An overview of students' opinion on Artificial Intelligence and its impact on their academic performance and career opportunities

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Abstract: *The present study is based on the students' opinions regarding the artificial intelligence and its usage in improving their academic performance and availability of career opportunities due to the artificial intelligence. In today's era the study pattern of the students has drastically changed. Before introduction of artificial intelligence students used to use books, notes and other printed study material or some contents downloaded from the internet. But after the availability AI technology the students are mostly using the various tools of artificial intelligence for their study. AI helps students to save their time and energy of study.*

The preparation of presentation, making assignments, finding contents become very much easy for the students but on the same time the artificial intelligence making students slave by losing their creativity. There is always threat in the mind of students that the artificial intelligence may lose their chance of getting job in the various industries because the human intelligence is being replaced with the artificial intelligence.

The present study is aim to throw the light on the students' views regarding how artificial intelligence is providing benefits to them for improving their academic performance and also to find out the drawback of the artificial intelligence in the academics. Similarly, this paper is also focus on the career opportunities and career threats of artificial intelligence for students.

Key Words: *Artificial Intelligence, Education, Academic Performance, Career, Career Opportunities etc.*

1. INTRODUCTION:

Artificial intelligence is the advanced computer programme which performs any kind of function without presence of human intelligence. Generally artificial intelligence is useful for learning, reasoning, problem solving, perception and understanding the languages. After introduction of artificial intelligence, the efficiency and accuracy of the work have tremendously increased. Due to use of artificial intelligence, the decision-making capacity of the individuals and firm has also increased. The main advantage of artificial intelligence is, it provides the personalized services to the users. Artificial intelligence with various advantages also possesses various disadvantages like bias and fairness of information and data. There is no chance of maintaining the privacy and security of the information. Due to introduction of the artificial intelligence there is might chance of replacement of various job with the AI technology. The artificial intelligence is occupying the place in each and every sector and industry. In banks, railways, insurance, healthcare, retail, manufacturing, marketing and educations are some areas which are mostly occupied by the artificial intelligence. Now a day the students are using various artificial intelligence tools for their studies which are helping them to improve their academic performance and get various career opportunities in future. With the use of AI tools students performing well in their academics. The AI tools are useful for finding the study material, making presentation, writing assignment, academic up gradation and so many things. But there are certain disadvantages of the AI technology face by the students like largely depend on AI tools, less use of traditional methods of study, less use of library, loss of creativity and so many.

2. LITERATURE REVIEW:

The present research paper reviewed the following literatures
The research paper published on topic **"Students' Perceptions of the use of Artificial Intelligence in Education Services"** by Ines Djokic, Nikola Milicevic, Nenad Djokic, Borka Malcic and Branimir Kalas, University of Navi Sad,

Navi Sad, Republic Serbia in year 2024. As per their research they find that the role of artificial intelligence is becoming wider and it reach to the education as well. The artificial intelligence is providing most of education area like contents, teaching, assessment and communication. As per their paper they pointed out the weakness of traditional education system is responsible of making artificial intelligence popular among the students. They also concluded that before introduction of artificial intelligence in the education system all fear about the privacy, control and lack of human interaction must be address.

The research paper published on topic **"The Level of Awareness and Perception of University Students towards Artificial Intelligence in Higher Studies"** by Dr. Hoori Nadir in year 2024. As per his research, he finds that the rate of adoption of artificial intelligence in teaching learning in evaluation process in education institutions is growing continuously. The artificial intelligence is paving the way for student centric personalized learning. He also finds that the artificial intelligence will fill the teaching learning gap, save the learning time and accelerate the students' performance with better understanding. AI system will help teachers and students by providing them with high quality contents that will enhance teaching learning and make the entire process measurable with the help of learning analytics, machine learning and data mining

The research paper published on topic **"Sustainability of Higher Education: Study of Students Opinions about the possibility of Replacing Teachers with AI Technologies"** by Valery Okulich-Kazarin, Artem Artykhow, Lukasz Skowron, Nadiia Artyukhova, Oleksandr Dluhopolskyi and Wiktor Cwynar in year 2024. The aim of their research paper was to find out the solution on all the students are sure that AI will replace university teachers or not. As per their study they find out that implementing the managerial and pedagogical recommendations will increase the sustainability of higher education with the consistent introduction of artificial intelligence technologies in university. As per their study out of 599 respondent 410 respondent were in opinion that the artificial intelligence will not replace university teachers. Only 65 respondents were in opinion that the artificial intelligence will replace university teachers and reaming 124 respondents were had no idea about this.

The research paper published on **"A Study on Artificial Intelligence and Its Impact on Education"** by Husniyera Yesmin and Ashraful Alom, Gauhati University, Assam in year 2022. As per their research they found that the use of artificial intelligence is increasing day by day. In education artificial intelligence is become the helping tools for students as well as teachers and supporting the learning process. As per their conclusion the AI can be used as an education tool that guides students towards their goals by providing personalize feedback on homework, quizzes etc. with the help of AI. With the help of AI the students can make their future bright. They also found that AI provides students with practical and experiential learning experience, particularly when used together with other technologies. Finally, they conclude AI had a major impact on education, administration and learning.

Research Gap:

Artificial intelligence is gaining importance in each and every sector. The role and uses of artificial intelligence is increasing rapidly in the field of education. Lots of research have been undertaken on artificial intelligence in education, higher education, uses if artificial intelligence in higher education and so on. All these studies were aim to find out the usefulness of the artificial intelligence in the education or to know the students opinion about the artificial intelligence. But out of these studies very limited studies taken place in the Nagpur city and none of the study focuses on the career opportunities or challenges for the students after introduction of artificial intelligence.

Significance of the Study:

The present study is significant in the following ways:
1. The study will help to know the opinions of the students of higher education.
2. The study will help to identify the reasons for which students use artificial intelligence in education.
3. To list out how artificial intelligence is helpful to enhance the academic performance of the students.
4. With the help of this study it can be assess the opinion of students about the career opportunities and career thereat after introduction of the artificial intelligence.

3. OBJECTIVES :
1. To study the opinions of students on Artificial Intelligence regarding their academic performance.
2. To study the opinions of students on Artificial Intelligence regarding their career opportunities.
3. To know the various use of Artificial Intelligence use by students in their academics.
4. To know the changes in study pattern of students after introduction of Artificial Intelligence
5. To know the difficulties faced by the students after introduction of Artificial Intelligence
6. To understand the role of Artificial Intelligence in saving the efforts of students.
7. To know the future threats to career of students after introduction of Artificial Intelligence.

Hypothesis:

> **Hypothesis: 1**
> H0: Artificial Intelligence doesn't help students to improve their academic performance.
> H1: Artificial Intelligence helps students to improve their academic performance.
> **Hypothesis: 2**
> H0: Artificial Intelligence doesn't help students to improve their career opportunities.
> H1: Artificial Intelligence helps students to improve their career opportunities.
> **Hypothesis: 3**
> H0: Artificial Intelligence doesn't provide various facilities to students in their academics.
> H1: Artificial Intelligence provides various facilities to students in their academics.
> **Hypothesis: 4**
> H0: Artificial Intelligence makes a significant negative impact on study pattern of students.
> H1: Artificial Intelligence makes a significant positive impact on study pattern of students.
> **Hypothesis: 5**
> H0: Students are not facing difficulties in their academics after introduction of Artificial Intelligence.
> H1: Students are facing difficulties in their academics after introduction of Artificial Intelligence.
> **Hypothesis: 6**
> H0: Artificial Intelligence is not helpful in saving the time and efforts of students in their academic performance.
> H1: Artificial Intelligence is helpful in saving the time and efforts of students in their academic performance.
> **Hypothesis: 7**
> H1: Artificial Intelligence doesn't increase the career threats to students.
> H0: Artificial Intelligence increases the career threats to students.

4. RESEARCH METHOD :

The present study is explorative and descriptive in nature. This study is based on the primary data to collect the opinions of the students on artificial intelligence through structured questioners on google form. For understanding and explaining the concepts of artificial intelligence secondary data has been used.

> a. *Sample Design and Size:*
> i.   The targeted population of the study is the students of various Programme of Nagpur city of UG and PG
> ii.   A total number of 48 students of various Programme of Nagpur city selected randomly.
> b. *Tools Used:*
>
> The conclusion of the study has been drawn by using frequency analysis, percentage and T-test using SPSS software.

5. FINDINGS :

1. In question 1 t(cal.)>t(tab.) hence the null hypothesis i.e. Artificial Intelligence does not help students to improve their academic performance is rejected. As per the data collected majority students are the opinion of artificial intelligence is helpful in many aspects for them. Artificial intelligence can facilitate them in academics as well as helps to improve their academic performance.

2. In question 2 t(cal.)>t(tab.) hence the null hypothesis i.e. Artificial Intelligence does not help students to improve their career opportunities is rejected. The students are the opinion that the artificial intelligence can useful to provide solutions on the various problems. It can be reducing the requirement of manpower in the industry but on the same time artificial intelligence is helpful to increase various kinds of career opportunities for the students.

3. In question 3 t(cal.)<t(tab.) hence the null hypothesis i.e. Artificial Intelligence does not provide various facilities to students in their academics is accepted. It is true and seems as per the responses collected from the students that artificial intelligence is helping students in various angles. The students are using the artificial intelligence and its various apps for finding the study contents, making presentation, submission of assignments etc. But as per students opinion these facilities are not sufficient. Data repetitions, same presentation, same language are some problems faced by the students while using the artificial intelligence in their study.

4. In question 4 t(cal.)>t(tab.) hence the hull hypothesis i.e. Artificial Intelligence does not make a significant positive impact on study pattern of students is rejected. As per the opinion of students artificial intelligence is useful by many aspects but it can't change the study pattern of the students. Because the after introduction AI there might be change in study contents and methodology but there is no change in the examination pattern conducted at university and college level.

5. In question 5 t(cal.)>t(tab.) hence the hull hypothesis i.e. Students are not facing difficulties in their academics after introduction of Artificial Intelligence is rejected. As per the data collected on the opinion of students over the difficulties facing by the students in their study after using artificial intelligence is accepted by them. As per their opinion there facing the difficulties in using the artificial intelligence and it impacted negatively to the students. The contents provided by the AI and contents available in the books might be change up to certain extents hence the students faced the difficulties.

6. In question 6 t(cal.)<t(tab.) hence the null hypothesis i.e. Artificial Intelligence is not helpful in saving the time and efforts of students in their academic performance is accepted. As per opinion of the students the artificial intelligence is not very much helpful to save time and efforts of them. The contents requirement to the students cannot get easily by using various apps of the artificial intelligence particularly in local and regional languages. The conversion of the text into power point presentation and so many features of artificial intelligence are not much effective. Hence the students need to rework on it and sometime needs to replace entire details hence AI is not responsible of saving students time and energy.

7. In question 5 t(cal.)>t(tab.) hence the hull hypothesis i.e. Artificial Intelligence does not increase the career threats to students are rejected. As per the opinion collected from the students are aware that the artificial intelligence is not going to increase the career opportunities for them but they are also sure that there will be many obstacles come in their career due to the artificial intelligence.

6. DISCUSSION :

The data collected from the 48 students from the structured questioner are tabulated and on that basis t-test has apply to test the hypothesis as per following manner.

Q. No.	S.A.	A	D	S.D.	Mean	St.Dev.	μ	T(cal)	T(tab)
1	19	11	10	8	2.15	1.13	1	7.19	2.042
2	11	17	12	8	2.35	1.02	2	2.33	2.042
3	14	21	9	4	2.06	0.91	2	0.46	2.042
4	12	23	9	4	2.10	0.88	3	6.92	2.042
5	8	13	21	6	2.52	0.92	3	3.00	2.042
6	18	17	10	3	1.96	0.92	2	0.25	2.042
7	18	12	8	10	2.21	1.17	3	4.65	2.042

Que. 1	Que. 2
Mean = (19x1)+(11x2)+(10x3)+(8x4) = 103/48 = 2.15 S.D. = 1.13 μ = 1 t(cal.) = 7.19 t(tab) = 2.042	Mean = (11x1)+(17x2)+(12x3)+(8x4) = 113/48 = 2.35 S.D. = 1.02 μ = 2 t(cal.) = 2.33 t(tab) = 2.042
Que. 3	Que. 4
Mean = (14x1)+(21x2)+(9x3)+(4x4) = 99/48 = 2.06 S.D. = 0.91 μ = 2 t(cal.) = 0.46 t(tab) = 2.042	Mean = (12x1)+(23x2)+(9x3)+(4x4) = 101/48 = 2.10 S.D. = 0.88 μ = 3 t(cal.) = 6.92 t(tab) = 2.042
Que. 5	Que. 6
Mean = (8x1)+(13x2)+(21x3)+(6x4) = 121/48 = 2.52 S.D. = 0.92 μ = 3 t(cal.) = 3.00 t(tab) = 2.042	Mean = (18x1)+(17x2)+(10x3)+(3x4) = 94/48 = 1.96 S.D. = 0.92 μ = 2 t(cal.) = 0.25 t(tab) = 2.042
Que. 7	
Mean = (18x1)+(12x2)+(8x3)+(10x4) = 106/48 = 2.21 S.D. = 1.17	

| μ = 3
t(cal.) = 4.65
t(tab) = 2.042 | |

7. CONCLUSION :

Now a day the artificial intelligence is becoming popular among the students as a tool of academic performance but even though the artificial intelligence is not able to improve the academic performance of students. Artificial intelligence is a computer programme which perform the work in very prompt and speedy manner even though as per the study the artificial intelligence is not helpful to increase the career opportunities for the students in future. Artificial intelligence is not popular and not reliable tool for the students which provides various facilities related with the study to the students. After introduction of artificial intelligence techniques, the study patter of the students has changed it is true up to the certain extent but as per the study the artificial intelligence does not positively impact on the study pattern of the students. After change in study pattern the traditional technique of study has replaced by the modern artificial intelligence techniques up to certain extents but traditional examination pattern does not allow to change it completely. There was some argument that artificial intelligence created the problems for the students in their study and as per study it is found that the students are using artificial intelligence but they are facing some difficulties as well.

Artificial intelligence is the smart computer programme which provides any information and study content to the student in fraction of time. Hence it is proved that the artificial intelligence is helpful to save the time and efforts of the students for improving their academic performance. But sometime AI provide the wrong information, wrong contents, wrong style of presentation etc. Due to these students need to readjust it as per their requirement and it taken marginally high time. There is worry among the students that due to artificial intelligence there is threat to the students for their career opportunities and as per the study it is true that due to introduction of artificial intelligence the students will face career difficulties in future due to less number of jobs creation.

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