An Analysis of the Effectiveness of AI in Education with a Focus on College Students

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Abstract

The goal of this study may influence this present generation's understanding regarding the use of AI in education. Examining student tactics in AI education and figuring out how artificial intelligence is seen as being helpful in education are the goals. Simple percentage statistics displayed as tables were the analysis approach employed for the data. The study's findings demonstrate that students were able to learn more about the use of artificial intelligence (AI) in education, and that they were doing it independently. AI plays a significant part in students' quest for knowledge. The recommendation was made to take into account how students might acquire new information by utilizing AI in the classrooms. Our conclusion is that using AI in education will enable students to learn more on their own. Students will benefit from independent learning for future academic endeavors.

Keywords: AI in education, students, teaching, learning, knowledge.

INTRODUCTION:

Students and instructors both benefit from AI in the classroom. Its advantages include increased accessibility, tutoring, automated grading and administration, and simplified processes. These give pupils a high-quality education and give teachers a break. The use of technology in education has always been significant, but it is now more common than ever because of the proliferation of smart devices and web-based curricula. Artificial intelligence is being applied in education in a wide variety of methods to aid students in their learning. Across all educational levels, artificial intelligence provides a cutting-edge strategy to improve student engagement. AI can dynamically change course content, give immediate feedback, and measure student

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engagement using interactive learning techniques outside of traditional schools. Artificial intelligence is now being used more often in the education sector, expanding beyond the traditional idea of AI as a supercomputer to encompass embedded computer systems.

LITERATURE REVIEW:

Lijia Chen, Pingping Chen, and Zhijian Lin evaluated how artificial intelligence (AI) will affect education. Based on a narrative and framework for evaluating AI that were found during a preliminary analysis, the study's focus was only on the use and impacts of AI in administration, instruction, and learning. AI began with computers and computer-related technologies, progressed to web-based and online intelligent education systems, and finally used embedded computer systems together with other technologies. The realization of the study's aim was successfully helped by a qualitative research strategy that made use of the literature review as a research design and methodology.

Shubham Joshi, Radha Krishna Rambola and Prathamesh Churi study investigates how instructors and students see the application and efficacy of AI in education. Both instructors and students highly support the employment of AI in the classroom. However, teachers are generally more technologically savvy than pupils. To apply AI in Education (AIED) more successfully, additional study on the generational and regional variation in instructors' and students' opinions is needed.

OBJECTIVES:

1. To examine the strategies used by students in AI education.
2. Determine how artificial intelligence is viewed as being beneficial in education.

METHODS:

This research is based on the empirical study. Because both primary and secondary data were used in this study. Using the convenience sampling technique, a sample of college students was drawn. A total of 48 college students made up the sample. While secondary data is gathered through the internet, primary data is gathered using a structured questionnaire. Data from the respondents were analyzed using the following methodology: Tables were used to visualize the data using a simple percentage technique.

RESULTS AND DISCUSSION:

Table 1: Age Details (in years)

Age	Frequency	Percentage
18 - 21	10	20.8%
21 – 24	18	37.5%
24 - 27	20	41.7%
Total	48	100

Source: Primary Data

INTERPRETATION:

Table 1 shows that the age difference between 18 – 21 years is 20.8%, 21 – 24 years is 37.5%, and 24 – 27 years is 41.7%.

Table 2: Gender Particulars

Particulars	Frequency	Percentage
Male	23	47.9%
Female	25	52.1%
Total	48	100

Source: Primary data

INTERPRETATION:

Table 2 shows that most respondents are female compared to male. 52.1% are female and 47.9% are male

Table 3: Qualification details of the respondents

Particulars	Frequency	Percentage
UG	12	25%
PG	15	31.2%
Professional	14	29.2%
Doctorate	7	14.6%
Total	48	100

Source: Primary data

INTERPRETATION:

The above table 3 shows that the qualification 25% of the respondents belong to UG, followed by 31.2% of the respondents are PG, followed by 29.2% of the respondents are Professionals and 14.6% of the respondents are Doctorate.

Table 4: Are you aware of the use of artificial intelligence in education?

Particulars	Frequency	Percentage
Yes	25	52.1%
Somewhat	13	27.1%
No	10	20.8%
Total	48	100

Source: Primary Data

INTERPRETATION:

Table 4 above, 52.1% of respondents are aware of the use of Artificial Intelligence in education, followed by 27.1% who are only slightly aware and 20.8% who are unaware.

Table 5: Do you feel like ai is improve your knowledge based on education?

Particulars	Frequency	Percentage
Yes	22	45.8%
Somewhat	17	35.4%
No	9	18.8%
Total	48	100

Source: primary data

INTERPRETATION:

Table 5 expressed that 45.8% of respondents believe AI is improving their knowledge based on their education, 35.4% believe AI is somewhat improving their knowledge based on their education, and 18.8% believe AI is not improving their knowledge based on education.

Table 6: Does ai have the capacity to adapt content to students based on education purposes?

Particulars	Frequency	Percentage
Yes	27	56.3%
Somewhat	15	31.2%
No	6	12.5%
Total	48	100

Source: Primary Data

INTERPRETATION:

Table 6 stated that 56.3% of respondents think AI is capable of modifying content for students based on educational goals, 31.2% of respondents think it is somewhat capable of doing this, and 12.5% don't think AI is capable of modifying content for students based on educational goals.

Table 7: Can ai realise the complete integration of teaching and learning in the field of education?

Particulars	Frequency	Percentage
Yes	24	50%
Somewhat	14	29.2%
No	10	20.8%
Total	48	100

Source: Primary Data

INTERPRETATION:

Table 7 observed that in the field of education, AI has completely integrated teaching and learning, according to 50% of respondents, while it has only partially integrated teaching and learning, according to 29.2% of respondents, and it hasn't completely integrated teaching and learning, according to 20.8% of respondents.

Table 8: Does ai provide students and teachers with a new way and perspective to evaluate student physical education courses?

Particulars	Frequency	Percentage
Yes	29	60.4%
Maybe	11	22.9%
No	8	16.7%
Total	48	100

Source: Primary Data

INTERPRETATION:

Table 8 states that for 60.4% of respondents, AI gives students and teachers a fresh viewpoint and method for assessing students' physical education classes, a possible new method, and perspective for evaluating students' physical education courses are mentioned by 22.9% of respondents, while a possible new method and perspective for evaluating students' physical education courses is mentioned by 16.7% of respondents.

LIMITATIONS OF THE STUDY:

1. This study is mostly concerned with college students in Chennai.
2. The research's sample size may be enhanced by at least 100 to 200 samples.

SCOPE FOR FURTHER RESEARCH:

This study will help future researchers advance their understanding of how well Artificial Intelligence (AI) may be used to educate college students. It also assists them in focusing more on this specific AI component that boosts student understanding of educational objectives. They can also arrive at a conclusion using AI that aids in learning more for educational purposes.

FINDINGS OF THE STUDY:

- The majority of the respondents belong to the age group of 24 - 27 years (41.7%)
- (52.1%) of the respondents are female
- Most of the respondents are Post Graduate (31.2%)
- (52.1%) of respondents are aware of the use of AI in education
- (45.8%) of respondents believe AI is improving their knowledge based on their education.
- (56.3%) of respondents think AI is capable of modifying content for students based on educational goals.
- In the field of education, AI has completely integrated teaching and learning, according to (50%) of respondents.
- (60.4%) of respondents, AI gives students and teachers a fresh viewpoint and method for assessing students' physical education classes.

CONCLUSION:

Students can now recognize their expertise in AI education, according to the study's conclusion. With the advancement of AI technology, the usage of AI in education will increase over time. People may gain a general overview of the scenario surrounding AI + education by looking at how AI is used in education and the difficulties it encounters. Additionally, it enables instructors and students to more effectively engage with and utilize AI technology during the teaching and learning process, enhances the caliber of teachers' instruction and students' learning strategies, and makes students' learning styles more varied and customized.

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