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ARTIFICIAL INTELLIGENCE AND TEACHER PROFESSIONALISM IN HIGHER EDUCATION DESKILLING OR RESKILLING?

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ABSTRACT
The increasing integration of Artificial Intelligence (AI) and digital technologies in higher education is significantly reshaping teaching practices and redefining the professional role of teachers. While AI-enabled tools promise enhanced efficiency, personalization of learning, and data-driven decision-making, they also raise critical sociological concerns related to teacher autonomy, professional judgment, and labour control. This paper examines the central question of whether the adoption of AI in higher education results in the de-skilling of teachers through standardization and algorithmic governance, or leads to reskilling by creating new professional competencies and pedagogical roles.

Anchored in sociological theories of labour and professionalism, particularly Braverman's concept of deskilling and Foucault's notion of surveillance and disciplinary power, the study analyzes how AI-mediated platforms such as automated assessment systems, learning management systems, and performance analytics restructure academic work. From a sociological perspective, the paper situates AI within broader processes of rationalization, managerial control, and the transformation of professional authority in educational institutions.

The paper adopts a qualitative conceptual approach based on critical analysis of existing scholarly literature, policy documents, and empirical studies on AI in education. It argues that AI emerges as a contradictory force in higher education: while it constrains teacher autonomy through algorithmic monitoring and standardized practices, it simultaneously demands reskilling in areas such as technological proficiency, data interpretation, and adaptive pedagogy. The study further highlights emerging inequalities within the teaching profession, wherein digitally skilled educators gain institutional advantage, while others face marginalization and job insecurity.

The paper contributes to sociological debates on digital labour and professionalism by demonstrating how AI reconfigures teaching work rather than simply replacing it. It concludes by emphasizing the need for balanced and ethical integration of AI, supported by institutional policies that protect teacher autonomy, promote inclusive reskilling, and recognize the irreplaceable social and emotional dimensions of teaching.

Keywords: *Artificial Intelligence, Teacher Professionalism, Higher Education, Deskilling, Algorithmic Control*

1. INTRODUCTION: AI AND THE CHANGING NATURE OF TEACHER PROFESSIONALISM

"Artificial intelligence is not just a tool for efficiency; it is a force reshaping the very nature of professional work in higher education" (Williamson, 2021). Over the past decade, universities have adopted AI platforms, automated assessment, learning analytics, and adaptive courseware, transforming teaching practices and professional expectations (Selwyn, 2020). While these technologies promise efficiency, personalized learning, and data-informed decisions, they also raise questions about faculty autonomy, discretion, and authority, making the sociological study of AI-mediated teaching timely.

Most research focuses on student outcomes, pedagogical innovation, or technical efficiency, while the impact on teacher labour and professionalism is underexplored. Limited attention has been paid to how AI reshapes professional identity, skill development, and power relations, especially in the Indian context where digital adoption intersects with structural hierarchies. Inequalities across contract types, seniority, gender, and digital fluency suggest AI produces uneven experiences of deskilling and reskilling (Luckin et al., 2016; Holmes et al., 2019).

This paper asks: Does AI in higher education deskill teachers, or generate new competencies and reconfigure professional work? Its objectives are to examine deskilling and reskilling, conceptually theorize AI-mediated academic labour, and highlight implications for equity, policy, and professional identity.

To capture these dynamics, the study introduces novel concepts, Algorithmically Curated Professionalism, Algorithmic Teaching Drift, and AI-Contingent Competence providing an analytic vocabulary for understanding how AI shapes discretion, pedagogy, and the digital professional self. Anchored in Braverman's labour process theory and Foucault's surveillance insights, the paper demonstrates that AI reconfigures

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professional roles, skills, and authority rather than simply replacing human labour (Braverman, 1974; Foucault, 1977).

The paper proceeds with a literature review, theoretical framework, analyses of deskilling and reskilling, discussion of inequalities, and concludes with conceptual and policy implications for ethical and inclusive AI integration in higher education.

2. LITERATURE REVIEW

The existing scholarship on Artificial Intelligence (AI) in education has expanded rapidly, primarily examining its potential to transform teaching and learning. A substantial body of research adopts a technologically optimistic perspective, framing AI as a tool to enhance efficiency, personalization, and pedagogical innovation in higher education (Luckin et al., 2016; Holmes et al., 2019). Studies in this strand highlight adaptive learning systems, automated assessment, and learning analytics as mechanisms to reduce teachers' routine workload while improving student engagement and outcomes (Zawacki-Richter et al., 2019), often presenting AI as neutral or supportive of human teaching capacities.

In contrast, critical scholarship interrogates the implications of AI for academic labour and professional autonomy. Drawing on political economy and critical sociology, researchers argue that digital technologies enable intensified managerial control, standardization of pedagogical practices, and expanded surveillance of academic performance (Selwyn, 2016; Williamson, 2017). Analyses of learning analytics and platform-mediated education emphasize the risks of algorithmic governance, where professional judgment is subordinated to data-driven metrics and performance indicators (Beer, 2017; Knox, 2020). AI may contribute to deskilling by fragmenting academic work and diminishing professional discretion.

More recently, scholarship has moved beyond the deskilling–enhancement binary to examine reskilling and hybrid professionalism. AI reshapes, rather than replaces, teaching labour by generating new demands such as digital literacy, data interpretation, and adaptive pedagogical design (Fenwick et al., 2019; Evetts, 2011). Teachers increasingly function as facilitators, mentors, and coordinators within digitally mediated environments. However, reskilling remains uneven, contingent upon institutional resources, training, and power structures (Czerniewicz et al., 2020).

Despite these insights, gaps remain: literature often prioritizes student outcomes, offers limited sociological analysis of teachers as workers, and insufficiently addresses power, inequality, and professional authority under algorithmic governance. This paper addresses these gaps by employing sociological theories of labour and professionalism to critically examine how AI reconfigures teacher professionalism in higher education.

3. METHODOLOGICAL APPROACH: A CONCEPTUAL SOCIOLOGICAL ANALYSIS

This study adopts a **conceptual and qualitative sociological approach** to examine the implications of Artificial Intelligence (AI) for teacher professionalism in higher education. The analysis is based on a **systematic and interpretive review of secondary sources**, including peer-reviewed scholarly literature, policy documents, and existing empirical studies on AI in education. These sources are examined thematically, with particular attention to recurring patterns related to labour control, professional autonomy, surveillance, and reskilling.

A theoretical and interpretive methodology is appropriate for analysing the **structural and institutional transformations of academic work** under conditions of digital governance. By drawing on established sociological theories of labour and power, the study conceptualizes AI as a socio-technical process embedded within organizational and policy contexts rather than as a neutral technological tool. While the conceptual nature of the analysis limits empirical generalization, it enables deeper theoretical insight and offers a framework for future empirical research on AI and academic labour.

4. THEORETICAL FRAMEWORK: LABOUR, SURVEILLANCE, AND PROFESSIONAL AUTHORITY

This paper draws on sociological theories of labour and power to examine how AI reshapes teacher professionalism, integrating **Labour Process Theory (LPT)** and **Foucault's surveillance and disciplinary power** (Braverman, 1974; Foucault, 1977). LPT explains how managerial and technological interventions restructure work, reducing autonomy through standardization, routinization, and transferred decision-making, extending deskilling to professional work (Evetts, 2011). Foucault highlights how observation, normalization, and self-regulation produce internalized compliance under algorithmic monitoring.

Teaching traditionally involved pedagogical discretion and evaluative authority. AI tools—learning management systems, automated assessments, analytics dashboards, adaptive platforms, and plagiarism

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detection software, redistribute control to institutional and algorithmic systems, embedding knowledge in measurable procedures (Selwyn, 2019; Luckin et al., 2016). Platforms generate continuous data on teaching, engagement, and outcomes, quantifying professional judgment and embedding efficiency norms. Autonomy is **restructured**, not removed, as educators exercise discretion within algorithmically mediated boundaries (Beer, 2017; Knox, 2020).

5. AI IN HIGHER EDUCATION: TECHNOLOGIES, POLICIES, AND INSTITUTIONAL LOGICS

AI reshapes academic labour, guided by institutional priorities, policies, and managerial rationalities (Selwyn, 2019). Tools like learning management systems, automated grading, adaptive platforms, plagiarism detection software, and dashboards improve efficiency and personalization but embed assumptions about standardization, accountability, and measurable outputs, shaping teaching practices (Luckin et al., 2016).

Digitalization is framed as a strategy for competitiveness, scalability, and accountability (Williamson, 2017). LPT highlights how policies embed tasks in technical systems, limiting discretion (Braverman, 1974), while Foucauldian analysis shows surveillance reshaping autonomy around performance norms (Foucault, 1977).

In India, AI adoption aligns with global imperatives and the NEP 2020, supporting assessment, online delivery, and engagement monitoring. Infrastructural gaps, uneven digital literacy, and hierarchical structures produce unequal experiences. AI can enhance efficiency but may increase workload, standardize pedagogy, and reinforce inequalities across ranks and contract types (Czerniewicz et al., 2020).

Sociologically, AI embeds managerial logics prioritizing measurable outcomes and standardization, converting teaching into auditable work and reshaping discretion. This frames deskilling—curriculum standardization and intensified oversight—analyzed in the next section.

6. DESKILLING THROUGH AI: STANDARDIZATION, SURVEILLANCE, AND LABOUR CONTROL

Artificial Intelligence (AI) in higher education acts as a socio-technical agent, restructuring teaching work and producing deskilling through standardization, surveillance, and managerial control (Braverman, 1974; Foucault, 1977). AI redistributes authority over pedagogical tasks, codifying professional knowledge into digital procedures. Embedding curriculum design, assessment, and feedback into automated systems limits discretionary decision-making, constraining the autonomy historically associated with academic professionalism (Selwyn, 2019; Luckin et al., 2016). Automated assessment platforms, plagiarism detection tools, and learning analytics convert teaching outputs into quantifiable indicators (Beer, 2017; Knox, 2020). Continuous data on student engagement, learning outcomes, and teacher activity enables real-time monitoring, encouraging self-regulation as faculty internalize algorithmic expectations. Interpretive judgments in grading, feedback, and curriculum adaptation are increasingly mediated by templates and performance standards.

Deskilling occurs through several mechanisms: prescriptive digital workflows define the “what” and “how” of teaching, aligning practices with institutional priorities; teachers spend substantial time interacting with platforms and responding to algorithmic feedback, reducing focus on substantive pedagogy; and algorithmically enforced assessment fragments academic labour into discrete, routinized tasks, reflecting Braverman’s separation of conception and execution (Braverman, 1974). Together, these mechanisms make teaching auditable, measurable, and administratively governed rather than purely discretionary.

Experiences of deskilling are uneven. Faculty with high digital literacy or institutional support navigate systems flexibly, while those with limited experience or in contingent positions rely heavily on automated guidance. Yet all educators face algorithmic benchmarks, heightening accountability pressures and narrowing professional judgment. Seniority, contract type, and institutional resources mediate how deskilling manifests, revealing broader inequalities (Czerniewicz et al., 2020).

These processes are not totalizing. While AI constrains traditional discretion, it simultaneously creates conditions for new skills, including interpreting analytics, designing adaptive learning pathways, and integrating technology into pedagogy. These emergent capacities are explored in the following section on **reskilling**, highlighting the dual and contradictory impact of AI on teacher professionalism.

7. RESKILLING AND CONDITIONAL REPROFESSIONALIZATION IN THE AGE OF AI

While AI constrains professional discretion, it also creates opportunities for reskilling and conditional re-professionalization, shaped by institutional support, digital literacy, and access to development resources (Braverman, 1974; Foucault, 1977). These competencies respond to technological demands and evolving institutional expectations, reshaping contemporary teaching skills.

Technological proficiency is central. Teachers navigate learning management systems, interpret analytics dashboards, manage automated assessments, and integrate adaptive platforms (Luckin et al., 2016; Holmes et al., 2019). Beyond basic digital skills, they critically evaluate algorithmic recommendations to make informed pedagogical decisions. Labour Process Theory emphasizes that this reskilling occurs within institutionally constrained parameters, while Foucauldian insights show AI-mediated surveillance fosters self-regulation aligned with metrics and norms (Beer, 2017).

Reskilling also involves pedagogical adaptation. As AI standardizes routine tasks, educators act as facilitators, mentors, and designers of personalized learning, curating pathways and tailoring interventions. This constitutes conditional re-professionalization, where expertise is exercised in coordination with algorithmic guidance (Fenwick et al., 2019).

Opportunities are uneven. Faculty with digital literacy or structured training adapt effectively, while those with limited experience or contingent roles face barriers. Seniority, contract type, and institutional resources mediate access, producing stratified outcomes (Czerniewicz et al., 2020). Algorithmic workflows, standardized assessments, and performance monitoring continue to limit discretionary judgment, reflecting the ongoing tension between professional agency and managerial control.

In sum, AI constrains autonomy while fostering new competencies. Reskilling represents conditional re-professionalization, dependent on individual and institutional capacities, and unevenly experienced across faculty, setting the stage for examining inequalities and stratification in AI-mediated higher education.

8. INEQUALITIES AND STRATIFICATION WITHIN AI-MEDIATED ACADEMIC WORK

AI in higher education affects faculty unevenly, amplifying structural inequalities (Czerniewicz et al., 2020; Selwyn, 2019). Access to digital infrastructure, technical literacy, and institutional resources shapes adaptation, producing a digital divide. Faculty with skills and support navigate AI efficiently, integrate data insights, and personalize learning, while those with limited fluency or training face barriers constraining growth and discretion (Luckin et al., 2016; Holmes et al., 2019).

Stratification also reflects contract type, career stage, and gender. Adjunct, part-time, or early-career faculty often lack development opportunities; senior faculty may face generational adaptation challenges. Female educators may carry disproportionate administrative burdens, limiting skill development (Beer, 2017). Bravermanian analysis shows managerial oversight interacting with hierarchies to produce differentiated labour experiences, while Foucauldian insights highlight uneven self-regulation under algorithmic surveillance (Braverman, 1974; Foucault, 1977).

Institutional support mitigates disparities: professional development, collaborative networks, and technical assistance reduce marginalization, whereas uneven resources reinforce inequality. Thus, AI's benefits are conditional, and reskilling opportunities remain stratified (Czerniewicz et al., 2020).

These patterns reveal that deskilling and reskilling are unevenly experienced. AI constrains autonomy for some while enabling adaptive professional development for others. Recognizing these inequalities is essential for analyzing AI's dual impact and sets the stage for the conceptual synthesis in the discussion, integrating deskilling, reskilling, and stratified faculty experiences.

9. DISCUSSION: CONCEPTUALIZING AI-MEDIATED TEACHER PROFESSIONALISM

The analysis demonstrates that AI in higher education produces a **dual and contradictory impact** on teacher professionalism, simultaneously constraining autonomy and enabling new forms of expertise. To capture this complexity, this paper introduces a set of interrelated concepts.

Algorithmically Curated Professionalism describes the professional work shaped and structured by AI systems, institutional oversight, and performance metrics. It integrates Braverman's labour process theory by showing how managerial control extends into knowledge-intensive teaching, while Foucault's notions of surveillance and normalization explain the self-regulatory practices faculty adopt in response. Empirically, deskilling—through standardized assessment, automated feedback, and monitored workloads—reflects the constraints of algorithmically curated professionalism, whereas reskilling—data interpretation, adaptive pedagogy, and technology integration—demonstrates selective professional agency within these boundaries.

Algorithmic Teaching Drift captures the subtle, incremental reshaping of instructional practices under AI guidance. Automated recommendations, analytics dashboards, and workflow templates gradually nudge teaching toward measurable outputs. This drift is uneven: faculty with limited digital fluency, adjuncts, or senior educators experience more pronounced constraints, while digitally adept teachers navigate these systems to innovate pedagogically.

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AI-Contingent Competence highlights skills and knowledge that emerge only through engagement with AI tools and institutional support, such as interpreting analytics, designing adaptive learning pathways, and managing blended instruction. Its uneven distribution reflects and reinforces stratification in the faculty body.

Bounded Autonomy emphasizes the paradoxical nature of discretion under AI: teachers retain judgment but operate within algorithmically defined and institutionally sanctioned boundaries.

Finally, **Digital Professional Self** refers to how AI reshapes educators' professional identity, aligning teaching roles with measurable, digitalized outcomes and influencing perceptions of competence and authority.

Together, these concepts provide a coherent analytic framework linking deskilling, reskilling, and stratification. They demonstrate that AI is not neutral but actively **reconfigures professional roles, competencies, and autonomy**. While the concepts primarily address formal, AI-mediated teaching, they offer a vocabulary for examining how educators negotiate agency, adaptation, and expertise under technological and institutional mediation.

In sum, AI-mediated teaching is a site of **contradictory professional dynamics**, where algorithmically curated professionalism, algorithmic teaching drift, AI-contingent competence, bounded autonomy, and the digital professional self together explain the tensions between control, adaptation, and evolving professional identities.

10. CONCLUSION

This paper demonstrates that AI in higher education produces a complex, contradictory impact on teacher professionalism, simultaneously constraining autonomy and generating opportunities for new expertise. By introducing the interrelated concepts of Algorithmically Curated Professionalism, Algorithmic Teaching Drift, AI-Contingent Competence, Bounded Autonomy, and the Digital Professional Self, the study extends Braverman's labour process theory and Foucault's insights on disciplinary power, showing how AI reconfigures teaching roles, competencies, and professional identity rather than merely replacing human labour.

These concepts carry direct implications for higher education policy. Institutions must recognize that AI adoption is not neutral: without deliberate interventions, it can exacerbate structural inequalities across contract type, seniority, gender, and digital fluency. Ethical and effective AI integration requires policies that safeguard teacher autonomy, ensure equitable access to reskilling programs, and support the development of AI-contingent competence across all faculty groups. Awareness of Algorithmic Teaching Drift and its influence on curriculum, assessment, and instructional decision-making should guide pedagogical review and evaluation practices, while fostering the Digital Professional Self can help educators navigate evolving professional identities in algorithmically mediated environments.

Future research should empirically examine the enactment of these concepts across diverse institutional and disciplinary contexts, including how Bounded Autonomy operates in practice and how AI shapes professional identity over time. Additionally, studies should explore the informal, relational, and affective dimensions of AI-mediated teaching, which remain beyond algorithmic capture.

By integrating conceptual insights with policy-oriented guidance, this paper demonstrates that AI-mediated teaching is a site of contradictory professional dynamics, where careful, equitable, and ethically informed strategies can enhance learning while preserving the irreplaceable social and relational dimensions of the teaching profession.

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