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How AI affects students ‘s performance and mark at university

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ABSTRACT

Artificial intelligence is increasingly advancing in higher education and training in a variety of ways, and the demands will bring various changes to the way we learn. In addition, it affects academic results. This article examines and analyzes the impact of artificial intelligence (AI) on the way universities and higher education institutions operate and evaluate. It also assesses the benefits of AI in education. Based on primary and secondary research surveys and interviews, the research suggests that AI can improve personalized learning and improve academic performance, improve efficiency in academic approaches, and address potential problems among students. supports. Also discussed are the processes of artificial intelligence overuse and overconfidence. The results of this research showed that 60 percent of university professors stated that artificial intelligence would be of great benefit to the students in helping them to better master the assignments and textbooks. The remaining 40 percent disagreed, saying they were concerned that AI would undermine students' ability to think independently and make decisions for themselves. According to the statistical result, we observed that many students mainly use Chatgpt tool more. It has been observed that Ai is currently working well for them and providing them with good benefits for finding and researching information.

АННОТАЦИЯ

Искусственный интеллект все больше развивается в сфере высшего образования и обучения различными способами, и эти требования приведут к различным изменениям в способах нашего обучения. Кроме того, это влияет на академические результаты. В этой статье рассматривается и анализируется влияние искусственного интеллекта (ИИ) на работу и оценку университетов и высших учебных заведений. В нем также оцениваются преимущества ИИ в образовании. Основываясь на первичных и вторичных опросах и интервью, исследование показывает, что ИИ может улучшить персонализированное обучение и улучшить академическую успеваемость, повысить эффективность академических подходов и решить потенциальные проблемы среди студентов. поддерживает. Также обсуждаются процессы чрезмерного использования искусственного интеллекта и чрезмерной самоуверенности. Эта статья завершается рекомендациями и навыками, необходимыми для использования и оптимизации ИИ в образовании. Результаты этого исследования показали, что 60 процентов профессоров университетов заявили, что искусственный интеллект принесет студентам большую пользу, помогая им лучше усваивать задания и учебники. Остальные 40 процентов не согласились, заявив, что они обеспокоены тем, что ИИ подорвет способность студентов мыслить независимо и принимать решения самостоятельно. Согласно статистическим результатам, мы заметили, что многие студенты в основном больше используют инструмент Chatgpt. Было замечено, что а

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й в настоящее время хорошо работает на них и предоставляет им хорошие преимущества для поиска и исследования информации.

ANNOTATSIYA

Sun'iy intellekt turli yo'llar bilan oliy ta'lim va kadrlar tayyorlashda tobora rivojlanib bormoqda va talablar biz o'rganish uslubimizga turli o'zgarishlar olib keladi. Bundan tashqari, bu akademik natijalarga ta'sir qiladi. Ushbu maqolada sun'iy intellektning (AI) universitetlar va oliy ta'lim muassasalari faoliyati va baholashiga ta'siri ko'rib chiqiladi va tahlil qilinadi. Shuningdek, u AIning ta'limdagi afzalliklarini baholaydi. Boshlang'ich va ikkinchi darajali tadqiqot so'rovlari va intervyularga asoslanib, tadqiqot AI shaxsiylashtirilgan ta'limni yaxshilashi va akademik ish faoliyatini yaxshilashi, akademik yondashuvlarda samaradorlikni oshirishi va talabalar o'rtasidagi potentsial muammolarni hal qilishi mumkinligini ko'rsatadi. qo'llab-quvvatlaydi. Shuningdek, sun'iy intellektdan haddan tashqari foydalanish va haddan tashqari o'ziga ishonch jarayonlari muhokama qilinadi. Ushbu maqola ta'limda AIdan qanday foydalanish va optimallashtirish bo'yicha zarur tavsiyalar va ko'nikmalar bilan yakunlanadi. Ushbu tadqiqot natijalari shuni ko'rsatdiki, universitet professorlarining 60 foizi sun'iy intellekt talabalarga topshiriq va darsliklarni yaxshiroq o'zlashtirishda katta foyda keltirishini ta'kidladi. Qolgan 40 foizi esa bu fikrga qo‘shilmagan va sun’iy intellekt o‘quvchilarning mustaqil fikrlash va o‘zlari qaror qabul qilish qobiliyatiga putur yetkazishidan xavotirda ekanliklarini aytishgan. Statistik natijaga ko'ra, ko'pchilik talabalar asosan Chatgpt vositasidan ko'proq foydalanishlarini kuzatdik. Ayni paytda Ai ular uchun yaxshi ishlayotgani va ma'lumotni topish va tadqiq qilish uchun yaxshi imtiyozlar berayotgani kuzatildi.

Key words: AI and personalized learning, risky processes of artificial intelligence, benefits of Ai in skill development, primary research results, usage of Ai tools, impacting performance, discussion results

Kalit so’zlar: AI va shaxsiylashtirilgan o’rganish, suniy intellektning xavfli jarayonlari, ko’nikmalarni rivojlantirishda sun’iy intellektning avfzalliklari, birlamchi tadqiqod natijalari, suniy intellektdan foydalanish usullari, ishlashga tasir qilishi, muhokama natiajalari.

Ключевые слова: ИИ и персонализированное обучение, рискованные процессы искусственного интеллекта, преимущества ИИ в развитии навыков, первичные результаты исследований, использование инструментов искусственного интеллекта, влияние на производительность, результаты обсуждения.

1.Introduction

According to the changes of recent years, artificial intelligence has gained the main place in higher education institutions, and in some sense, changes in the form of education have been made through this intelligence. From tutoring systems to automated assessment platforms, this artificial intelligence has been designed to deliver personalized learning and thus become an effective solution for engaging students in the classroom through additional systems. Although AI is improving the academic performance of the education system in particular, it also faces many critical situations. This is causing a lot of speculation that it could lead to over-reliance on

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technology and criticism of AI. This article examines different approaches to studying the role of artificial intelligence in education, including its impact on student academic performance, and addresses the associated benefits and challenges. It provides insights into how AI will impact teaching and learning experiences among teachers and students and what skills to use.

2.Literature review

Ai and personalized learning

AI is today's global integration and is increasingly being used to make learning and teaching processes more efficient in many contexts. Personalized learning in Coursera's flexible learning system adapts to students' learning styles and provides fast, efficient access. It's AI-powered personalized learning. Khan Academy's learning recommendations empower students and learners to focus and enrich them with enough information at the right time to achieve their best academic results. It is Course's adaptive learning algorithm that trains the AI to use personalized data and provides ample opportunities. (Chassignol et al., 2018) [1]

Risky processes of Artificial intelligence

Many sources describe situations like addiction and overindulgence in AI tools as dangerous. An example of this is that students mainly have tasks solved by AI or continuous use of platforms that depend on AI, which leads to dependence on artificial intelligence. As a result, there are negative aspects of this, for example, critical thinking, inability to solve problems by oneself, and a decrease in the need for scientific resources are observed. (Gulson and Witzenberger, 2020) [2]. In addition, this article suggests that the growing digital divide and the fact that all educational processes and students do not have equal access to AI technologies are among the main reasons for increasing educational inequality.

Benefits of Ai in skill development

Improving the types of use of artificial intelligence, reducing inflexibility in course selection, enabling students to improve their results. These processes have successfully classified 2,900 examples but have proven to have an error rate of 37.5 percent. Decisions trained on the data were classified with 63.5 percent. This article provides clear and positive information on this information and decisions. (Shannaq and Al-Zeidi, 2024) [3]

3.Research Methodology

This study further illuminates the topic with qualitative insights and exchanges of quantitative data from surveys of university students and university professors. The primary study was created by surveying about 110 students on how they use AI and how it affects their academic performance and processes. In addition, information was obtained from university professors and lecturers about how artificial intelligence affects the student education system and how well it can help the evaluation process.

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Information was provided based on scientific articles, studies, and findings related to the subject of secondary research. All of this research provides insight into how AI can affect student performance at university, in what ways AI can be used, and how well it can influence their assessment system. Both studies are researched in a way that is related to each other, and the results of the primary study are confirmed by the secondary study. How artificial intelligence affects the education system; its good and bad points are presented.

Primary research

Based on the topic of this article, research conducted a survey of 110 students with questions based on artificial intelligence. Creating 8 survey questions with a basic set of questions and 5 options for each. Through this primary research, research into how AI will impact their education and training systems and what benefits are needed has resulted. This topic, "How AI affects students' performance and marks at university," caused a lot of discussion among students, because it was observed that AI is mainly used for university and textbooks.

Purpose: Collect data from students on how important AI is and how it affects their performance.

Survey questions

1.How often do you use AI tools (Grammarly, Turnitun, Chatgpt)

2. Which AI tools do you always use for academic purposes?

3. Do you think using AI can improve your academic performance (learning efficiency, understanding, grades)

4. In which situation AI has the most positive impact on your studies?

5.Have AI tools helped you identify your disadvantages which you need to improve academically?

6. Do you rely on Ai tools to complete assignments or prepare your exams?

7. Do you agree that Ai tools can disturb critical thinking and problem-solving by making you too dependent on them?

8. In general, how satisfied are you with the use of AI tools your learning experience?

In addition, research conducted short interviews with university professors and lecturers, and survey results has been satisfied. Almost 65% of students reported positive results. They noted that AI has greatly simplified assessment criteria and has had a positive impact on ensuring more active participation of students in the learning process and making the necessary textbooks more comprehensible. Nevertheless, some professors also mentioned its negative aspects, for example, students get used to using excessive AI, it has a negative effect on the development of their personal thoughts and it destroys their decision-making and independent thinking. They said that they are planning to make several capacities.

Secondary research

This secondary research explores the perspectives and insights of various sources and articles on how AI is being used, the challenges it poses, and how it is benefiting students and the

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education system today. It is known that artificial intelligence is gaining ground in many aspects, and AI in particular is advancing the learning process, and it is expected that there will be both benefits and harms. All such information can be found from relevant sources and research theories.

1.As artificial intelligence continues to advance, there are many advancements with the curriculum from year to year. Accordingly, McKinsey's report found that student achievement increased by 10-12 percent and cited reasons for this. (McKinsey & Company, 2022) [4]

2. AI focuses on improving the learning process and providing better understanding to students and learners. Regulates the educational process, teaches research on assignments and projects, and explains to students in depth. This article goes into more detail on such information and can provide me with a lot of information. (Leovigildo Lito Mallillin and D Mallillin, 2024) [5]

3.There are sources that say the use of AI can always raise ethical concerns when performing scientific works or evaluation algorithms and subjective tasks. Also, based on secondary research, it produces numerical differences, i.e., paid forms of artificial intelligence work well among students among their peers. It is assumed that they cannot use artificial intelligence equally due to their income. (Huang and Rust, 2021) [6]

4.Research findings

Figure 1

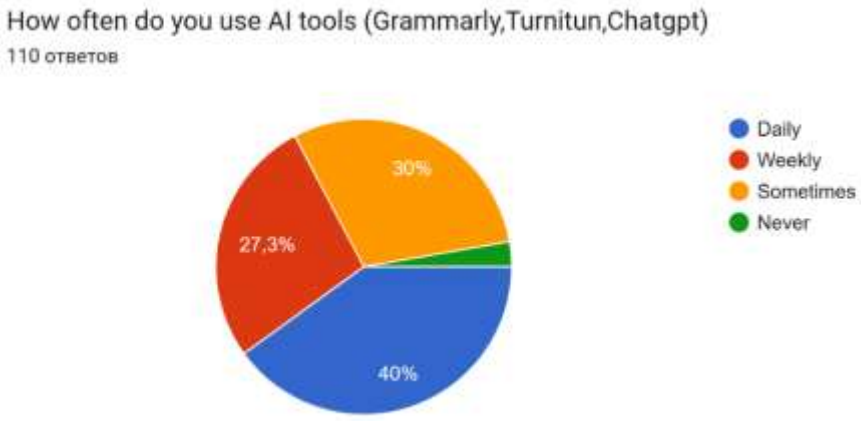

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Figure 2

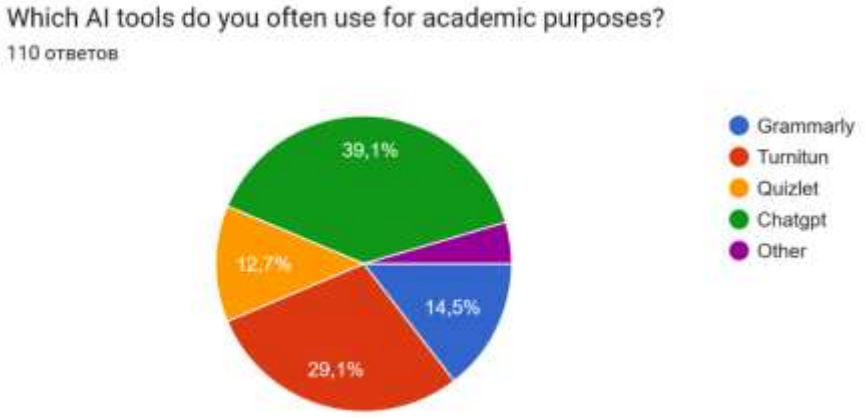

Figure 3

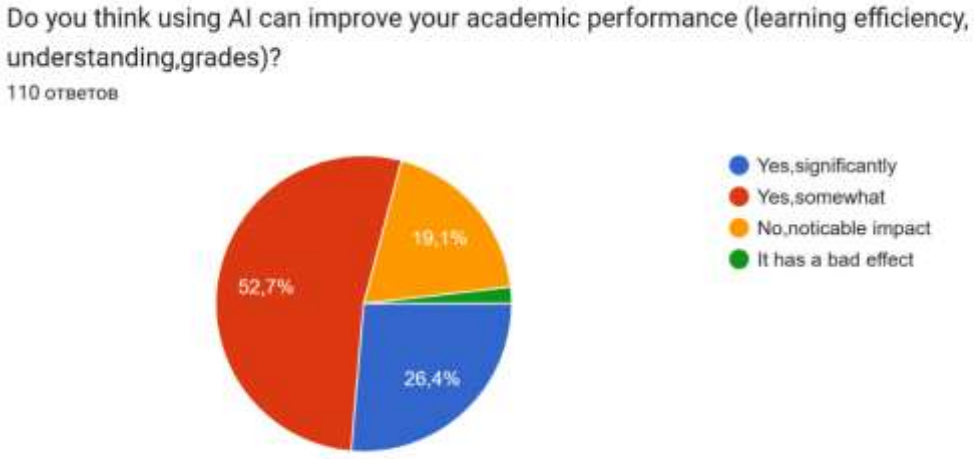

Figure 4

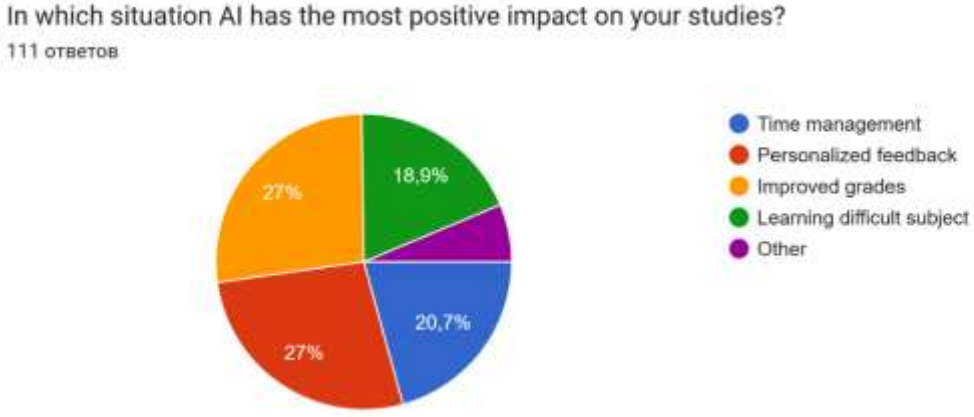

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Figure 5

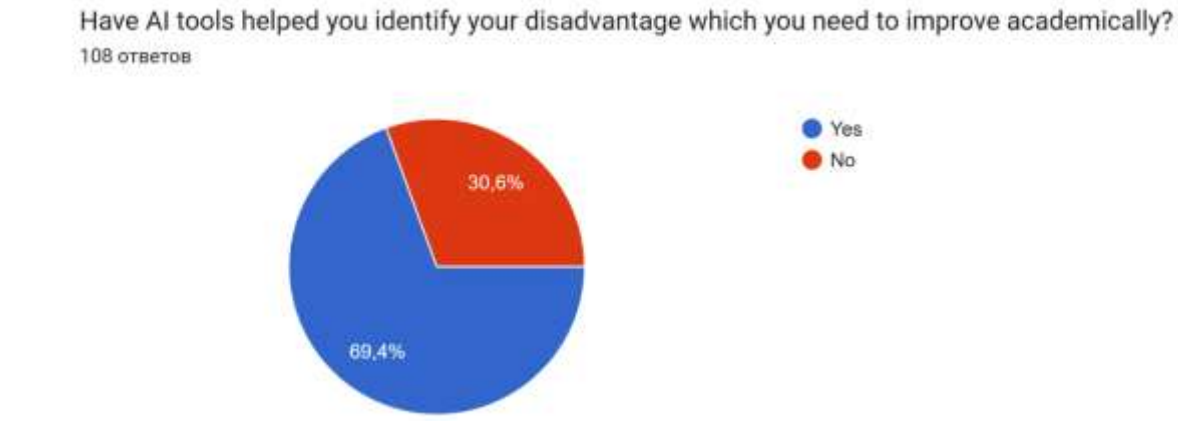

Figure 6

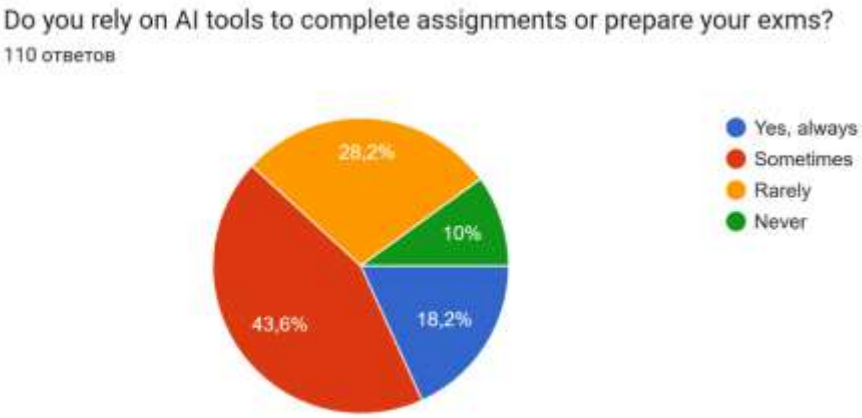

Figure 7

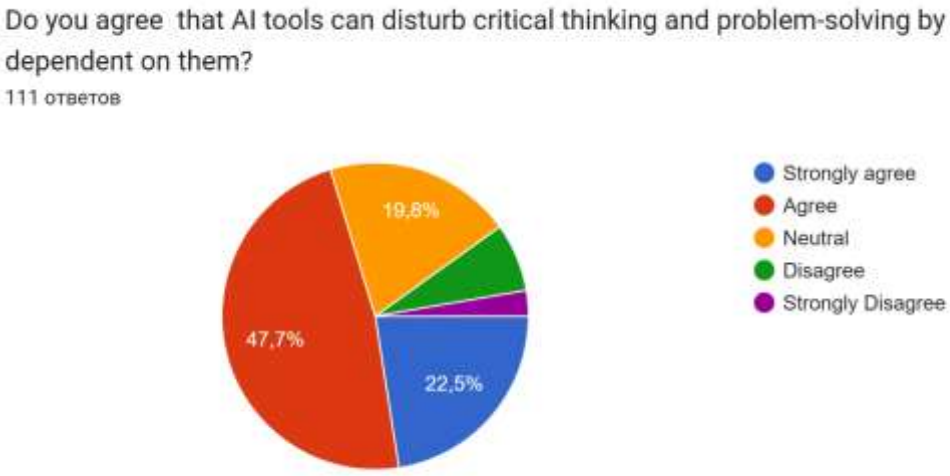

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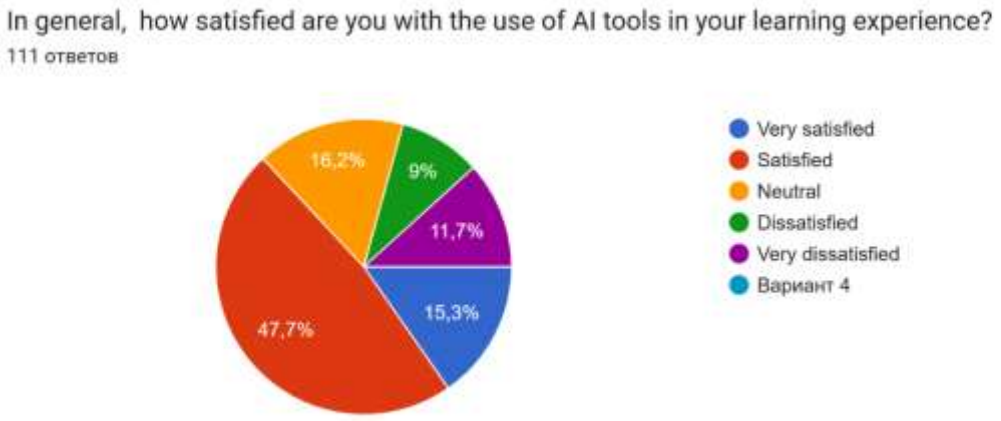
Figure 8



5.Data analysis

Utilization of AI tools: The results of this question showed that 40 percent of students were observed to use artificial intelligence tools regularly. The most popular tools include ChatGPT, Turnitin, Grammarly, and Quizlet from various platforms. In particular, the most used platform among students is ChatGPT, which showed 39.1 percent; Turnitin took 29.1 percent, which is mainly used for coursework and assignments. Quizlet platform is popular with 12.7 percent. The remaining percentage is added to the use of Grammarly and other platforms, with students mainly using the above tools more.

Affecting on performance: This result showed that many students responded yes to AI improving their performance in some way with 52.7 percent. The remaining 26.4 percent answered that it will affect significantly. I think this is a good result because most of them are not too used to artificial intelligence. The remaining 19.1 percent stated that they do not provide much benefit. From this it can be concluded that AI does not develop them much for academic performance.

Impact on studies: The results indicate that AI has the same impact on student learning as personalized feedback and improving grades, with 27 percent proving it. Almost identical indicators for learning difficult subject and time management showed 18.9 and 20.7 percent. It often has a positive effect on improving students' grades. Also, 69.4 percent of students agreed that artificial intelligence should help students develop academic aspects. Except for the remaining 30.6 percent.

Effecting tasks: 43.6 percent of students answered that they did not use AI for their homework and exam work, but sometimes. 28.2 percent indicated for rarely completing tasks. It can be concluded that students use the help of artificial intelligence to complete their assignments.

Impacting problem-solving and critical thinking: A 47.7 percent result showed that AI affects students' critical thinking and problem-solving abilities, confirming that it can be overwhelming for many students. The remaining 22.5 percent of students strongly agree,

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indicating that many students are affected by these skills. However, many of the results show that 47.7 percent are consistently satisfied with the use of AI. It can be seen from this that artificial intelligence has proven to be effective for many people through statistical analysis.

6.Discussion

- **Primary research methodology**

According to the answers of the primary research, we can observe that the use of artificial intelligence is widespread in various fields. It can believe that students are using various tools of AI almost every day, and it is growing worldwide. The fact that artificial intelligence has contributed to the development of education in various fields, providing students with necessary instructions for academic purposes and creating understandable resources for educational processes, is another impetus for development. ChatGPT is a popular tool among students and has become their friend. Personally, it can be said that if we can use artificial intelligence properly, it can give us a lot of knowledge and skills. In particular, the fact that artificial intelligence has a positive effect on student performance is almost 70 percent, which means that the information provided by AI is based on real-life experience and proves to be very intelligent. All 110 students left positive impressions about artificial intelligence. In this experiment, the university professors are also satisfied that the AI evaluation system works properly in their answers, and it has been effective for them and has created many educational resources. Almost 60% of teachers have proven that AI has a positive impact on their learning style.

- **Negative impacts of using AI**

There are certainly many positives to using artificial intelligence, but there are also negatives. It will be a good helper for the student on the survey, except for teachers and professors. Continuous use of artificial intelligence prevents students from concentrating their thoughts, lacks positive thoughts in decision-making, over-relies on artificial intelligence, and the completion of given tasks only with the help of AI may cause a lack of experienced and qualified personnel in the future. Because it would be appropriate for me to point out to them that AI is not human-like and cannot do tasks that humans can do. The remaining 40 percent of teachers worry that too much use of artificial intelligence will lead to exactly the above problems. It follows that artificial intelligence may not always have a good effect, and university professors are planning to develop a new project about this. It is precisely the creation of various restrictions and limits that aim to produce a new system of using AI only when necessary.

- **Secondary research methodology**

Usage of artificial intelligence

According to the sources found, many results on the use of artificial intelligence are presented in the data. According to statistics, it was shown that AI students' mastery of lessons increased by 10-12 percent. Based on this, it can be said that AI is developing and becoming smarter day by day, which ensures that it provides many benefits to people and effectively helps them achieve their goals. Based on this information, we can discuss that the creation of AI and its benefits are created based on the perception of people's thoughts will take the fact that these indicators are growing more and more indicates that the technology is developing further.

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Education processes

Another piece of information that should be discussed is that the impact of AI on the educational process and the use of artificial intelligence to provide students and teachers with a good mastery of the subject is another success. brings its results according to assignments and projects. Students can benefit from this tool with proper instruction to be more active in their curriculum. The information given in the teaching system at the university, various presentations, and slides will motivate the student to learn better, and artificial intelligence can contribute to the convincingness of the various tasks controlled by the teacher.

Exceptions of Ai tools

Another source of secondary research suggests that artificial intelligence raises ethical concerns. Using this tool is platinum; most sorted data works after payment. It can make numerical differences among students. What effect does this have? However, a wealthy person can use it, and the poor have to rely on their own strength. In other words, it leads to differences among peers and changes in grades. Therefore, the university should create criteria. During a serious assignment or exam, it is advisable to create restrictions to ensure that everyone is equal-minded and has the same responsibility. Sources believe that they cannot use AI because of their income. It can be said that it is correct in one account, but I do not agree with this opinion, because the human mind and perception are stronger than any means. This man-made artificial intelligence can work in every field, but it cannot create feelings and hypotheses like thinking and feeling like humans, so it was considered permissible to create necessary measures and restrictions on its use in education and other fields.

7.Conclusion

In this article, researches have presented my findings based on data and research. The article begins with an introduction, in this part it is mainly introduced what the article is about. The next part is the literature review part, in which have cited clips from the research conducted on artificial intelligence. This will help to improve the quality of the article. This part is followed by the research methodology in which is present information about the interviews and surveys conducted with students and university teachers. Secondary research provides information about what other people think about the topic and what background information they have collected. In the data analysis part, statistical information is presented precisely through the conducted surveys and interviews. In Discussion, all these collected primary and secondary studies are discussed and general insights are given and information is generated in the form of their discussion. All of the collected data and research are fully presented on how AI will affect education, how students and teachers view it, and the ways in which they use assessment systems. All secondary data found are provided with references and citations to prove the reference base. I hope this article and the research conducted will be useful.

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