology not only simplifies the search process, but it also helps them find information that they might have missed if they had done a manual search.

Additionally, AI-based e-learning platforms such as Coursera, EdX, Khan Academy, and Udemy offer access to thousands of courses from different fields taught by teachers from all over the world. AI can also analyze students' learning patterns and suggest relevant supplementary materials, quizzes, and exercises so that the learning process becomes more efficient.

A More Personalized and Efficient Learning Experience

AI allows education platforms to tailor teaching materials and how they are delivered based on needs and speed. For example, they can provide practice questions or study materials that match the student's level of understanding, provide feedback in real-time, and recommend additional materials to help address the problem.

Additionally, students can use artificial intelligence-based virtual tutors, such as Socratic or Duolingo, to help them learn outside of the classroom. This app can help students learn independently and answer academic questions quickly. Students have the ability to learn anytime and anywhere, regardless of library hours or lecturer hours.

This personalization allows students to understand lecture material more quickly, focus their efforts on topics that need more attention, and get immediate feedback without having to wait for a consultation schedule with teachers or tutors.

Increase Efficiency and Productivity in Doing Tasks

AI is also very helpful for students to complete their academic assignments. Artificial intelligence-based apps like Grammarly, Quillbot, and Hemingway Editor are very beneficial for improving the quality of writing. Grammarly, for example, checks for grammatical errors and offers recommendations for better writing styles, more precise word selection, and improving text cohesiveness. Students can create better academic and professional writing with the help of this artificial intelligence.

AI helps students conduct research and data analysis in addition to writing. Students can easily process data, perform statistical analysis, and create complex data visualizations with artificial intelligence-based statistical and analytical tools such as SPSS, R, and Python, along with modules such as TensorFlow and Pandas. Students can focus on understanding the results of a deeper analysis because AI eases technical and repetitive tasks. For example, in quantitative-based research, AI allows students to model complex data, regression analysis, and machine learning in a faster and more efficient way. Thus, students can complete their research assignments and projects in less time and with more accurate results.

Job Opportunities

AI opens many doors for students in the world of work. Currently, the job market is in dire need of students with skills in the field of data science or AI. In the modern era, professions such as machine learning engineers, data scientists, AI ethicists, and data analysts are in great demand. Students can increase their competitiveness in an increasingly competitive world of work by learning and mastering AI-based technology.

Additionally, AI assists college students in finding jobs through platforms like LinkedIn and Indeed, which use AI to recommend jobs according to students' skills and profiles. Some AI-based services also offer interview simulations and automated resumes to aid in the recruitment process.

Negative Impact of AI on Students

Excessive Dependence on Technology

One of the main negative effects of using AI among college students is the risk of becoming overly reliant on the technology. Students who are used to using AI-based tools to make daily tasks easier may find it difficult to complete tasks without the help of such technology. Reliance on AI can also hinder the development of students' critical thinking and problem-solving skills, which are essential skills. AI-based tools often provide instant

solutions to the problems at hand, which can cause students to lose the ability to think critically on their own, analyze problems, and find creative solutions.

In the context of learning, relying on AI technology can also reduce students' desire to truly understand the material. If students know that they can easily complete tasks by using AI applications or searching for answers, they may not be interested in really understanding the concepts taught in class. As a result, they do not master basic knowledge and only learn superficially.

Decline in Social and Communication Skills

Students' ability to interact socially and communicate with others can be reduced if they use it incorrectly. Students may prefer to interact through screens rather than talking directly with classmates, teachers, or college mates. This may be due to the increasing use of digital platforms powered by artificial intelligence.

AI replaces some aspects of human interaction, such as academic guidance or psychological counseling, it can cause students to miss out on opportunities to practice these communication skills in the future. The ability to communicate well, both verbally and nonverbally, is a very important skill in the world of work, but AI can cause students to miss out on opportunities to practice these skills in the future.

Manual and Cognitive Skills Reduction

While AI offers a variety of tools that are very helpful in completing academic tasks faster and easier, it can also cause students to lose their manual and cognitive skills. For example, if students in the writing field are constantly using AI to improve their grammar, sentence structure, or vocabulary, they may no longer feel the need to manually improve their writing skills. This can negatively impact their confidence. Additionally, AI can reduce skills in problem-solving and decision-making. Students who are used to using AI to make automated recommendations or solutions may be less trained in making decisions based on judgment and analytical thinking.

Data Privacy and Security Risks

The use of AI technology is often the target of data theft by irresponsible parties. Many AI-based applications, both in learning and daily life, collect students' personal data, including information about study habits, academic preferences, and financial information. If not managed properly, this data collection can be misused. Unresponsible parties can access students' personal data stored on educational platforms or applications. Sensitive student data, such as academic grades, personal identity, or financial information, can be used for unethical or even criminal purposes in the event of a data breach.

Students are also often unaware of how much data they share with AI-based applications. For example, in the use of virtual tutor apps or e-learning platforms, data on students' comprehension levels, learning patterns, or quiz results are stored and analyzed by AI to provide a satisfying learning experience. However, without strict regulation, this data can be misused by developers or sold to third parties without the knowledge of students.

Technological Unemployment and Challenges in the World of Work

The potential emergence of "tech unemployment" is also a broader negative impact of AI on students. AI has the ability to replace many previous human jobs, especially those related to reps and analysis. As a result, in the future, students will face great challenges in the world of work as AI-based automated systems replace many traditional jobs.

For example, accounting, data analysis, and administration have begun to use artificial intelligence to replace human work. Students enrolled in these majors may feel that the employment opportunities that were once extensive are diminishing. This means that students must constantly adapt and acquire new skills related to technological advancements. While AI creates new opportunities in high-tech fields, students who don't keep up with these developments may be left behind in the job market. Those who do not have the skills required by technology-based industries will face difficulties in finding a job (Jumasrin, 2020).

Challenges and Obstacles for Students in the Use of AI

One of the main challenges faced by students in using AI is the limitation of knowledge and technical skills. Many students, especially those who are new to technology or computer science, may have difficulty understanding how AI works and applications because AI is a fairly complex technology that involves algorithms and data science.

For students in non-technical majors such as literature, economics, or law, this challenge is greater because the curriculum in those majors may not cover the skills needed to use AI independently. As a result, they may have to study on their own or take additional courses outside of their course of study to understand the fundamentals of AI. While AI offers many opportunities, not all college students have the ability to use it. One of the main obstacles is the cost and availability of the necessary hardware and software. Some AI tools require high computer specifications, especially if they are used for machine training models or processing large amounts of data. College students who don't have access to powerful computers or sophisticated software may feel limited in using AI.

Additionally, to get access to all the features of the AI platform and app, you will need to purchase a premium subscription or pay to get access to all of them. For example, an auto-authoring tool or data analysis tool may only offer basic features for free, but additional features must be purchased. This can pose financial challenges for students, especially those from underprivileged backgrounds. Universities around the world are still in the early stages of incorporating AI thoroughly into their curricula. Some major universities have started offering courses focused on AI, but many others are still lagging behind. Universities that have not officially used AI-based learning may make students feel left behind compared to students from more advanced universities in this regard.

Conclusion

AI helps creativity, innovation, and acceptance of new or innovative things. Human resources who are always responsive to the advancement of science and technology (IPTEK) will easily become adopters and can use technology as a tool to improve connection, communication, and the use of technology both through design and application.

Technology cannot replace the role of teachers or lecturers who are very important in guiding their students. As a result, Artificial Intelligence (AI) technology can serve as a second medium and a suggested tool for improving the quality of learning. A good and moral understanding of the potential, consequences, and limitations of AI-based technologies must be improved. This is necessary so that people can optimally utilize and prepare themselves for the challenges in the digital technology era. The research has analyzed and talked about digital process activities consisting of three stages: digitalization, digitalization, and digital transformation through the use of digital tools to aid learning.

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