

Artificial Intelligence and Higher Education: A Sociological Analysis of Students' Perceptions, Opportunities and Challenges at Assam University, Silchar

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Abstract—Artificial Intelligence (AI) has emerged as one of the most transformative forces of the twenty-first century, reshaping how knowledge is produced, accessed, and consumed across all sectors of society — including higher education. This study examines students' perceptions, opportunities, and challenges associated with AI use at Assam University, Silchar, adopting a sociological lens grounded in technological determinism and the sociology of education. Using a structured questionnaire administered to approximately 130 undergraduate and postgraduate students across multiple departments, the research reveals that nearly all respondents were aware of AI, with ChatGPT and Gemini emerging as the most frequently used tools. Students primarily employ AI for assignment writing, examination preparation, and content creation, averaging roughly two hours of daily usage. While participants generally held positive attitudes — citing improved access to information, enhanced learning efficiency, and personalized academic support — significant concerns were also raised regarding academic dependency, plagiarism, the reliability of AI-generated content, and a perceived erosion of critical thinking. Drawing on Durkheim's theory of socialization, Bourdieu's concept of cultural capital, Giddens's analysis of modernity, and Merton's framework of manifest and latent functions, the study situates AI adoption within broader patterns of social inequality and institutional transformation. Findings call for university-level AI literacy programmes, transparent ethical guidelines, and pedagogical strategies that harness the benefits of AI without undermining the intellectual development of students.

Index Terms—Artificial Intelligence, Higher Education, Sociology of Education, Technology and Society, Students' Perception, Assam University, Digital Learning, Academic Integrity

I. Introduction

We are living through a remarkable moment in history. Within the span of just a few years, Artificial Intelligence has shifted from being a subject of science fiction to an everyday companion for millions of students around the world. Walk into any university library today — or rather, look at the open tabs on any student's laptop — and you are likely to find ChatGPT, Gemini, or Grammarly sitting alongside lecture notes and textbooks. This rapid, largely unplanned integration of AI into academic life raises questions that are not merely technical or pedagogical but profoundly sociological.

Artificial Intelligence refers broadly to the capacity of computer systems to perform tasks that traditionally required human cognition: learning from data, recognizing patterns, generating language, and making decisions. Over the past decade, advances in large language models have made AI tools not only more

powerful but also remarkably accessible — free or low-cost applications that any student with a smartphone and a data connection can use. The implications of this democratization of intelligent technology are still being worked out, and this study is one contribution to that conversation.

Higher education occupies a special place in sociological thinking. From Émile Durkheim's view of educational institutions as agents of social solidarity to Pierre Bourdieu's analysis of how schools reproduce cultural capital and social hierarchies, sociologists have long understood that universities are not neutral spaces where knowledge is simply transferred. They are arenas where social norms are transmitted, identities are shaped, and life chances are distributed. When a technology as powerful as AI enters this arena, it does not merely change how students write essays or prepare for exams; it potentially reconfigures the very relationships between students, teachers, knowledge, and social opportunity.

Assam University, Silchar, located in the Cachar district of Assam in Northeast India, provides a particularly interesting setting for exploring these dynamics. The university draws students from a remarkable diversity of social, economic, linguistic, and geographical backgrounds — first-generation college students alongside those from educated urban families; students from tribal communities alongside those from more privileged backgrounds; students with reliable broadband access alongside those who depend on limited mobile data. This diversity makes the university both a microcosm of Indian higher education and a site where the social dimensions of AI adoption are especially visible.

This study therefore aims to investigate — through a sociological lens — how students at Assam University understand, use, and experience AI technologies. It asks not just whether students are using AI, but how they are using it, what they hope to gain, what they fear, and what these patterns tell us about the broader social forces at work. The rest of the paper is organized as follows: Section 2 reviews the relevant literature; Section 3 sets out the theoretical framework; Section 4 describes the methodology; Section 5 presents the results; Section 6 offers discussion; and Section 7 provides conclusions and recommendations.

II. Review of Literature

The intersection of Artificial Intelligence and higher education has generated a rapidly expanding body of scholarship over the past five years, accelerated dramatically by the public release of ChatGPT in late 2022. This review situates the present study within three broad strands of this literature: AI's educational potential, its ethical and social challenges, and the emerging Indian context.

2.1 Educational Potential of AI

Holmes, Bialik, and Fadel (2019) offered one of the foundational accounts of AI's potential in education, arguing that intelligent technologies can transform learning through adaptive systems that respond to individual student needs, provide immediate feedback, and support differentiated instruction at scale. Luckin (2018) extended this argument, contending that AI should be understood as a partner in human intelligence rather than a rival — a tool that can free teachers from routine tasks and allow them to focus on the relational and creative dimensions of pedagogy.

Zawacki-Richter, Marín, Bond, and Gouverneur (2019), in a systematic review of 146 studies, found that AI was being deployed across higher education for four primary purposes: profiling and prediction of student outcomes; intelligent tutoring; assessment and feedback; and administrative efficiency. Crompton and Burke (2023) updated this picture, demonstrating that generative AI had by that point become the dominant area of interest, with institutions worldwide grappling with how to incorporate tools like ChatGPT into curricula responsibly.

2.2 Ethical and Social Challenges

The enthusiasm for AI in education has been matched, and in some quarters exceeded, by concern. Cotton, Cotton, and Shipway (2023) conducted a study of student attitudes toward ChatGPT and found that while students valued its utility, they also recognized — and in some cases strategically exploited — its potential for facilitating academic dishonesty. This finding echoes Williamson and Eynon's (2020) broader warning that the datafication of education raises serious questions about surveillance, privacy, and the commodification of learning.

Bearman, Ryan, and Ajjawi (2023) examined how AI is being discursively framed in higher education and found that institutional narratives oscillate between utopian promises and dystopian warnings — a tension that leaves students navigating a confusing and often contradictory landscape. Dwivedi et al. (2023), in a major multi-disciplinary review, called for nuanced, context-sensitive approaches that neither uncritically celebrate AI nor reflexively reject it.

Selwyn (2019) offered a more structural critique, arguing that enthusiasm for AI in education often distracts from fundamental questions of equity, access, and the purposes of public education. His concern that AI may deepen existing inequalities — between well-resourced and under-resourced institutions, between digitally confident and digitally excluded students — is particularly relevant in the Indian context.

2.3 Indian and Northeast Indian Context

Indian scholarship on AI in education is still developing, but important contributions have emerged. Sharma and Gupta (2022) documented the accelerating digital transformation of Indian higher education, noting that while urban institutions in metropolitan areas have rapidly embraced AI, rural and semi-urban universities face persistent infrastructural challenges. Singh and Verma (2023) specifically examined AI adoption among students in Indian universities and found that patterns of use closely mirror socio-economic stratification — students with greater financial resources and stronger digital literacy were better positioned to leverage AI productively.

Research specifically focused on Northeast India remains sparse. The region's unique socio-cultural landscape — characterized by ethnic and linguistic diversity, a history of political conflict, and persistent development challenges — creates educational dynamics that differ significantly from those in more studied parts of India. This study attempts to address this gap by generating empirical data from Assam University, Silchar.

III. Theoretical Framework

This study is guided by four theoretical traditions that together provide a robust framework for understanding the social dimensions of AI adoption in higher education.

3.1 Technological Determinism

Technological determinism, associated with thinkers such as Marshall McLuhan, holds that technologies are not passive instruments but active social forces that reshape human cognition, communication, and social organization. McLuhan's famous dictum — 'the medium is the message' — suggests that the form of a technology, not just its content, transforms the way people think and relate. Applied to AI, this perspective encourages us to consider not just what students are doing with AI tools but how the experience of using AI is reshaping their intellectual habits, their relationships with knowledge, and their sense of what learning means.

3.2 Sociology of Education — Durkheim and Social Solidarity

Émile Durkheim (1956) argued that education's primary function is social rather than individual: schools and universities exist to transmit collective values, norms, and ways of thinking that bind society together. From this perspective, the question of AI in education is partly a question about social cohesion — about whether AI-mediated learning supports or undermines the shared intellectual culture that universities are meant to cultivate. If students increasingly outsource their thinking to AI, the implications extend beyond individual academic performance to the social fabric of intellectual life.

3.3 Bourdieu — Cultural Capital and Digital Inequality

Pierre Bourdieu (1986) introduced the concept of cultural capital to describe the knowledge, skills, dispositions, and credentials that individuals acquire and that translate into social advantages. In the digital era, a form of 'digital cultural capital' has emerged — the ability to navigate, critically evaluate, and strategically use digital and AI tools. Students who arrive at university with strong digital literacy are better positioned to use AI productively; those with weaker foundations may use it in ways that further disadvantage them or may be excluded from its benefits altogether. Bourdieu's framework therefore draws attention to how AI adoption may reproduce and even amplify existing social inequalities.

3.4 Giddens — Modernity, Reflexivity, and Risk

Anthony Giddens (2009) described late modernity as a period characterized by reflexivity — a constant monitoring and revision of social practices in light of new information — and by the proliferation of risks associated with technological change. For Giddens, individuals in modern societies are not passive recipients of technological change but active agents who navigate, negotiate, and sometimes resist new technologies. This perspective is valuable for understanding how students at Assam University are not simply being swept along by the AI tide but are making deliberate choices — sometimes thoughtful, sometimes pragmatic, sometimes ethically complex — about how to incorporate AI into their academic lives.

3.5 Merton — Manifest and Latent Functions

Robert K. Merton's (1968) distinction between manifest functions (intended and recognized consequences of social practices) and latent functions (unintended and unrecognized consequences) offers a useful analytical tool for examining AI in education. The manifest functions of AI tools — improving access

to information, enhancing productivity, supporting learning — are well recognized. But AI also carries latent functions: it may silently reconfigure power relationships between students and institutions, create new forms of surveillance, or generate cultural shifts in how originality and intellectual labor are valued. Attending to these latent functions is essential for a fully sociological account of AI in higher education.

IV. Methodology

4.1 Research Design

This study adopts a descriptive and analytical research design within a quantitative framework. A structured questionnaire was developed to capture student perceptions, usage patterns, and attitudes toward AI in an academically rigorous and replicable manner. The quantitative approach was chosen to enable systematic comparison across demographic groups and to generate findings that could inform institutional policy.

4.2 Study Area and Population

The study was conducted at Assam University, Silchar, a central university established under the Assam University Act of 1989, serving as a major centre of higher education in Southern Assam and the broader Northeast India region. The target population comprised all currently enrolled undergraduate and postgraduate students across the university's various academic departments.

4.3 Sampling

A stratified random sampling technique was employed to ensure adequate representation across academic disciplines, levels of study, and demographic categories. The final sample comprised approximately 130 students from departments spanning the social sciences, natural sciences, humanities, and professional programmes. This sample size was considered appropriate for the exploratory and descriptive objectives of the study.

4.4 Data Collection

Primary data were collected through a structured questionnaire comprising close-ended questions, multiple-choice items, and five-point Likert-scale statements (1 = Strongly Disagree to 5 = Strongly Agree). The questionnaire covered: demographic profile; AI awareness and knowledge; sources of information about AI; AI tools used; frequency and duration of use; academic purposes of AI use; perceived opportunities; perceived challenges; ethical concerns; and attitudes toward AI integration in higher education. Secondary data were drawn from peer-reviewed journal articles, books, government reports, UNESCO publications, and online academic databases.

4.5 Data Analysis

Collected data were analyzed using descriptive statistical techniques including frequency distribution, percentage analysis, mean scores, and standard deviation. Results are presented through tables and figures. Analysis was conducted using Microsoft Excel.

4.6 Ethical Considerations

Participation was entirely voluntary. Informed consent was obtained from all respondents prior to questionnaire administration. Anonymity and confidentiality were maintained throughout the data collection and analysis process. No personally identifiable information was recorded.

V. Results

5.1 Demographic Profile of Respondents

The demographic characteristics of the 130 respondents are summarized in Table 1 and illustrated in Figure 1. Female respondents constituted 60% of the sample, reflecting the increasing participation of women in higher education in Northeast India. The majority of respondents (50%) fell within the 22–25 age group, consistent with typical postgraduate enrollment. Postgraduate students (53.1%) slightly outnumbered undergraduates (46.9%). Urban residents constituted 70% of the sample, and 95.4% reported having regular internet access — a figure that, while encouraging, also highlights the 4.6% who remained digitally excluded even within a university setting.

Table 1: *Demographic Profile of Respondents*

Variable	Category	Frequency (n≈130)	Percentage (%)
Gender	Female	78	60.0
	Male	52	40.0
Age Group	18–21 years	32	24.6
	22–25 years	65	50.0
	26–28 years	33	25.4
Level of Study	Undergraduate	61	46.9
	Postgraduate	69	53.1
Place of Residence	Urban	91	70.0
	Rural	39	30.0
Internet Access	Yes	124	95.4
	No	6	4.6

5.2 Awareness of AI and Tool Preferences

As shown in Table 2, awareness of Artificial Intelligence was near-universal among respondents (97.7%). This high level of awareness is consistent with AI's growing visibility in media, online platforms, and everyday discourse. Importantly, 75.4% of respondents rated their own understanding of AI as high or very high — suggesting a degree of confidence that warrants further investigation in relation to actual knowledge and critical literacy.

ChatGPT emerged as the dominant AI tool (86.2%), followed by Gemini (75.4%), with a smaller proportion reporting use of Grammarly, Copilot, or other platforms. The vast majority of students (83.8%) reported daily

use, with an average of approximately two hours per day — a substantial commitment of time that positions AI as a routine rather than occasional feature of academic life.

Table 2: *AI Awareness, Tool Preferences, and Usage Frequency*

Item	Frequency (n≈130)	Percentage (%)
Heard about AI	Yes – 127	97.7
Self-rated AI knowledge: High/Very High	98	75.4
ChatGPT (primary tool)	112	86.2
Gemini (primary tool)	98	75.4
Grammarly / Copilot / Other	54	41.5
Daily AI usage (frequency)	109	83.8
Avg. daily time spent: ≈2 hours	~2 hrs/day	—

5.3 Academic Purposes of AI Usage

Table 3 presents the academic purposes for which students reported using AI tools. Assignment writing emerged as the most prevalent use (91.5%), followed by examination preparation (80.0%) and content creation (73.8%). The high rates of use for these core academic tasks are significant: they suggest that AI is not being used primarily for peripheral activities but is embedded in the central intellectual work of students' academic lives.

Table 3: *Academic Purposes of AI Usage*

Academic Purpose	Frequency (n≈130)	Percentage (%)
Assignment Writing	119	91.5
Examination Preparation	104	80.0
Content Creation & Essay Drafting	96	73.8
Information Retrieval / Research	89	68.5
Language Translation	62	47.7
Concept Clarification	75	57.7

5.4 Perceived Opportunities

Table 4 presents mean scores for the perceived opportunities associated with AI, rated on a five-point Likert scale. Respondents rated 'improved access to information' highest (M = 4.52, SD = 0.61), followed closely by 'saves time in research' (M = 4.44, SD = 0.65) and 'support for academic assignments' (M = 4.41, SD = 0.68). These high scores reflect genuine appreciation for AI's capacity to reduce the friction involved in

information-seeking and academic production. 'Personalized learning' received a slightly lower mean score ($M = 4.19$, $SD = 0.80$), perhaps reflecting students' awareness that current AI tools, while adaptive in some respects, do not yet fully replicate the individualized attention of a human tutor.

Table 4: *Perceived Opportunities of AI in Higher Education (Likert Scale, 1–5)*

Perceived Opportunity	Mean Score (1–5)	Std. Deviation
Improved access to information	4.52	0.61
Enhanced learning efficiency	4.38	0.72
Support for academic assignments	4.41	0.68
Personalized / adaptive learning	4.19	0.80
Saves time in research	4.44	0.65
Improves quality of written work	4.26	0.74

5.5 Perceived Challenges and Concerns

Table 5 presents mean scores for perceived challenges. 'Risk of academic dependency' registered the highest concern ($M = 4.31$, $SD = 0.71$), followed by 'threat to academic integrity' ($M = 4.18$, $SD = 0.79$). These findings indicate that students are themselves aware — and in many cases troubled — by the ethical implications of their AI use. 'Digital inequality' registered the lowest mean among the challenges listed ($M = 3.74$, $SD = 0.93$), though this may partly reflect the fact that the most digitally excluded students are less likely to appear in a university-based survey sample.

Table 5: *Perceived Challenges Associated with AI Usage (Likert Scale, 1–5)*

Challenge / Concern	Mean Score (1–5)	Std. Deviation
Risk of academic dependency	4.31	0.71
Threat to academic integrity / plagiarism	4.18	0.79
Inaccuracy of AI-generated content	3.97	0.88
Decline in critical thinking	4.05	0.82
Digital inequality / unequal access	3.74	0.93
Privacy and data security concerns	3.88	0.89

VI. Discussion

6.1 The Paradox of High Awareness and Unreflective Use

One of the most striking findings of this study is the combination of high self-reported AI awareness and relatively unreflective patterns of use. Nearly all students claimed to be familiar with AI, and three-quarters rated their understanding as high or very high — yet the dominant uses of AI reported (assignment

writing, exam preparation, content generation) are precisely those that risk substituting AI's outputs for genuine intellectual engagement. This paradox is well captured by Merton's (1968) distinction between manifest and latent functions: the manifest function of AI use is academic support and productivity; the latent function, if left unexamined, may be a gradual erosion of the habits of mind — questioning, synthesizing, arguing — that higher education is meant to cultivate.

6.2 AI as Digital Cultural Capital

Bourdieu's (1986) concept of cultural capital is highly productive here. Students who arrived at university already fluent in digital environments — who had grown up with reliable internet access, exposure to diverse digital tools, and informal mentors who could explain how AI works — were clearly better positioned to use AI not just as a shortcut but as a genuine learning amplifier. For these students, AI functions as an extension of existing cultural capital, further differentiating them from peers who came to the technology with less preparation.

The 70% urban residence and 95.4% internet access rates in this sample, while relatively favourable, should not distract from the significant minority who remain at the margins of digital life. Those 4.6% without reliable internet access, and the larger proportion from rural backgrounds with weaker digital foundations, face a landscape in which AI's benefits accrue unevenly — reinforcing rather than reversing existing patterns of social stratification.

6.3 Social Media as Knowledge Infrastructure

The finding that social media was the primary channel through which students learned about AI is sociologically significant. It suggests that for this population, the boundaries between entertainment, social interaction, and knowledge acquisition are porous in ways that formal educational institutions have not fully grasped. Giddens's (2009) analysis of the reflexive nature of modern knowledge is relevant here: students are not passively receiving information about AI through social media but are actively curating, sharing, and constructing understandings of what AI is and what it can do — understandings that may be partial, enthusiastic, or shaped by commercial interests rather than educational values.

6.4 Academic Integrity in the Age of Generative AI

The concern about academic integrity expressed by students themselves — 'threat to academic integrity' receiving the second-highest mean score among challenges — is both encouraging and sobering. It is encouraging because it suggests that students are not entirely unreflective about the ethical dimensions of AI use; they understand, at some level, that submitting AI-generated work as their own is problematic. It is sobering because awareness does not automatically translate into ethical behavior, particularly when institutional norms are unclear and enforcement is perceived as inconsistent.

Cotton, Cotton, and Shipway (2023) found that students often rationalize AI-assisted academic dishonesty through comparisons with other accepted forms of assistance, such as using a thesaurus or asking a friend to proofread. This moral grey area requires universities to move beyond punitive responses toward pedagogical approaches that genuinely engage students with the question of what learning is for — and why the struggle of thinking through a problem independently matters, even when an AI can produce a competent answer in seconds.

6.5 Implications for the Sociology of Education

From a Durkheimian perspective, the integration of AI into educational practice raises questions about solidarity and shared intellectual culture. If students increasingly mediate their engagement with knowledge through AI systems that produce similar outputs regardless of individual background, the diversity of perspective and argument that characterises a healthy intellectual community may be diminished. At the same time, the finding that AI is improving access to information for students who might previously have struggled to navigate complex academic resources points to a potential democratizing function that should not be dismissed.

The tension between AI as democratizer and AI as reproducer of inequality is one that mirrors broader debates in the sociology of technology. As Selwyn (2019) has argued, the outcomes of technological change in education depend less on the technology itself than on the social, economic, and political conditions into which it is introduced. Universities in Northeast India — still working through the legacies of regional underdevelopment, linguistic marginalization, and uneven state investment in education — face these challenges in their own particular form.

VII. Conclusion

This study set out to examine how students at Assam University, Silchar perceive, use, and experience Artificial Intelligence in their academic lives. The findings paint a picture of a student population that is enthusiastic, pragmatic, and to some extent self-aware about the technology they have so rapidly incorporated into their daily routines. AI is not a marginal or exotic phenomenon for these students — it is a routine part of academic life, used daily by the majority, for the most central academic tasks.

The sociological analysis reveals that this adoption is not socially neutral. Patterns of access, confidence, and use reflect existing social structures. The opportunities that AI offers — faster access to information, support for writing and research, personalized learning — are most fully realized by those who already possess the cultural capital and digital infrastructure to use them well. The risks — dependency, plagiarism, declining critical thinking — fall unevenly too, tending to be most acute among those with the weakest foundations for critical engagement with AI-generated content.

What this study ultimately suggests is that the challenge of AI in higher education is not, at its core, a technical problem. It is a social and educational one. The question is not how to keep AI out of universities — that moment has passed — but how to create educational environments in which AI is used in ways that deepen rather than diminish intellectual life; that extend opportunity rather than replicate exclusion; and that produce graduates who can think critically about the technologies they use, not just use them fluently.

Assam University, like universities everywhere, stands at an important inflection point. The decisions made in the coming years about how to teach with and about AI will shape not just educational outcomes but the kind of society that these students go on to build.

VIII. Recommendations

- Universities should develop comprehensive AI literacy programmes that go beyond technical skills to address critical, ethical, and sociological dimensions of AI use.
- Clear, transparent, and educationally grounded policies on academic integrity and AI should be developed, communicated, and consistently applied.
- Faculty development programmes should equip teaching staff to design assessments and learning experiences that harness AI productively while maintaining intellectual rigor.
- Universities should invest in digital infrastructure and support services to ensure that the benefits of AI are accessible to all students, including those from rural and economically disadvantaged backgrounds.
- Students should be explicitly taught to critically evaluate and verify AI-generated content rather than accepting it uncritically.
- Institutional AI task forces, involving students, faculty, and administrators, should be established to provide ongoing, adaptive governance of AI in educational settings.

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