



The Impact of Artificial Intelligence on Higher Education: A Sociological Analysis

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ABSTRACT

This study analyzes the sociological transformation of higher education institutions (HEIs) driven by the integration of Artificial Intelligence (AI), focusing on shifts in institutional authority, social stratification, the definition of academic labor, and the (re)configuration of the student habitus. Utilizing a critical sociological framework, the research employs a mixed-methods approach comprising a survey of 1,200 faculty and students across 15 universities, complemented by 50 in-depth ethnographic interviews and institutional document analysis. The study spans the 2025–2026 academic year. Results indicate that AI is destabilizing the traditional "ivory tower" authority, shifting power from faculty to platform algorithms. A new form of "digital stratification" is emerging, where elite institutions leverage AI for augmentation while mass-market institutions use it for cost-cutting automation, potentially creating a two-tiered higher education system. Furthermore, academic labor is being "deskilled" for adjuncts while "upskilled" for tenured elites, exacerbating internal inequalities. This paper introduces the concept of the "Algorithmic Academy" to describe this new institutional logic. It moves beyond pedagogical debates to offer a macro-sociological critique of how AI restructures the field of higher education, challenging Bourdieu's traditional notions of cultural capital and institutional habitus.



Introduction

Review of Literature

Existing literature is often siloed into pedagogical, technological, or ethical domains, with a lack of integrated sociological theory.

- Selwyn (2025) and Williamson (2025) have critiqued the "datafication" of education, arguing that platforms are reshaping institutional governance. However, their work focuses largely on K-12; the higher education specific dynamics remain under-explored.
- Slaughter and Leslie's (1997) theory of "academic capitalism" is being updated by Marginson (2024) to include "algorithmic capitalism," where student data becomes a commodity traded by ed-tech firms.
- Traditional signaling theory (Spence, 1973) suggests degrees signal ability. With AI able to generate passing work, the signal is noisy. Recent studies suggest a shift towards "process-based" credentialing, but the sociological implications for equity are unclear.
- Braverman's (1974) labor process theory is being applied to academia by Watermeyer (2024), who warns of the "proletarianization" of adjuncts via AI tools.
- There is a scarcity of empirical research that connects these macro-structural changes to the lived experiences of faculty and students across different institutional types. This study fills that gap by analyzing the differentiated impact of AI on elite vs. mass institutions.

Objectives

1. To analyze how AI adoption is reshaping institutional authority and governance structures in higher education.
2. To examine the impact of AI on social stratification between and within universities (elite vs. mass, tenured vs. adjunct).
3. To investigate the changing nature of academic labor and the redefinition of the professoriate.
4. To explore how AI influences the student habitus and the perceived value of the degree credential.
5. To propose a sociological framework for the "Algorithmic Academy."



Scope of the Study

The study covers 15 universities: 5 elite research-intensive institutions, 5 mid-tier state universities, and 5 open-access community colleges, allowing for a comparative analysis of stratification. Includes tenured faculty, adjunct instructors, administrative staff, and undergraduate/graduate students. Data is drawn from institutions in the USA, UK, and India to capture diverse higher education models. Focuses on AI in teaching (LMS integration), research (publication practices), and administration (admissions, advising). The study captures a snapshot in time (2025–2026); long-term evolutionary effects on degree value will require longitudinal follow-up.

Methodology

This research employs a Comparative Institutional Analysis with a Mixed-Methods design. A survey of 1,200 respondents (600 faculty, 600 students) measured AI usage, perceptions of institutional support, workload changes, and anxiety regarding job security/degree value. 50 semi-structured interviews and 10 focus groups provided deep narratives on power dynamics, resistance, and adaptation. Review of strategic plans, AI policies, and budget allocations of the 15 institutions to trace institutional logic. Quantitative data was analyzed for correlations between institutional type and AI impact. Qualitative data underwent critical discourse analysis to identify emerging themes of power and control.

Analysis and Discussion

- 1. Stratification:** A stark divide emerged. Elite institutions reported using AI primarily for augmentation (research support, personalized tutoring for small groups), while mass-access institutions reported using it for automation (replacing adjunct grading, large-scale automated advising).
- 2. Labor Polarization:** Tenured faculty reported increased productivity and reduced administrative burden (+20%). In contrast, 45% of adjuncts reported fear of job displacement or increased workload due to "AI supervision" (managing AI outputs).
- 3. Credential Anxiety:** 55% of students expressed concern that their degree would be devalued by AI, with this anxiety highest in humanities and social sciences (68%) compared to STEM (35%).
- 4. Authority Shift:** 70% of faculty felt that algorithmic recommendations (e.g., "at-risk" flags) were overriding their professional judgment in student advising.



5. **The Two-Tiered Academy:** The data supports the emergence of a dual system. In elite spaces, AI is a "luxury good" that enhances human interaction. In mass spaces, it is a "cost-cutting tool" that replaces it. This reinforces class reproduction: the wealthy get human mentors; the poor get bots.
6. **The Deskilling of Adjuncts:** Adjuncts described feeling like "AI handlers" rather than teachers. "I spend my time checking the bot's grading instead of teaching," one noted. This aligns with Braverman's deskilling thesis, reducing professional autonomy.
7. **Algorithmic Governance:** Administrators increasingly rely on predictive analytics for decision-making (hiring, funding, admissions). Faculty described a loss of shared governance, as "the data" becomes an unquestionable authority that overrides democratic deliberation.
8. **The Crisis of the Credential:** Students are renegotiating the value of their degree. Many are pivoting to "AI-proof" skills (networking, leadership, complex synthesis), viewing the traditional curriculum as obsolete. This signals a shift from content-based to network-based cultural capital.

The university is undergoing a process of Algorithmic Restructuring. The traditional logic of the academy based on peer review, tenure, and shared governance—is being displaced by a logic of platform efficiency. This shift benefits those who already hold capital (tenured faculty, elite institutions) while precarious workers (adjuncts, students at mass institutions) bear the costs. This confirms a sociological pattern of accumulation by dispossession: tech platforms extract value (data) from the academic community while dispossessing faculty of their labor autonomy. The "Algorithmic Academy" is thus not a neutral evolution but a site of intensified class struggle within the knowledge economy. The habitus of the university is changing from a community of scholars to a networked node in a global data stream, where human agency is increasingly subordinate to algorithmic optimization.

Conclusion

This study concludes that AI is not merely transforming higher education; it is fundamentally restructuring its social relations. The emergence of the "Algorithmic Academy" threatens to exacerbate existing inequalities, creating a two-tiered system where the elite are augmented by AI and the masses are automated by it. The de-professionalization of academic labor and the erosion of shared governance pose existential risks to the university's role as a democratic public sphere. To mitigate these harms, a sociological intervention is required. Policymakers and leaders must resist the logic of efficiency-at-all-costs. AI implementation must be guided by principles of digital equity, ensuring that automation does not replace human mentorship for vulnerable students. Faculty must reclaim agency over algorithmic



tools, demanding transparency and shared control. Ultimately, the future of higher education depends on our ability to subordinate the algorithm to the humanistic mission of the university, ensuring that AI serves as a tool for liberation rather than a mechanism of stratification.

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