

## Role of Artificial Intelligence (AI) in Sustainable Education of Higher Education Institutions in Guwahati City: Teacher's Perception

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**[Abstract]** Human resource management is a very imperative feature in the education practice. Human resources in an educational institution submit to every individual or group functioning in that institute, counting educators, learners, administrators, and all supplementary members of the workforce running in that institute. Online teaching and learning came into the style. Artificial intelligence (AI) is altering every market sector, and the education sector is no exception. AI has been converted into a fundamental component of educational institutions and has a force on teachers and students. The educational sector has embraced the recent techniques of training and learning. Hence, artificial intelligence (AI) gives opportunities for education to turn effortlessly accessible both inside and outside the classroom. In the demand of the present times, AI has a vast potential in the education sector in the market and is a progressive change. This paper attempts to get an insight on the role of AI in sustainable instruction of higher education institutions from the teacher's perception.

**[Keywords]** artificial intelligence, higher education institution, human resource management, sustainability

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### Introduction

Technology has altered the main sectors across the globe. Technology plays a crucial part in society and is the fastest emergent essential today. Artificial intelligence (AI) is at hand in our lives, and in modern times, it is progressing with competence. AI gives a fair chance to enterprises to analyze their operational activities in detail and pave the way for a better future. Thus, using AI in active chores helps organizations attain quality and saves time. Artificial intelligence is the replication of individual aptitude procedures by machinery, particularly computer systems. AI, which stands for artificial intelligence, refers to techniques that take off human intellect to execute everyday jobs and can progress themselves based on the information they collect. The position of AI has caused a marvelous escalation in the education sector. Numerous diverse habits are being used to assist students in being taught with the increase of artificial intelligence in education. The inclusion of AI has become the need of the hour for organizations.

Earlier higher educational institutions were characterized by where teachers and students interacted in the classroom, and most of the job was done by hand in higher education institutions. In traditional learning, the teacher delivers knowledge to the students in the school. However, online teaching came into fashion during the Covid-19 pandemic, when all the countries were affected globally, especially the education sector. The Covid-19 global pandemic has dramatically impacted education, leading to the shift from the traditional classroom to an online setting. Varied modes of teaching can be used, such as one-on-one video calls, group video calls, and webinars at several apps, such as Zoom, Google meets, and so on. Online learning facilitates

teaching from any location (our comfort zone, i.e., our home) and enrolls students from various geographical areas. The internet has altered the citizen's vision of education.

AI's newest technology innovation can be used to find sustainable answers. AI would be able to cooperate in higher education institutions alongside a sustainable approach. The United Nations declared in its 2015 report, Transforming Our World: The 2030 Agenda for Sustainable Development: Getting a decent education is vital for boosting the lives of the commoner and encouraging sustainable development. The Sustainable Development Goals 2015 ensures comprehensive and fair education and stimulate enduring learning prospects for all. Target 1: "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal 4 effective learning outcomes" shows the commitment to nondiscriminatory education outcomes.

### *A Role for Artificial Intelligence in Sustainable Education*

**Planned in sequence.** Students benefit from AI's applicability in education. Teachers may need to be conscious of limitations in their teaching and study resources that can create confusion in the students' minds about certain concepts. Artificial intelligence makes a mode to resolve that dilemma. Students can locate the answers or information on Wikipedia or Google Scholar.

**Uncomplicated grading software.** Teachers can grade the students' written papers through machines, as AI is much faster and more accurate. Teachers can now use various software applications to rate the answers and essays written by students. Teachers can reorganize their workloads according to their priorities rather than sacrificing time to evaluate answer scripts.

**AI provides valuable feedback to teachers and students.** AI comments on both teachers and students about the accomplishment of the lessons. Some higher education institutions are using AI systems to keep an eye on learners' improvements and to prepare the teachers if there is any matter with student presentation. Various AI systems permit learners to obtain the guidance they require.

**Virtual Reality Learning.** Students feel more associated with their education familiarity. AI in tutoring has been tremendously rising by presenting virtual reality lessons. Users of AI have contact to submit to universities across the globe from any part of the city.

**Transform the position of educators.** In the education sector, teachers are accountable for eternity. Therefore, AI is modifying the position of the educator to be that of a facilitator. As mentioned above, AI can capture odd jobs like grading, help students progress learning in a different manner, and serve as a place for students to find information. In some way or another, technology is already motivating changes in higher educational institutions' classrooms.

### *Undoubtedly Artificial Intelligence Is Now an Enormous Instrument in Teaching-Learning Environment, But AI Still Has A Few Disadvantages:*

**Diminishing human interaction.** Students lose the capacity to become skilled at societal skills, as they do not interrelate with the entire group for the course instance, thereby creating a communication gap between teachers and students.

**Financial Problem.** AI machines, such as face detection or language processing tools adopted by higher educational institutes, are much more expensive. Putting these technologies into operation in higher educational institutions takes more work.

**Addicted to AI.** As students get more interested in AI devices, students could lose interest in learning. Artificial intelligence can become addictive.

**Maintenance issue.** A specialist should be present in higher educational institutions to serve

everything AI does.

**The approach of idleness.** With the increased usage of AI, students nowadays wish to avoid placing an attempt into their studies, as AI has made things much more suitable. Therefore, this technology has persuaded idleness in the student body.

### Literature Review

Chaudhary (2017) confirms that artificial intelligence is mutually advantageous for learners and educators. The applicability of artificial intelligence and recently upgraded software have assisted learners and educators to achieve more didactic knowledge (Ocaña-Fernández, Valenzuela-Fernández, & Garro-Aburto, 2019). The consequence of these advanced systems of AI does not discontinue at this position. It improves tutoring for all diverse groups, thereby civilizing the quality of tutoring by allowing feedback to students on their knowledge acquired.

Chaudhary (2017) confirms that using new technologies can help both educators and learners gain added educational familiarity. Though artificial intelligence (AI) is an element of computer science, intelligent systems bestow identical uniqueness originating in individual performance (Aldosari, 2020). Researchers believe that the effects of the supremacy of artificial intelligence contribute to momentum and precision (Ma, & Keng, 2018). Therefore, AI is a chief force on the curriculum of higher education institutions. AI is altering how educators instruct and how students acquire knowledge, and it is now promoting tailored teaching and learning (Dishon, 2017). AI evaluates students' performance based on gigantic information and instrument knowledge by curbing learners' erudition instantly.

AI's reducing the burden on teachers is another advantage. In most higher education institutes, the teachers devote most of their time to checking homework and assessment documents, which absorb teachers' training and research time. Therefore, intelligent systems (Holstein, McLaren, & Alevan, 2017), didactic robots (Chevalier, Riedo, & Mondada, 2016) and other AIs can lend a hand to the teachers in solving these continual tasks mechanically.

### Methodology

The study is descriptive, and the data used are primary and secondary data. The study was conducted among the teachers of various higher education institutions in Guwahati, Assam. The data was collected by circulating a questionnaire among the teachers of different higher education institutions in the city. The total sample size of the study is 105. The study was conducted in the period of September-October 2022. The analysis has been done with the help of SPSS ver.20 using Chi-Square testing. Apart from this, secondary data has been compiled through journals, annual reports, and articles linked to the topic of the present study. In this study, the researcher has adopted Judgmental Sampling Technique in selecting the sample unit.

The objective of the research is to analyze the function of artificial intelligence (AI) in the sustainable education of higher education institutions (HEI), with particular reference to the city of Guwahati from the teacher's perception.

### Data Analysis

#### *Null Hypothesis:*

H1: There is no association between the quality of teaching and gender in using AI.

H2: There is no association between proper time management and gender in using AI.

H3: There is no association between the level of learning and gender in using AI.

H4: There is no association between the level of communication with students and the use of AI.

**Table 1**

*Summary of Hypothesis*

SI No.	Hypothesis	P-Value	Result
1	H1	.02	Rejected
2	H2	.01	Rejected
3	H3	.03	Rejected
4	H4	.04	Rejected

***Interpretation***

From the above analysis, it can be interpreted that the p-value of H1 is .02, i.e., it is  $< 0.05$ , which is of significance rank. Since an acceptable quality of teaching is one of the foremost essentials of higher education institutions, as a result of the use of AI, the quality of teaching plus its sustainability has been increased. So, the null hypothesis is cast off, and the substitute hypothesis is established; hence, an association linking the quality of education plus gender in using AI is present.

While AI is the most powerful technology, it saves a lot of time for the teachers and the students, and using AI by gender leads to proper time management in the training process. The p-value of H2 is .01, i.e. it is  $< 0.05$ , which is of significance rank. So, the null hypothesis is discarded, and the substitute hypothesis is acknowledged; hence, a relationship between proper time management plus gender in using AI is present.

The p-value of H3 is .03, i.e. it is  $< 0.05$ , which is of significance rank. So, the null hypothesis is cast off, and the alternate hypothesis is accepted; hence, there is an alliance involving the level of learning and gender in using AI. Male students, as well as female students, can learn their answers from internet sources. Consequently, using AI has also enhanced their intensity of learning.

The p-value of H4 is .04, i.e., it is  $< 0.05$ , which is of significance rank. Throughout the use of AI, a communication gap has evolved between educators and learners in the classroom. Both male students and female students have become tech addicts. So, the null hypothesis is discarded, and the alternative hypothesis is established; hence, the relationship involving the level of communication with the students, along with the use of AI, is at hand.

**Results and Discussions**

It has been found that most teachers have been working in different colleges in the city for an extended period, more than five years. The teachers in higher education institutions have been using AI, such as interactive boards and laptops, which significantly influences their teaching style, such as proper time management and quicker teaching. Due to the availability of AI and the internet, students can now learn quickly. However, for every advantage, there is a disadvantage. It has been found that AI has created a communication gap between teachers and students, thereby making the students tech addicts, too. To minimize the communication gap, teachers may persuade the students to share their experiences in the classroom. This can be prepared using effortless assignment tasks or by encouraging extra-curricular activities, like sports, cultural events, etc. Teachers may discuss digital balance with the students and guide them to tackle the pitfalls of technology obsession.

### Conclusion

Artificial intelligence and its practice in our normal life seem to grow daily. In education, AI started making its mark by acting as a support to maintain the teaching and learning process. It has enhanced teachers' teaching quality and students' learning methods. Applications of current technological advancements in artificial intelligence hold considerable promise for making education sustainable for India and the rest of the globe. In its 2015 report, *Transforming Our World: The 2030 Agenda for Sustainable Development*, the UN affirmed the following: A high-quality education is obligatory to advance people's lives as well as advance sustainable development. AI in education is here to stay and will only carry on progressing and cause a revolutionary alteration in the higher education institutions.

### Future Research

Even though the technology is available in most schools, colleges, and universities, all the educators and learners are not occupied in this arrangement. Most older teachers lack knowledge of how to use their laptops or mobile devices' internet capabilities. Furthermore, some rural places lack internet access, while some less developed communities lack access to electricity and other modern conveniences. It can be accomplished that the location of AI has caused a spectacular acceleration in the education region and its sustainability. However, augmentation of infrastructure for artificial intelligence is eventually compulsory to judge this manner of learning as absolutely rewarding.

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