

A Study on the Impact of Artificial Intelligence on Higher Education with Special Reference to Chennai City

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Abstract

AI technology helps to transform the education sector by providing customized learning opportunity, automating administrative facilities, and improvised accessibility. In various sectors, including higher education and other service sectors, artificial intelligence (AI) has been a topic of developing the educational sector towards investigation and research. This study finds the benefits of AI on higher education by investigating its impacts on lecturing and understanding, frequent validation, morals & ethical values, needs inter personal skills and the future of degree holder's future generation. The main goal of this study is to examine the benefits of AI on higher education world, understand its impact on the lecturing and understanding process, investigate its advantages on continuous testing and ranking and pre determine its impacts in the fields of higher educationist's future. To determine this, the study uses a qualitative approach based on a questionnaire survey method through Google forms from the under graduate and post graduate students. The SPSS tool was used for analysis. It results the important scope of AI in the future of educational sector. It was found that the benefits and the impact of AI in equipping degree holders with new skills for their future careers. It also explains the importance of considering the moral and ethical values of artificial intelligence (AI).

It was identified that AI is more beneficial and needed to inter grate all higher education institutions into their programs to prepare degree holders for the future employability. This study explores the benefits into the capability of AI to transformation on educational sector and deliver better knowledge to the growth of new developmental skills for higher educationist. It has important tool for educators,

policy creators, and other related personnels in the higher education sector. It was suggested that the higher educational systems can introduce and inter grate AI more on higher education and the moral and ethical values of AI in the growth and development of their programs should be noted down and must be implemented by the institutions. It helps the higher educationist to develop in a better way to meet the future expectations.

Keywords: AI technology, Higher Education, Career, Ethics & Values, Graduates.

I. INTRODUCTION

The word Artificial Intelligence (AI) itself we have the meaning that is this is artificial intelligence of the human. The human (intelligence) ideas and thoughts are saved at one place (machinery) and used by the others are called as Artificial Intelligence. Earlier students if they need any notes or information, they have to go directly to the library to get information, now it is easy to collect the details related education and other activities. It simplifies the teaching and learning technology of the world. In India higher education started using AI technology in educational sector. This study helps to understand the effect of AI technology in higher education. Even though we have lot of benefits with AI technology, some of the disadvantages also there while using AI technology. This study helps identify both merits and demerits and the problems arise while using AI technology. This is exploratory research. Primary and secondary data was collected to understand and analyses the impact of AI technology on higher education. The study uses a quantitative research design to collect data from under graduate and post graduate students, academics from different colleges in Chennai through google forms. Increasing efficiency, improving accuracy, time saving and the students experience are the factors selected to evaluate this study. Data quality, lack of autonomy, dependance on technology and misrepresentation are the problems identified and tested for the study.

Benefits of AI in Higher Education

The primary usage of AI is to gives systematic and individual approach to every student. Each and every student's needs and wants are identified and satisfied by the AI in the customized way. It provides the platform to the students to learn individually. It gives broader information and knowledge about each and every subject.

Educational institution to fulfill administrative tasks has to perform various functions like grading to the students, enrollment, and admissions processes, monitoring the performance of faculty, staff and students. AI becomes this function easier with the help of automation. AI also helps to research and analytics. Enables

researchers to examine vast amounts of data, identify patterns, and make new discoveries. Today the research can be done virtually. It creates a platform to the research environments and collaborative platforms and facilitates interdisciplinary research and global connections.

AI increases accessibility in higher education, providing language translation services, accessibility tools for students with disabilities, and online learning platforms for remote students. Faculty benefit from AI-assisted grading and feedback, personalized professional development, and AI-generated educational content. Institutions can reduce costs through efficient resource allocation, predictive modeling for student success, and data-informed policy development.

Moreover, AI develops the overall higher educationist experience through AI-powered student support services, personalized career counseling, and AI-generated student recommendations. Scalable and flexible online learning platforms expand educational opportunities, while AI-driven analytics and insights inform teaching practices and institutional decision-making.

Overall, AI's benefits in higher education include:

- Facilitating tailored learning
- Increasing efficiency of the higher education students
- Better Administration
- Improved research and development
- Increased information availability
- Supports teachers
- Saves Cost and energy
- Data availability
- Improving learning experience
- Flexibility

Review of Literature

Grabanska G, Andrezejewski M, Grabinski K (2021), explored a study about the perception of the potential usefulness of artificial intelligence in the academic curriculum of finance and accounting courses of graduate students. The study was conducted to investigate the perception of usefulness of artificial intelligence among the graduate students learning in Cracow University of economics. The study explored the awareness of importance and required technology changes as the expectations of graduate students.

A study explored to analyze the perspectives on artificial intelligence among the health care students in Canada. In the study 78.77% participants reported that artificial intelligence technology would affect their career within upcoming years. Similarly, 74.5% respondents highlighted the positive attitude regarding the new rule of artificial intelligence in their career fields. Additionally, students having a negative or opposite perspective on artificial intelligence they also agreed on the needs of artificial intelligence in their academic curriculum. [Teng M, Singla R, You O, Gupta R, (2022)]

In the study of Kurnaiti E.Y, Fithtaini R (2022), administered on the perception of QuillBot utilization as an AI tool in English writing among the postgraduate students. The qualitative study was performed with 20 postgraduate participants familiar with the QuillBot tool.

A study explored to evaluate the patient's perception towards human artificial intelligence interaction in the healthcare sector in the USA. The major purpose of the study was to examine the perception of significant benefit risk utility of artificial intelligence clinical applications among the patients. The study revealed negative perceptions about privacy concerns, trust issues, communication barriers, less transparency in regulatory standards, liability risk. The findings supported that incompatibility with instrumental, technical, ethical and regulatory values were the reason for rejecting artificial intelligence tools in the health care sector, due to the risk associated with implementing AI applications in the diagnosis and treatment procedures. Additionally, the study was highlighted on regular audits, continuous monitoring of AI tools, and also evaluated the safety, quality transparency features in AI applications. [Esmacilzadeh P, Mirzaei T, Dharanikota S (2021)]

A study administered by Jaiswal A, Arun C.J. (2021) to evaluate potentials of artificial intelligence for the transformation of the education system in India. The study was conducted with four subject matter experts working on AI technologies and four senior managers of Indian educational technology firms who develop AI applications for schools. The study revealed the significant importance of personalized learning, recommendation systems and adaptive assessments that are helpful for the students and the teachers. Also, the study highlighted the immense potentials of artificial intelligence tools in educational technology firms and the practical implications for the transformation of education systems in India.

As discussed above, AI and its various aspects have been studied by several scholars like, the use of AI in government policy implementation, academic program implementation, AI and its effects on employment sectors, AI in content development and editing, AI in healthcare sector, AI in teaching – learning process etc. The present study in general focuses upon general perception of AI amongst the under & post graduate students (higher education) and specifically focuses upon

eight sub areas of AI such as Increasing efficiency, improving accuracy, time saving, students experience, data quality, lack of autonomy, dependance on technology and misrepresentation.

Need for the Study

Artificial Intelligence (AI) helps to changing various fields in the various sectors and it is very important to the educational sector to study and implement the AI technology into the higher education. This paper explains the multi-level effects of AI on higher education in India, concentrating on the benefits it provides and the problems arises through this. Basically, AI has lot of benefits to the development of the students. Students can use AI to improvise their knowledge and also helps to develop towards the research. Each technology has many benefits and demerits as well. This creates a need to study about the impact of AI technology on higher education. This study gives deeper knowledge about the usage of AI technology and the overall understanding about the technology among student community. This study also explains the ethical and moral values of implementing AI technology in higher education.

Objectives of the Study

- To study the effects of AI technology on higher educational Sector.
- To examine the importance and need of AI on the lecturing and understanding process.
- To analyses the factors influencing AI technology.
- To find out the problems faced by the degree holders while using the AI technology.
- To give suggestions to understand and implement the AI tool in a better manner.

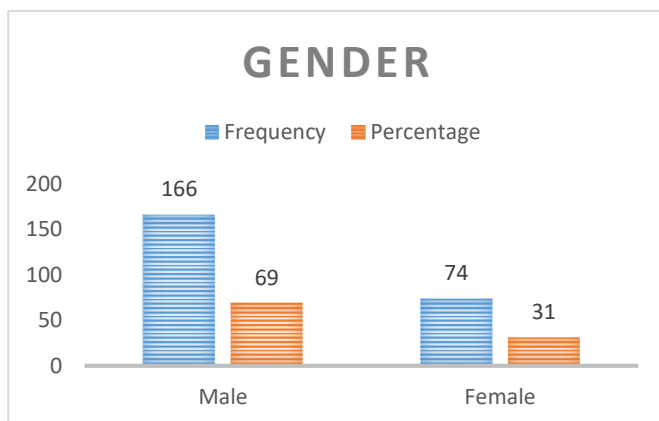
Research Methodology

This is exploratory research and uses the qualitative method to investigate the topic raised. The qualitative approach focuses on the impact of AI in higher education and life in general. The survey was conducted through google forms issued to the targeted participants from Chennai via emails and WhatsApp. Data was collected from 240 respondents under Simple random sampling method. Primary and secondary data was collected and used for the research. The most common secondary source of data collection are academic databases such as Web resources and Scopus journals as well as literature reviews. SPSS tools were used to analyses the data.

Data Analysis and Interpretation

**Table & Chart -1
Gender**

Gender	Frequency	Percentage
Male	166	69
Female	74	31
Total	240	100



**Table & Chart-2
Awareness of AI technology**

Awareness of AI technology	Frequency	Percentage
Yes	200	83.3
No	40	16.7
Total	240	100

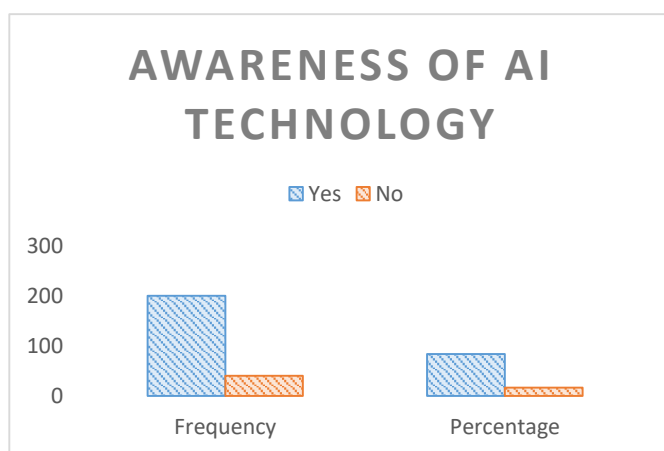


Table – 3
The impact of AI technology

Factors influencing AI technology	Frequency	Percentage
Increased efficiency	152	63.3
Improved accuracy	64	26.7
Time Saving	4	1.6
Enhanced Students experience	20	8.3
Total	240	100

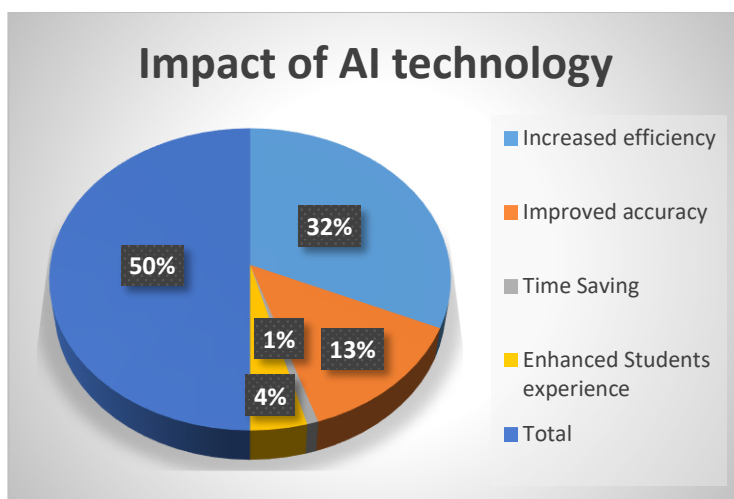
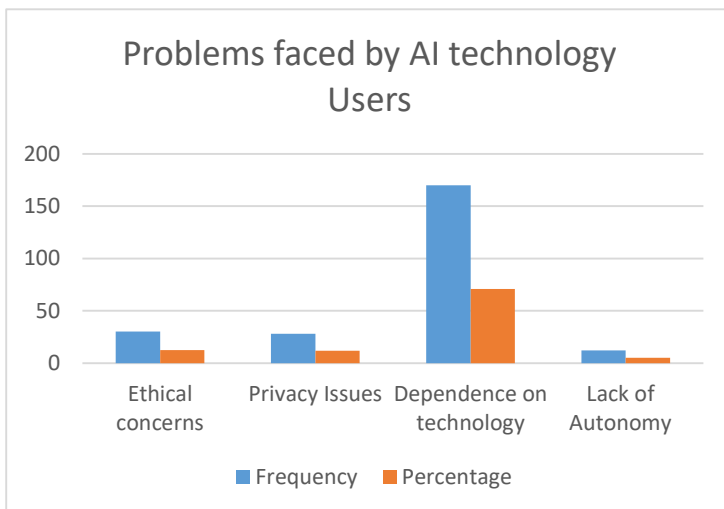


Table -4
Problems faced by the customers

Problems faced by AI technology Users	Frequency	Percentage
Data Quality problems	30	12.5
Lack of Autonomy	28	11.66
Dependence on technology	170	70.8
Misinformation	12	5.0
Total	240	100



Chi Square Test

Age and Features of Electric bikes

Null Hypothesis (H0): There is no significant association between UG & PG students and factors influencing AI technology.

Hypothesis (H1): There is significant association between UG & PG students and the factors influencing AI technology.

Cross Tabulation

Age	The Impact of Using AI technology				Total
	Increased efficiency	Improved Accuracy	Time Saving	Enhanced Students experience	
UG students	46	80	58	32	216
PG Students	8	0	6	10	24
Total	54	80	64	42	240

Chi-square test

	Value	df	Asymptotic Significant (2-Sided)
Pearson Chi-Square	12.843	6	.46
Likelihood Ratio	14.899	6	.021
Linear-by-Linear	.722	1	.396
N of Valid Cases	240		

Since p value is < 0.05 reject null hypothesis

Inference: There is association between age group and the impact of AI technology.

Interpretation: Respondents of different age groups have difference in preference towards the impact AI technology.

One Way Anova - Age group and Attributes of Electric Bikes

Null Hypothesis (H0): There is no significant difference between respondent’s perceptions towards the attributes of AI technology.

Alternative Hypothesis (H1): There is significant difference between respondent’s perceptions towards the attributes of AI technology.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups. (Combined).	8.208	2	4.104	8.227	.017
Linear Team	.000	1	.000	.000	.982
Unweighted	4.206	1	2.103	8.322	.40
Weighted	4.002	1	2.001	8.122	.45
Deviation					
Within Groups	113.606	234	.485		
Total	121.814	239			

Since p value is <0.05, reject null hypothesis

Inference: There is significant difference between respondent’s perception towards the attributes of AI technology.

Interpretation: Respondents of various age groups have different perception towards various attributes of AI technology.

Findings

- It was observed that 83% of the customers are having awareness about AI technology very well. Others are using AI technology without having a detailed idea about it.
- It was identified that 63.3% of the respondents are agreed that AI technology is increasing efficiency.
- 43% of the respondents are agreed that AI technology is improving accuracy.
- 60% of the respondents agreed that AI technology will be the future.
- It was found that 60% of the respondents are agreed that AI technology will be reliable.

- It was observed that 42% of the respondents are not sure that AI technology will be able to meet the expectations of the educational world.
- The Major problem of using AI technology is Dependence on technology.

Suggestions

- Continuous usage of AI technology can make the students community as the lazier one and reduces the learning and thinking skills. Hence students Can Use AI technology whenever it is needed not on all the time.
- Developing of AI generated research reports and publications will be more useful for the literature review and thesis writing.
- AI-Powered Assessment Tools Artificial Intelligence can be used to create intelligent assessment tools that provide quick feedback and streamline the process. This tool helps identify areas where students need improvement and can reduce the administrative burden on teachers.
- Separate time allocation to use AI technology will be more helpful to enhance the faculties and the students of higher education in future.

II. CONCLUSION

The benefits of Artificial Intelligence in higher education are more and more. It transformed the learning methods and teaching techniques and provides lot of benefits to the students, teachers and educational institutions. This study gives deeper knowledge about AI technology and its benefits in the teaching sector. This study will be more beneficial to the future researchers. It is very important to the higher education to implement AI in educational curriculum. Even though, we have many benefits in AI technology, it is the intelligence of some human. Each and every human has unique values and thoughts, if students started to copy the information given by the AI, it definitely affects the IQ level of each and every student. It will affect the overall development of student community. Hence, educational institutions ensure the practicing of AI in educational system in some extent not into all the fields. For example, now a days preparing a presentation and developing a program becomes very easy with the help of using AI. It saves time and energy but, at the same time it is some one's idea. So, train the students to implement some creativity in the existing one. How ever, AI is very important in today's world. AI's impact on higher education is more and more. Hence AI technology can be used whenever is needed and for the development process to enhance the thinking and creativity power of an individual.

III. REFERENCES

Web resources

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