



## A Study on Responsible and Ethical Use of Artificial Intelligence in Higher Education in Thane District

Manju G. Jhuriani<sup>1</sup> & Dr. Richa A. Modiyani<sup>2</sup>

<sup>1</sup>Research Scholar, S.S.T. College of Arts & Commerce, Ulhasnagar - 421004, Maharashtra

<sup>2</sup>Research Guide, SSBT's College of Engineering & Technology, Jalgaon - 425001, Maharashtra

Corresponding Author – Manju G. Jhuriani

DOI - 10.5281/zenodo.19399174

### Abstract:

Artificial Intelligence (AI) is transforming higher education by influencing teaching, learning, assessment, and administration. While offering benefits such as efficiency, personalization, and accessibility, AI also raises ethical concerns, including academic integrity, data privacy, and accountability. This study examines faculty and student awareness, perceptions, and attitudes toward responsible AI use in selected colleges in Thane district. Findings emphasize the need for ethical frameworks, institutional policies, and awareness programs to ensure AI serves as a supportive academic tool, enhancing learning without replacing human intelligence or originality.

**Keywords:** Artificial Intelligence, Ethics, Responsible Use, Higher Education, Academic Integrity

### Introduction:

#### Background of the Study:

Artificial Intelligence (AI) is increasingly integrated into higher education through tools supporting content creation, personalized learning, research, and administrative tasks. Intelligent tutoring systems, automated grading, plagiarism detection, and generative AI platforms are widely used by students and faculty. While these tools can enhance learning outcomes and institutional efficiency, uninformed use raises ethical concerns. In Indian colleges, AI adoption often outpaces the development of regulatory and ethical guidelines. Misuse for academic dishonesty, lack of transparency, algorithmic bias, and data privacy issues are growing challenges. Thus, examining stakeholders' perceptions and responsible AI use in higher education is essential.

#### Statement of the Problem:

Despite growing AI adoption in higher education, ethical and responsible use remains

unclear. Many colleges lack policies, training, and frameworks to guide faculty and students, risking misuse and compromised academic integrity. This study explores stakeholders' perceptions and identifies areas where institutional support and ethical guidance are needed for responsible AI use.

#### Objectives of the Study:

1. To assess the level of awareness of AI tools among faculty and students.
2. To examine perceptions regarding responsible and ethical use of AI in higher education.
3. To identify concerns related to plagiarism, data privacy, and bias associated with AI usage.
4. To understand the role of institutional policies and support in promoting ethical AI practices.
5. To suggest measures for encouraging responsible and ethical use of AI in colleges.

**Scope of the Study:**

1. Limited to selected colleges affiliated with the University of Mumbai in Thane district.
2. Respondents include faculty and students from various disciplines.
3. Focuses on academic use of AI tools; technical development of AI systems is not covered.

**Limitations of the Study:**

- The study is limited to selected colleges in Thane District, which may restrict the generalizability of the findings.
- The study is based on self-reported perceptions of respondents, which may be subject to personal bias.

**Review of Literature:**

Artificial Intelligence (AI) is increasingly integrated into higher education, transforming teaching, learning, and assessment. AI applications such as adaptive learning systems, intelligent tutoring, and automated feedback enhance personalization and efficiency by supporting learners and assisting educators in instructional planning (Holmes et al., 2019).

Despite these benefits, ethical challenges are widely highlighted. Floridi et al. (2018) argue that ethical AI should be grounded in transparency, accountability, and human oversight to ensure trust and fairness. Academic integrity is a major concern, as AI use by students raises issues of authorship, originality, and plagiarism, especially without clear institutional guidelines (Selwyn, 2019; Eaton, 2021).

Data privacy and security are central, as AI often relies on large volumes of student data, posing privacy risks if safeguards are absent (Zawacki-Richter et al., 2019; UNESCO, 2021). Algorithmic bias and fairness are also critical, as AI trained on unrepresentative data can produce

unequal outcomes and reinforce disparities (Jobin et al., 2019).

Institutional readiness and governance are important for ethical AI adoption. The lack of policies and frameworks creates inconsistent practices and uncertainty among faculty and students (Holmes et al., 2022). Structured training, policy development, and continuous oversight are recommended to promote responsible AI use.

Overall, while AI has the potential to enhance higher education, its ethical and responsible use depends on clear policies, ethical guidelines, AI literacy, and ongoing monitoring. These findings provide a foundation for examining faculty and student perceptions of ethical AI use in colleges.

**Hypotheses of the Study:****Hypothesis 1:**

**H<sub>01</sub>:** There is no significant difference between faculty and students in AI awareness and usage.

**Ha<sub>1</sub>:** There is a significant difference between faculty and students in AI awareness and usage.

**Hypothesis 2:**

**H<sub>02</sub>:** There is no significant relationship between AI usage and ethical concerns. **Ha<sub>2</sub>:** There is a significant relationship between AI usage and ethical concerns.

**Hypothesis 3:**

**H<sub>03</sub>:** Institutional support does not significantly influence perceptions of ethical AI use.

**Ha<sub>3</sub>:** Institutional support significantly influences perceptions of ethical AI use.

**Research Methodology:****Research Design:**

A quantitative, survey-based design was used to examine students' and faculty members' perceptions of the responsible and ethical use of Artificial Intelligence (AI) in higher education.

Data were collected via a structured questionnaire administered through Google Forms.

#### Sampling Method:

Population: Students and faculty from selected colleges in Thane District affiliated with the University of Mumbai

Sample Size: 150 students and 50 faculty members

Sampling Technique: Non-probability convenience sampling

#### Data Collection:

Primary data were collected using a digital Google Forms questionnaire. Participation was voluntary, and responses were anonymized to ensure confidentiality and unbiased feedback.

#### Data Analysis:

1. Descriptive analysis: Frequency and percentage distribution of responses
2. Mean and standard deviation: To assess overall perception levels
3. Inferential analysis: Independent sample t-test and correlation analysis (where applicable)
4. Graphical representation: Bar charts and tables to aid interpretation

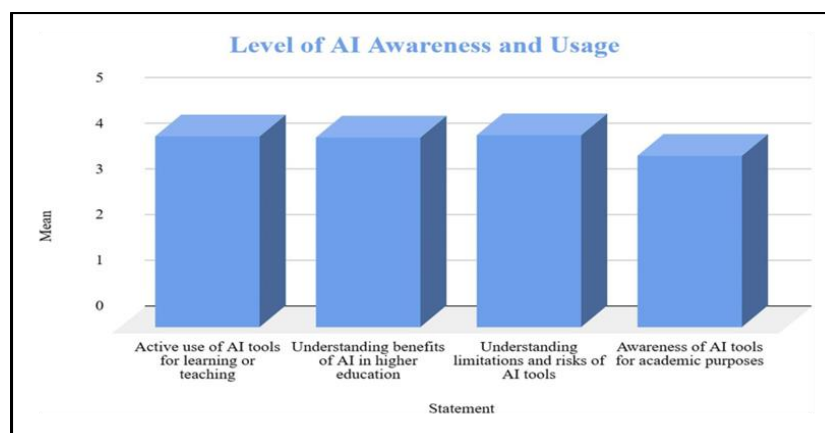
#### Data Analysis and Interpretation:

##### Descriptive Analysis:

##### Awareness and Usage of AI in Higher Education

**Table 1: Descriptive Statistics of AI Awareness and Usage**

Statement Code	Statement	Mean	Std. Deviation
AU1	Active use of AI tools for learning or teaching	4.19	1.03
AU2	Understanding benefits of AI in higher education	4.16	1.11
AU3	Understanding limitations and risks of AI tools	4.22	1.18
AU4	Awareness of AI tools for academic purposes	3.78	1.04
Overall, AI Awareness & Usage	Composite Mean	4.09	1.09



**Figure 1: Level of AI Awareness and Usage**

#### Interpretation: AI Awareness and Usage:

Table 1 and Figure 1 show respondents' awareness and usage of AI tools. The overall

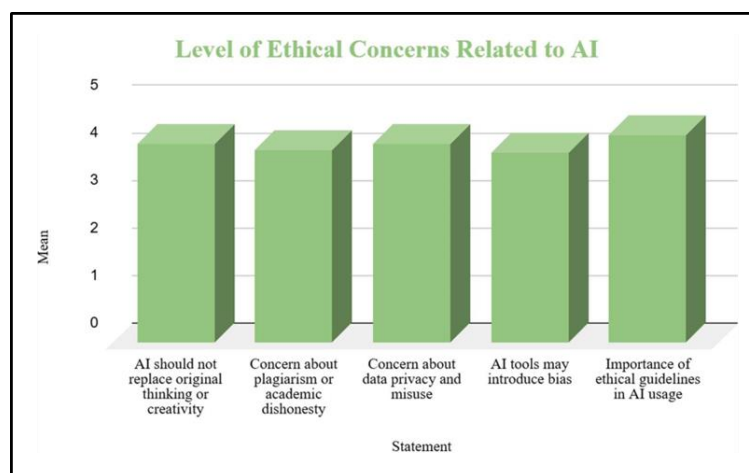
mean of 4.09 indicates high awareness and frequent use. Mean scores for understanding benefits (4.16) and limitations/risks (4.22) suggest

a balanced and informed perspective. Overall, responsible attitude toward AI in higher education. respondents demonstrate a positive and education.

### Ethical Concerns Related to AI in Higher Education:

**Table 2: Descriptive Statistics of Ethical Concerns Related to AI**

Statement Code	Statement	Mean	Std. Deviation
EC1	AI should not replace original thinking or creativity	4.19	1.12
EC2	Concern about plagiarism or academic dishonesty	4.06	1.13
EC3	Concern about data privacy and misuse	4.19	1.03
EC4	AI tools may introduce bias	4	0.98
EC5	Importance of ethical guidelines in AI usage	4.38	0.87
Overall Ethical Concerns	Composite Mean	4.14	1.02



**Figure 2: Level of Ethical Concerns Related to AI**

### Interpretation: Ethical Concerns Related to AI

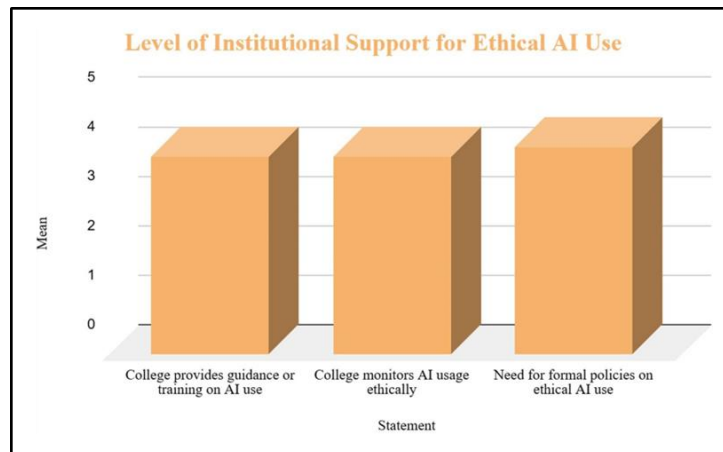
Table 2 and Figure 2 illustrate perceptions of ethical concerns. The composite mean of 4.14 reflects high ethical awareness. Respondents

strongly agree on the importance of guidelines (4.38) and recognize issues like plagiarism, data privacy, and bias (4.00–4.19). This indicates consciousness of ethical challenges and the need for responsible AI use.

### Institutional Support for Ethical AI Use in Higher Education:

**Table 3: Descriptive Statistics of Institutional Support for Ethical AI Use**

Statement Code	Statement	Mean	Std. Deviation
IS1	College provides guidance or training on AI use	4	0.98
IS2	College monitors AI usage ethically	4	1.08
IS3	Need for formal policies on ethical AI use	4.19	0.93
Overall Institutional Support	Composite Mean	4.18	1.04



**Figure 3: Level of Institutional Support for Ethical AI Use**

#### **Interpretation: Institutional Support for Ethical AI Use**

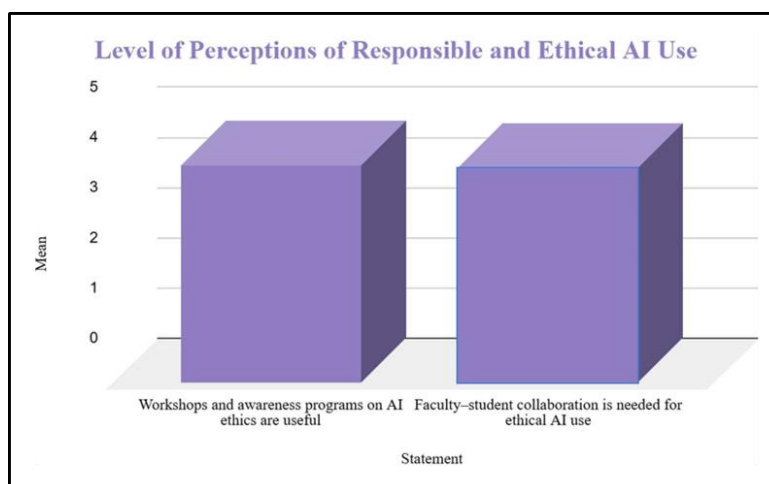
Table 3 and Figure 3 show perceptions of institutional support. The overall mean of 4.18 suggests agreement on the role of institutions in

guiding ethical AI practices. High scores for formal policies (4.19) and monitoring (4.00) highlight expectations for structured guidelines, training, and regulation.

#### **Perceptions of Responsible and Ethical AI Use in Higher Education:**

**Table 4: Perceptions of Responsible and Ethical AI Use**

Statement Code	Statement	Mean	Std. Deviation
RA1	Workshops and awareness programs on AI ethics are useful	4.34	1.1
RA2	Faculty–student collaboration is needed for ethical AI use	4.28	1.02
Overall Responsible AI Perception	Composite Mean	4.28	1.02



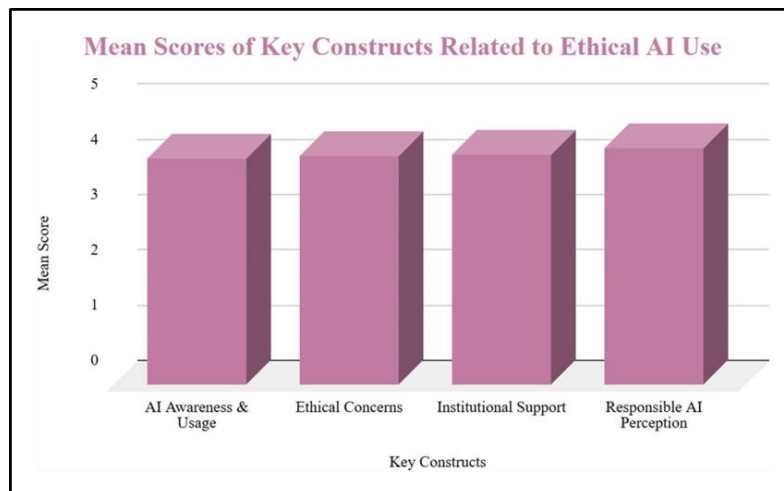
**Figure 4: Level of Perceptions of Responsible and Ethical AI Use**

### Interpretation: Perceptions of Responsible and Ethical AI Use

Table 4 and Figure 4 present perceptions of initiatives promoting responsible AI use. The overall mean of 4.28 indicates strong agreement

on the usefulness of workshops, awareness programs, and faculty–student collaboration, suggesting these strategies are effective for fostering ethical AI practices.

### Mean Scores of Key Constructs Related to Ethical AI Use:



**Figure 5: Mean Scores of Key Constructs Related to Ethical AI Use Interpretation:**

Figure 5 shows mean scores of key constructs, reflecting high AI awareness and usage, ethical concerns, institutional support, and

perceptions of responsible AI use, indicating an overall positive perception across all dimensions.

### Hypothesis Testing:

**Table 5: Summary of Hypothesis Testing Results**

Hypothesis	Test Applied	Statistical Value	p-value	Decision
H <sub>01</sub>	Independent t-test	$t = -1.16$	0.254	Accepted
H <sub>02</sub>	Pearson Correlation	$r = 0.74$	< .001	Rejected
H <sub>03</sub>	Pearson Correlation	$r = 0.70$	< .001	Rejected

The Independent t-test shows no significant difference between faculty and students in AI awareness, leading to the acceptance of H<sub>01</sub>. Pearson correlation indicates a strong, significant relationship between awareness and AI usage, resulting in the rejection of H<sub>02</sub>. A significant positive relationship is observed between ethical concerns and support for formal AI policies, leading to the rejection of H<sub>03</sub>.

### Findings of the Study:

- Respondents showed high awareness and frequent use of AI tools.
- Faculty and students recognized AI's usefulness in teaching and learning.
- Ethical concerns, including plagiarism, data privacy, and bias, were acknowledged.
- AI usage was positively related to ethical awareness, reflecting responsible attitudes.
- Institutional support through guidelines, training, and monitoring was crucial.

- Workshops, awareness programs, and faculty-student collaboration promoted responsible AI adoption.
- Overall, AI adoption is increasing alongside growing ethical consciousness.

### Conclusion:

The study examined the responsible and ethical use of Artificial Intelligence in higher education institutions in Thane District. Findings reveal that faculty and students actively use AI tools and acknowledge their benefits, while being aware of ethical challenges such as plagiarism, data privacy, and bias. Ethical awareness and institutional support, including guidelines, training, and monitoring, are crucial for fostering responsible AI practices. The study concludes that the ethical and responsible integration of AI is essential for maintaining academic integrity and ensuring the sustainable adoption of emerging technologies in higher education.

### Recommendations:

- Establish clear institutional policies for ethical AI use.
- Conduct regular workshops and training on responsible AI practices.
- Promote academic integrity alongside constructive AI use.
- Guide students on ethical and appropriate AI usage.
- Encourage collaboration to develop context-specific ethical AI frameworks.

### References:

1. Eaton, S. E. (2021). *Academic integrity in the post-pandemic era*. International Centre for Academic Integrity. <https://www.academicintegrity.org>
2. Floridi, L., Cowls, J., Beltrametti, M., et al. (2018). AI4People—An ethical framework for a good AI society. *Minds and Machines*, 28(4), 689–707. <https://doi.org/10.1007/s11023-018-9482-5>
3. Government of India, Ministry of Education. (2020). *National education policy 2020*. <https://www.education.gov.in>
4. Holmes, W., Porayska-Pomsta, K., Holstein, K., et al. (2022). Ethics of AI in education: Towards a community-wide framework. *Computers and Education: Artificial Intelligence*, 3, 100058. <https://doi.org/10.1016/j.caeai.2022.100058>
5. Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines.
6. *Nature Machine Intelligence*, 1(9), 389–399. <https://doi.org/10.1038/s42256-019-0088-2>
7. 0088-2
8. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of AI applications in higher education. *International Journal of Educational Technology in Higher Education*, 16(39). <https://doi.org/10.1186/s41239-019-0171-0>
9. UNESCO. (2021). *Recommendation on the ethics of artificial intelligence*. United Nations. <https://www.unesco.org>
10. Williamson, B., & Eynon, R. (2020). Historical threads, missing links, and future directions in AI in education. *Learning, Media and Technology*, 45(3), 223–235. <https://doi.org/10.1080/17439884.2020.1798995>