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**COMPREHENSIVE ANALYSIS OF STUDENTS' AND TEACHERS'
ATTITUDES TOWARDS EFFECTS OF AI (ARTIFICIAL INTELLIGENCE)
ON HIGHER EDUCATION: A MIXED APPROACH**

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ABSTRACT

Artificial Intelligence (AI) is cropping up day by day as an essential part of our developing era. This research paper illustrates a comprehensive analysis of the impacts of AI on higher education finding its alternative influences on educating, learning, and the overall education system. Drawing on recent developments and findings, this paper highlights some positive and negative sides of the usage of AI and the teachers' and students' views on the role of AI and its effects on their work and study.

Firstly, the article begins by providing background information about AI like its meaning, main aim, and types. Then, other researchers' opinions and works about AI have been studied. It mentions the advantages and disadvantages of AI and some changes in the education landscape by showing some data about tutoring systems, automated assessment tools, and adaptive learning platforms.

Secondly, the survey was conducted to check people's concepts whose work is related to education about AI. In the survey, although AI is being one of the main tools in education, there are still some people who do not have background data about AI. Because of these sorts of misunderstandings of teachers about AI, students are using AI in order to accomplish their tasks by plagiarizing.

Finally, studying all the information and research, the views of the targeted population of the survey were discussed. Most of them responded that AI plays a crucial role in education according to its benefits like time-saving, getting reliable information in a short time, and getting feedback.

INTRODUCTION

With the development of computer systems and machines, AI has cropped up as the most useful way to make accomplishments much easier. AI or Artificial Intelligence refers to the development of computer systems that can perform tasks that require human intelligence.

Although some different researchers have observed the efficiency and effectiveness of AI on teaching and learning in education, I want to focus on students' and teachers' opinions, not only about opportunities but also the challenges of using this method of studying in higher education. The main aim of this research was to examine the merits and demerits of AI usage by students and educators of higher education.

Let's observe the meaning and main aims of AI. AI stands for Artificial intelligence which is the machine doing several accomplishments like humans. It can carry out some tasks, solve some problems, or give ideas that can be helpful for people and assist them in achieving their goals.

The concept of AI has cropped up since 1950 when it was explained as the ability of machines that can accomplish any task. Everybody realizes that AI is altering every part of our life. It is going to be spread widely all around the world by paving the way for people to think over all information to be combined and analyzed. Today everybody knows that interests are increasing by the day with huge advances. For example, more and more people talk in Generative AI programs like ChatGPT. Since it carries on providing people with immediate responses to their requests, AI can not lose its reputation among people and also learners. Several programs of ChatGPT have been cropping up which are free of charge and are a handful for the public.

We can say that AI is a technology that is an imitation of human skills. For example, problem-solving, conception, and creativity. It can accomplish things that are thought "smart" (Aruna Pattam, 2021). There are a lot of types of AI according to its work and functions. For instance, capabilities, functionalities, and technologies. Now let's look at their differences briefly. First of all, narrow AI does explicit accomplishment while general AI (also known as "Strong AI") shows a huge range of efforts as the same as people like being able to do multifunctional actions and creating machines (Manish Verma, 2023). As for functionality, despite answering quick questions, reactive machine AI is weak in memorizing. However, there is another function of AI that can store memory, it is called limited memory. Limited memory AI can store past information, and it can work effectively in the short term. In the following, we are going to be aware of the new concept of AI which has not been realized yet. Theory of mind AI is related to psychology. It works with emotions and

strives to anticipate people's future lives. It tries to understand feelings, and beliefs and communicate as people.

METHODOLOGY

This study employs a mixed methods research design to comprehensively investigate the impacts of AI on higher education and people's understanding of it. By combining qualitative insights from interviews with quantitative data from surveys, the research aims to shed light on the complexities and potential implications of AI integration in the higher education landscape. The findings will contribute to informed decision-making processes for institutions, policymakers, and practitioners in harnessing the benefits of AI while addressing the associated challenges.

Firstly, several studies were observed, and then a survey of 11 students and teachers was conducted to know about their views about the influence of AI on education.

The paper consists of distinguished parts. First of all, information was provided related to different experiences of using AI for various purposes from masters of higher education, researchers who conducted studies on this topic, and their opinions about the advantages and disadvantages of AI. The second section shows the analysis of the survey conducted from the targeted population. Finally, the last section presents the implications of integrating AI into higher education.

Now, let's look at and analyze some factors why researchers choose a mixed method given in the following stage:

- Enhanced understanding.

Providing a comprehensive understanding of the research topic can give enough contextual information with numerical data. Quantitative data can offer statistical evidence and generalizability, while qualitative data can provide rich, contextualized insights and help uncover underlying reasons and motivations.

- Comprehensive analysis.

Mixed methods research often involves integrating qualitative and quantitative data during analyzing data. It can provide readers with deep insights, not with general understandings.

- Contextualization.

The information which is gained with the qualitative method can assist readers with performing social and cultural reasons on the topic through interviews or surveys.

In qualitative research, we have studied notions of other researchers according to the merits and demerits of AI on education. Now, we are going to observe their views.

When it comes to the advantages and drawbacks of Artificial intelligence, first of all, the merits of it are going to be observed. Initially, it can be useful for decreasing the number of human errors. Individuals occasionally make some mistakes in discrepant fields whereas artificial intelligence can provide accuracy and exactness (Nikita Duggal, 2024).

In addition, people can work productively within 3 or 4 hours in a day. Some breaks and days off also are needed for humans while robotics can be available at any time. They do not need breaks or time off. Furthermore, they can think quickly and do multiple tasks at a time by providing satisfactory results (N. Duggal, 2024). Another advantage of it is for teachers and lecturers. Currently, most educators prefer using artificial intelligence to save time and work with fast service (Khawlah M. Al-Tkhayneh, Emad M. Alghazo & Dina Tahat 2023. p.106). For instance, artificial intelligence can do some office work like making presentations, and some documents. Additionally, it can check student's tasks and also evaluate them. Of course, this sort of work takes much time, therefore, educators prefer to use them rather than wasting their energy on tasks. AI can help students to check their tasks and also can give feedback to correct their mistakes. Furthermore, students ask anything, anytime, and anywhere, and AI sufficiently answers their questions. AI can give them advice or answers according to their level. This thing is also available (Carlie 2023). Although several people are working and achieving their purpose with the help of artificial intelligence, there are some disadvantages.

It can yield a negative impact on student's self-development because of less communication with teachers. As we know if a student works with an educator while doing some crucial tasks, they can learn some important parts by making mistakes. If they use only artificial intelligence to attain their purpose, they will lose interaction with teachers as they will not make mistakes.

, another drawback of AI is having issues with personal data. As we know, AI involves teachers' and students' personal information. It can decrease the safety of privacy. For instance, Italy prohibited using ChatGPT because of the problem which is mentioned above (Norbert Annus, 2023, p.3).

As far as I am concerned AI increased the number of plagiarized works among all people even if they are teachers or students. They are asking for their demands, AI is fulfilling them. They can make their presentations and also some crucial accomplishments as it is causing them to lose their professional skills.

In the following research, we have surveyed teachers and students to check their understanding of AI and their opinions about its effects.

RESULT

In the following stage, you will be aware of the questions of the survey:

1. **Where do you study or work? (institute, school, educational center)?**

2. **Who are you?**

- Teacher
- Student
- both

3. **How old are you?**

- 18-25
- 26-30
- 31-40

4. **Have you got enough information about AI (artificial intelligence)**

- yes, I Have
- No, I haven't. What is it?
- Not much. I heard it, but I don't know

5. **What do you think is good for teachers?**

6. **Is it good for students?**

7.

How familiar are you with the concept of artificial intelligence (AI) in the context of higher education?

- I am familiar enough
- I am not familiar enough

8.

Have you noticed any changes in the way AI is being used in higher education?

- Yes. There are too many changes
- No. Nothing has changed

9.

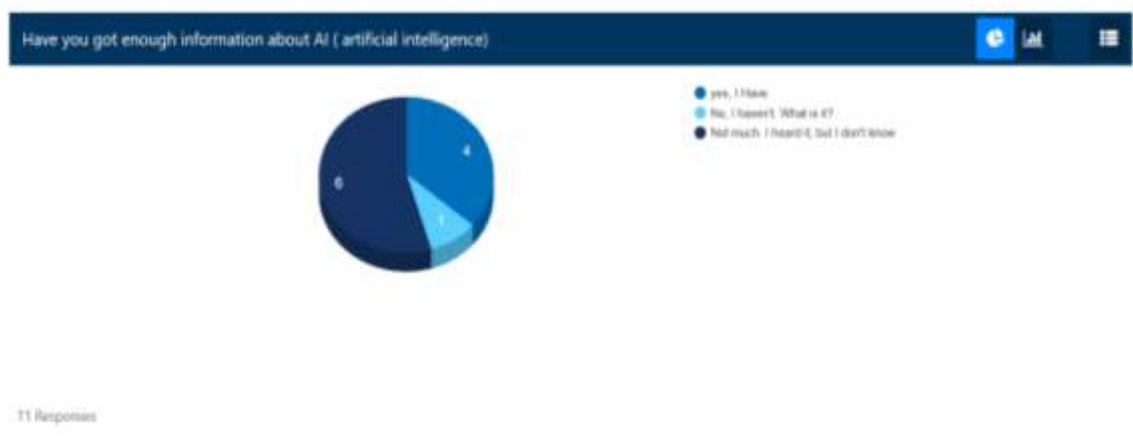
Are you aware of any specific AI-based tools, or platforms that are being used in higher education?

- yes
- no

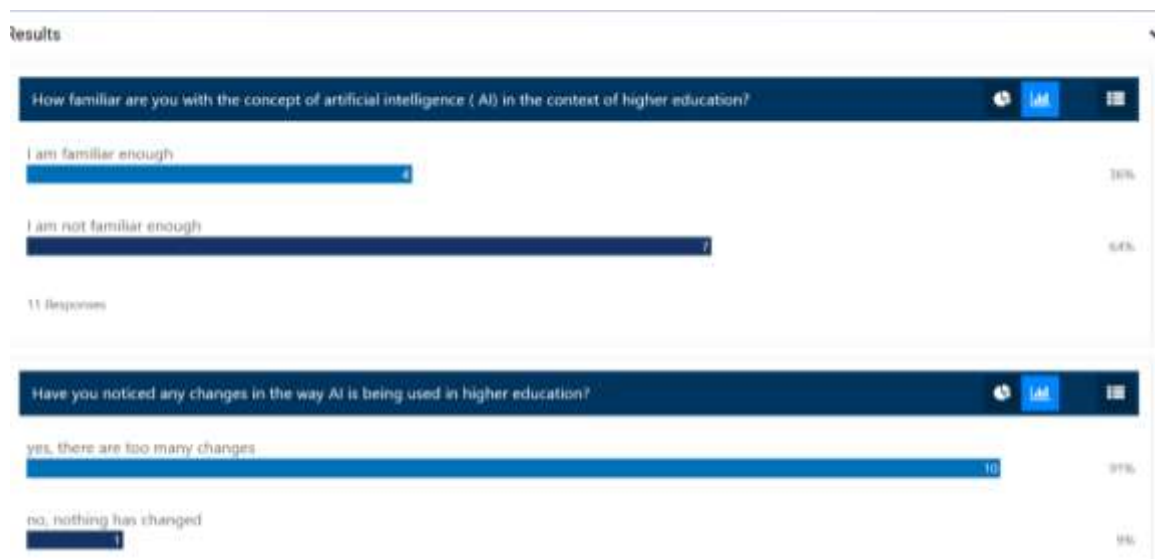
10. **To what extent do you believe AI technology can enhance personalized learning experiences for students in higher education?**

11. **How do you perceive the overall impact of AI on the future of higher education?**

I surveyed 12 students and teachers of the institute and educational center who are 18-41 years old. I chose to work with them as they are studying and working in education and might have enough information about AI rather than other people.



In the answers to the survey, we can see that more than half of respondents have enough understanding about AI whereas a third of them heard about AI but do not have information about the main aim of AI. Only 1 respondent has no data about it.



As we can see, at the beginning of the survey around 50 % percent of respondents had enough information about it but now when it comes to the concept of

AI in the context of higher education the trend made up 36%. I can easily say that in our country most people are not fully aware of AI. Although, they know about robots, virtual assistants, and also the purposes of AI in commerce and medicine, they do not have an adequate understanding usage of AI in higher education. Therefore, they do not know the alterations that made our education very different from the past.

Yes 3 responses

Exactly

I am not sure it is good or bad, but without AI as well teachers can do their work I think with the help of books and internet websites too.

Yes of course

Using computers enough

Sure

It is good for teachers

Absolytely

Yes it is very good

11 Responses

Is it good for students? AI Analysis

Yes 4 responses

For sure

I would say somehow good. They can check their writings with the help of AI and also sometimes learn new things.

Somehow

I don't know

Partly

Certainly

Yes I think so

All of them think that AI is good for themselves because it makes their tasks easier and more effective.

To what extent do you believe AI technology can enhance personalized learning experiences for students in higher education? AI Analysis

Yes 2 responses

In many ways, that's for reference letters, resumes and even research papers

It can help somehow. But in many times , students use AI even to do their homeworks or tests instead reading and finding by themselves

Completely agree

?

Of course

It offer more facilities and convinients

It is very good 🍌

More information

10 Responses

How do you perceive the overall impact of AI on the future of higher education AI Analysis

If used properly it will have positive effect

It gives as good resluts if we both teachers and students use it properly

Big

Very high

😊

I didn't think about it

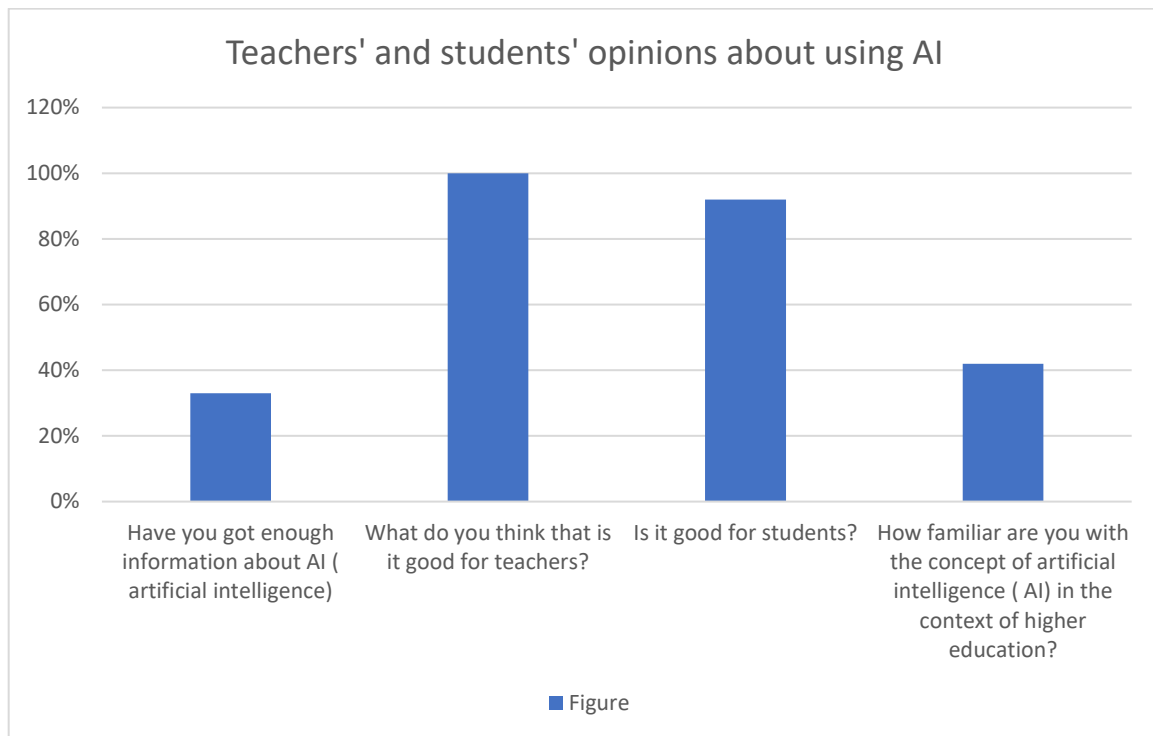
Good

There is no any impact

Positive

8 Responses

They know some advantages and most of them expect AI will be used more widely in the future.



The given bar chart illustrates the opinions and general understanding of teachers and students. Obviously, in our country, most people do not have enough information and understanding about artificial intelligence.

First of all, in the first bar, we would like to know about respondents' background knowledge about AI. Only a third of the targeted population has adequate information about AI. Since AI has been appearing moderately in our country, many people only heard about it without knowing its aim and function. Then, in the following stage, respondents were asked whether using AI is good for teachers in education or not. All of the teachers and students agreed educators to use AI in education according to some benefits. In the next trend, the same question was asked but not for teachers, or students. Accounting for 92 %, nearly all of the respondents thought that utilizing AI is useful for students. Finally, we wanted to check their idea about AI in the context of higher education.

The trend for it constituted 42% and showed there is still have inadequate understanding of using AI in higher education.

DISCUSSION

As we can see from our survey, most respondents of the targeted population agreed on the view of utilizing AI in higher education because of some provided

benefits. As it is widely accepted that, AI has the greatest role in education by changing our education system. In the following stage, I am going to give some suggestions to use AI in a positive way in education.

First of all, AI can be a productive way for students to accomplish their tasks, and ask some things which they find difficult while carrying out some crucial tasks. Students can get a huge amount of reliable information with the help of AI. Despite providing these sorts of benefits, AI can give students to work in their comfort zone also. Students do not have to expend their time to go somewhere or face some issues to find satisfactory results.

Secondly, AI can be a tutor for everyone as it explains information deeply. It gives students virtual assistants, guidance, and study tips. Virtual assistants like ChatGPT give immediate responses to questions. It can give some feedback and broaden explanations which can help students avoid making mistakes.

Another benefit of AI according to people's view is for students who are not physically active. They can study and learn with the help of AI without a teacher. In this case, they do not need a special educator or are facing difficulties in getting reliable information or asking for tips.

CONCLUSION

To sum up, artificial intelligence is leading to create humungous alterations in education. Even though there are some negative sides of robots of artificial intelligence, there are several benefits sides to utilize in the education system. While there are some demerits of AI creating some challenges to people like finding job vacancies in adequate numbers, the merits of it outweigh over disadvantages.

Firstly, they can personalize the learning experience by catering to individual needs and preferences. Adaptive learning systems can analyze student data and provide tailored content, feedback, and support, leading to improved academic outcomes. Additionally, AI can automate administrative tasks, freeing up valuable time for educators to focus on teaching and engaging with students. Furthermore, AI can facilitate access to education, breaking down barriers of time and distance.

Moreover, AI can revolutionize research in higher education by analyzing vast amounts of data, identifying patterns, and generating insights that can accelerate scientific discoveries and innovation. AI-powered tools can also aid in plagiarism detection, ensuring academic integrity. However, it is crucial to address potential challenges associated with AI in higher education. Ethical considerations such as data privacy, algorithmic bias, and the responsible use of AI must be prioritized. Institutions need to invest in training educators and students to develop the necessary digital literacy skills to navigate the AI-driven landscape effectively.

It is important to note that some individuals are not utilizing the benefits of AI in higher education for the intended purpose. Instead, they use AI to complete tasks without putting in the necessary effort themselves. This often leads to the use of plagiarized data, which negatively impacts productivity and reliability. In my perspective, students should work on their skills and avoid relying completely on AI technology.

In summary, AI has the potential to enhance learning experiences, improve administrative processes, and foster innovation in higher education. While challenges exist, a proactive and responsible approach to integrating AI into higher education can lead to a more inclusive, personalized, and efficient educational ecosystem. By embracing AI technologies and leveraging their potential, higher education institutions can prepare students for the demands of the future and contribute to societal progress.

REFERENCES

1. Al-Tkhayneh, K. M., Alghazo, E. M., & Tahat, D. (2023). The advantages and disadvantages of using artificial intelligence in education. *Journal of Educational and Social Research*, [P 106].
2. Annus, N. (2023). Weigh the pros and cons of using artificial intelligence in education (p. 2). Publisher.
3. Carlie. (2023). AI in education: The advantages and disadvantages. Retrieved from <https://www.instrucko.com/blogs/the-advantages-and-disadvantages-of-ai-in-education>
4. Duggal, N. (2024). Advantages and disadvantages of Artificial Intelligence. Retrieved from <https://www.simplilearn.com/advantages-and-disadvantages-of-artificial-intelligence-article>
5. Manish Verma (2023). Artificial intelligence role in modern science: aims, merits, risks, and its applications.
6. Pattam, A. (2021). Artificial intelligence, in simple terms. Retrieved from https://au.linkedin.com/in/arunapattam?trk=article-ssr-frontend-pulse_publisher-author-card