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The Innovation-Enervation Paradox in higher education: AI and the Dunning-Kruger effect

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ABSTRACT

Artificial intelligence is increasingly framed as the solution to higher education's persistent challenges, including workload, efficiency, and student engagement. Far less attention, however, has been given to the governance conditions that make such claims possible. This paper introduces the Innovation–Enervation Paradox to analyse how institutional AI adoption can generate epistemic, pedagogical, and organisational strain while being sustained as a marker of progress. Rather than treating AI as a neutral tool, the paper examines how it is authorised, normalised, and defended through distributed governance arrangements across universities. Drawing on Fraser's account of recognition and redistribution, Butler's theory of performativity, and Haraway's concept of situated knowledges, it argues that AI governance is a political process that reorganises authority, expertise, labour, and risk. The Dunning–Kruger effect is then mobilised heuristically to explain how institutional confidence in AI becomes stabilised under conditions of partial and uneven knowledge. Through two heuristic scenarios, prompt engineering as pedagogical innovation and AI-enabled academic integrity as governance, the paper explores how practices framed as innovative can narrow epistemic plurality, redistribute labour, and generate recursive cycles in which strain becomes the rationale for further technological intervention.

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Introduction

Artificial intelligence and other emergent technologies are increasingly being integrated into education under the banners of innovation, efficiency, and global competitiveness. What is at stake, however, is not 'AI' in the abstract but the governance conditions through which AI becomes authorised, normalised, and defended as institutional progress. Within universities, technological adoption rarely occurs through a single decision or actor. Instead, it emerges through dispersed processes across procurement, academic integrity, learning design, IT governance, risk management, and senior leadership communication (Rhodes, 1997). Contemporary governance research emphasises that modern public institutions operate through collective networks of interdependent actors rather

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than simple hierarchical control (Ansell & Gash, 2008). In higher education, this collective dispersion can produce uneven distributions of authority and accountability when new technologies are introduced. The politics at stake, therefore, are not specific to AI, but are better understood through a lens of recognition, redistribution, and participation. From this perspective, the central issue is not simply the adoption of new technologies, but how their governance may intensify or reconfigure existing forms of misrecognition that shape whose knowledge is authorised, whose labour is valued, and who is able to participate meaningfully in educational decision-making.

A recurring institutional pattern is that AI systems are introduced as workload solutions, efficiency mechanisms, or signals of modernisation, while the downstream work of interpretation, student support, and risk management becomes redistributed to educators and professional staff. J. Arantes and Vicars (2024) demonstrate how the integration of digital technologies can intensify academic labour while the resulting fatigue and psychosocial risks remain insufficiently recognised within workload models, institutional processes, and policy. AI therefore enters an institutional environment in which the labour generated by technological transformation is already unevenly recognised and distributed. These redistributions are rarely recognised as governance decisions resulting increased stress around technical adoption (Tarafdar et al., 2007); they appear instead as operational consequences of technological integration. It is within this governance space that I introduce the Innovation–Enervation Paradox: a condition in which institutional acceleration toward AI adoption outpaces the redistribution of epistemic authority and governance labour required to sustain equitable and defensible enactment. In such circumstances, institutions may pursue technological innovation more rapidly than their organisational capacity to manage the interpretive, ethical, and pedagogical implications that follow. This is the central argument of the paper.

Critical edtech scholarship helps explain why appeals to ‘innovation’ and ‘progress’ carry strong institutional authority. Emerging technologies in education across sectors, including artificial intelligence, predictive analytics, and automation, are often framed as transformative solutions to educational problems (Komljenovic et al., 2023; Williamson, 2018). Williamson’s (2018) analysis of ‘silicon start-up schools’ demonstrates how data-driven models are positioned as forward-looking reform initiatives, while Komljenovic et al. (2023) show how edtech investors actively construct markets and imaginaries in which technological adoption signals institutional relevance and competitiveness. Within these framings, technological uptake functions not only as a pedagogical or technical decision but also as a marker of institutional legitimacy.

Plagiarism detection platforms provide a concrete example of how such legitimacy dynamics operate in practice. Systems such as Turnitin do more than assist academic judgement; they introduce quantifiable indicators that can become authoritative reference points within institutional processes. As Nuhtrat (2025, p. 1) observes, the similarity score has increasingly been treated as ‘a singularly reliable measure of academic integrity’, shifting evaluation from situated academic judgement toward technical thresholds. This transformation produces ‘novel ethical negotiations’ (Nuhtrat, 2025, p. 16), as educators interpret, contextualise, and sometimes challenge platform-generated outputs within disciplinary contexts. In higher education, algorithmically generated metrics may therefore become influential not because they resolve epistemic uncertainty but because they provide administratively usable proxies for complex academic judgement.

While critical edtech scholarship has examined narratives of ‘progress’ through analyses of commercial power and platformization (Gulson & Witzemberger, 2022; Perrotta et al., 2021), it is also noted that the translation of AI hype into higher education is mediated through particular institutional governance configurations. Two recurring institutional positions frequently emerge. The first comprises *governance functions*, including committees, policy units, academic integrity offices, legal counsel, and risk and compliance structures responsible for authorising technological integration under conditions of audit and accountability. The second comprises *innovation functions*, such as teaching and learning units, digital transformation teams, AI labs, and educational technology partnerships responsible for translating technological developments into pedagogical practice. These positions are not reducible to individuals, nor are they inherently misguided or beneficial to an institution. Rather, they are structurally embedded within institutional validation regimes shaped by performativity, scalability logics, commercial partnerships, and competitive visibility (Black, 2008). As Black (2008, p. 144) observes, legitimacy within regulatory regimes is not inherent but socially constructed, emerging through institutional environments that define what actions are perceived as ‘desirable, proper, or appropriate’. By treating these positions as sites where institutional expertise is constructed and validated, this paper examines how particular claims to authority around AI become stabilised, while pedagogical, relational, and situated knowledge may be displaced.

To illuminate this dynamic, the Dunning–Kruger effect (Guan et al., 2025) is mobilised heuristically as an analytic device for examining how institutional confidence in AI systems may become stabilised under conditions of epistemic uncertainty. While made common in pop psychology, its use here aligns with sociological accounts of institutional sensemaking under conditions of partial and distributed knowledge (Weber & Glynn, 2006). This paper adopts a speculative–analytical methodology grounded in Haraway’s (2013) concept of situated knowledges and traditions of critical policy sociology. The heuristic scenarios function as analytic devices rather than empirical cases, constructed to render visible the otherwise diffuse and distributed dynamics of AI governance in higher education. The validity of this approach lies not in empirical generalisation, but in its capacity to generate theoretically grounded insights into recurring patterns observable across contemporary higher education contexts.

By applying this thinking, it encourages us to can identify patterns in which lower levels of AI knowledge can correlate with higher confidence in AI systems. Noting that AI systems, are characterised by complexity and ambiguity, that no, one person can be expected to master. As such, when translated into organisational settings, this dynamic becomes less about individual activity and more about how confidence becomes attached to institutional authority. As institutions are ‘intertwined with sensemaking processes’ (Weber & Glynn, 2006, 1644), decisions about AI may be framed as strategic or future-oriented, potentially proceeding without proportionate epistemic scrutiny, as technological fluency becomes symbolically associated with leadership competence. This has been seen previously, with research on AI adoption highlighting a disconnect between innovation discourse by vendors, and organisational learning. Jarrahi et al. (2023), argue that there is ‘a sizable gap between AI capabilities presented by vendors and actual impacts . . . within organizations’ (p. 126). Thus, under these conditions, technological

experimentation may be privileged as a marker of institutional progress, even when its epistemic consequences remain uncertain.

Similar dynamics have been observed beyond higher education. Giray (2024) suggests that generative AI adoption within academic research cultures may accelerate publication practices while weakening opportunities for critical skill development. In the medical domain, Li et al. (2025) document patients and families relying on AI chatbots for specialised advice, illustrating how perceived technological competence can displace professional expertise in high-stakes contexts. Taken together, these patterns suggest that institutional confidence in AI may stabilise governance trajectories that privilege platform-mediated outputs over relational or disciplinary judgement. This dynamic helps illuminate how institutional confidence in AI can become organisationally, potentially narrowing interpretive space, while redistributing accountability. The Innovation–Enervation Paradox names this structural condition in which technological acceleration reshapes whose knowledge counts and how educational futures are authorised.

To explore these dynamics, this paper develops two heuristic scenarios: prompt engineering as pedagogical innovation and AI-enabled academic integrity as governance. These cases are not empirical accounts of particular institutions, but analytical constructions based on common and every day, mundane tasks common in institutions, designed to surface recurring tensions within contemporary AI governance in higher education. In this paper, AI governance is understood primarily at the institutional and meso-policy level. It refers to the policies, procedures, decision-making structures, risk frameworks, procurement practices, pedagogical guidelines, and accountability mechanisms through which AI systems are authorised, implemented, monitored, and contested within higher education. The issue, therefore, is not that institutional actors lack intelligence or act irrationally, but that AI governance systems often require timely, defensible decisions in contexts where epistemic completeness is unattainable. Under such conditions, confidence functions as an organisational resource rather than a reflection of epistemic certainty.

The paper proceeds by situating the Innovation–Enervation Paradox theoretically through Fraser, Butler, and Haraway before applying the framework to these two scenarios to examine how institutional authority, performative expertise, and technological imaginaries converge in institutional contexts. The contribution of this paper is not to adjudicate the value of AI in education, but to interrogate the conditions under which its adoption reshapes education at large. By focusing on the redistribution of epistemic authority, the Innovation–Enervation Paradox provides a framework for analysing how claims of innovation may coexist with forms of epistemic narrowing. In doing so, it seeks to move beyond polarised debates, or risk or opportunity, and instead examine how institutional governance mediates the relationship between technological change and educational justice. The Innovation–Enervation Paradox therefore draws attention to the governance conditions through which epistemic authority, labour, and risk are redistributed as AI becomes embedded within higher education.

Background

If education is understood as a site for fostering critical inquiry and intellectual rigour (Wrigley et al., 2012), then the speed of AI's expansion in higher education

warrants closer examination of the governance conditions through which technological adoption is authorised and legitimated. As Wrigley et al. (2012) argue, reclaiming the democratic potential of education requires engagement with structural inequalities rather than superficial reform. As such, the acceleration of AI investment in higher education raises a related question: how far do current institutional approaches to AI align with these deeper commitments to critical and equitable educational practice?

Debates surrounding AI in education are frequently structured through a polarised discourse in which technological optimism is positioned against critical scepticism (Selwyn, 2019). Within this framing, AI is often presented as a transformative solution capable of enhancing efficiency, personalisation, and scalability, while at the same time critical perspectives emphasise uncertainty, risk, and uneven consequences. Sadowski (2025, p. 91) captures this ambiguity, noting that ‘one thing I do know for certain: these technologies will create systemic problems, fragilities and failures that we also won’t understand’. This suggests that the challenge is not simply whether AI is beneficial or harmful, but how institutions make decisions under conditions of incomplete knowledge and epistemic uncertainty. Jarrahi et al. (2023, p. 126) explain that the ‘expert-in-the-loop’ approach could take a different shape as the human expert does not necessarily feed the system with the problem-solving logic. While AI is often framed as introducing unprecedented challenges, the argument advanced here is that it does not generate an entirely new form of politics, but rather rearticulates longstanding struggles over authority, expertise, and justice within new sociotechnical configurations.

Increasingly there are reports of professionals submitting AI-generated content containing fabricated citations. As discussed below, these examples illustrate how confidence in AI outputs can potentially exceed users’ capacity for verification. I draw on these examples, to illustrate that these incidents are not reducible to individual misuse but point to a broader epistemic condition in which fluency and coherence are mistaken for reliability in AI.

Managerialism, platform power, and institutional legitimacy

Within higher education, these conditions are mediated through institutional governance arrangements shaped by distributed networks of actors, including senior leadership, policy units, edtech providers, and teaching and learning specialists. In such contexts, claims about AI’s transformative potential circulate through institutional discourse, strategic planning, and external partnerships that function with, or promote AI adoption, arguably driven by institutional narratives of competitiveness and innovation rather than demonstrated organisational learning. For example, the speed to which the deployment of the calculated grades algorithm in the United Kingdom during the COVID-19 pandemic was justified as a scalable and objective solution to assessment disruption yet was subsequently reversed following widespread concerns regarding inequitable outcomes and loss of public trust. Comparable dynamics have been observed within higher education through the accelerated uptake of AI-enabled proctoring systems, where technologies introduced to preserve academic integrity have been shown to raise significant concerns regarding surveillance, bias, and fairness. In these contexts, the authority of technological solutions is not derived solely from technical validation, but from their

alignment with broader institutional imperatives to demonstrate responsiveness, modernisation, and innovation.

Despite longstanding organisational learning research demonstrating that effective integration of change requires iterative experimentation, feedback, and context-specific adaptation rather than rapid institutional uptake (Levitt & March, 1988), institutional responses to emergent AI systems often proceed under conditions of compressed timelines and limited evaluative capacity. Recent AI governance research similarly emphasises that organisations frequently lack the internal structures required to critically assess and integrate AI systems, noting that many organizations are not yet equipped with the governance mechanisms needed to manage the risks and complexities of AI deployment (Governance Institute of Australia, 2025). Under such conditions, institutional actors (whether individuals or teams) responsible for strategic decision-making may not possess comprehensive expertise across the technical, pedagogical, legal, and ethical dimensions of AI. Expertise, therefore, is not absent, but distributed, partial, and context dependent. The question is not whether decision-makers are knowledgeable or not, but how particular configurations of knowledge are authorised, amplified, and translated within institutional settings. In complex sociotechnical domains, confidence can become decoupled from epistemic depth, particularly when technological fluency is symbolically associated with leadership capability or innovation capacity.

The implications of this dynamic become visible in the increasing integration of AI into core educational practices. AI systems are not simply tools that support existing pedagogies; they actively reshape the conditions under which knowledge is produced, evaluated, and validated. For example, Zhang et al. (2024, p. 20) describe algorithmic conformity in AI agents that tend to ‘uncritically affirm and reinforce user’s views or preferences, even when they are harmful or unethical’. In educational contexts, this raises questions about how reliance on AI-generated outputs may influence forms of inquiry, assessment, and intellectual engagement when, as Perrotta et al. (2022) hypothesise, cognitive labour becomes partially externalised to generative systems. These dynamics are further reflected in specific institutional applications. Plagiarism detection systems, for example, translate complex academic judgement into quantifiable metrics, potentially narrowing the interpretive space within which educators exercise disciplinary judgement. Similarly, AI-powered chatbots, while often introduced to improve efficiency and responsiveness (Parisi & Farman, 2018; Snyder et al., 2023), reconfigure student interaction into structured, predictive exchanges. While these systems may enhance access in some contexts, they may also prioritise standardisation over the relational and dialogic dimensions of learning that underpin epistemic justice (Ali et al., 2025). This involves negotiating trade-offs between innovation, accountability, and social values within complex institutional environments. As Sartori and Theodorou (2022) discuss, decisions about AI integration are inherently political, shaping whose knowledge is recognised, whose labour is valued, and whose perspectives are included.

The preceding discussion suggests that the integration of AI in higher education cannot be understood solely in terms of technological capability or pedagogical innovation. Rather, it raises questions about how authority, expertise, and participation are organised within institutional governance. To conceptualise this dynamic, the next section introduces the Innovation–Enervation Paradox as a framework for analysing

how technological innovation may simultaneously generate and depend upon forms of epistemic, pedagogical, and organisational strain.

The Innovation–Enervation Paradox

The Innovation–Enervation Paradox names a recursive dynamic in which technological innovation generates forms of epistemic, pedagogical, and organisational strain, and where those very conditions of strain become the rationale for further innovation. Innovation and enervation are therefore not opposites but co-constitutive processes within contemporary institutional life. Innovation is typically understood as the introduction of new ideas, practices, or technologies that introduce new goods or services, or improve existing ones. Enervation, by contrast, refers to a reduction in vitality, strength, or intellectual and moral energy. The Innovation–Enervation Paradox describes a condition in which innovation produces forms of enervation, and where those conditions of enervation, in turn, generate further demands for innovation.

In higher education, this dynamic becomes visible in the adoption of AI. Technologies are introduced as innovations intended to improve efficiency, enhance learning, or resolve persistent challenges. However, as these technologies become embedded in institutional practice, they often generate new forms of labour, uncertainty, and interpretive burden. Academic staff are required to redesign assessments, interpret AI outputs, manage academic integrity in new ways, and respond to shifting policy expectations. These demands can produce fatigue, ambiguity, and a narrowing of pedagogical practice. These dynamics extend patterns identified by J. Arantes and Vicars (2024) where technological integration can intensify work and generate forms of digital fatigue and psychosocial risk that remain inadequately recognised within workload and policy arrangements. At the same time, these very conditions are frequently reframed as evidence that further innovation is required. Increased workload becomes a rationale for automation. Policy ambiguity becomes a rationale for standardised tools. Difficulties in assessment become a rationale for more sophisticated AI detection or generation systems. In this way, enervation does not interrupt innovation but becomes one of its drivers. The strain produced by earlier innovations is mobilised to justify subsequent rounds of technological intervention.

Shaped by the institutional conditions under which AI is authorised and embedded, this dynamic in higher education, plays out in how decisions about AI adoption are mediated through distributed governance arrangements involving leadership, policy units, edtech providers, and teaching and learning specialists. Under conditions of uncertainty and competitive pressure, innovation becomes a visible and legitimate response to complex problems. As a result, technological solutions may be prioritised even where their educational value remains uncertain or unevenly distributed. To analyse how this cycle is sustained, this paper uses the heuristic figures of the AI overseer and the AI innovator. These are not empirical categories, but analytical constructs that capture recurring configurations within institutional governance. The AI overseer refers to positions of formal authority responsible for strategic decision-making, while the AI innovator refers to actors who promote and operationalise AI technologies. Both operate within conditions of distributed expertise, where knowledge is partial, uneven, and difficult to verify across technical, pedagogical, and ethical domains.

Within these conditions, innovation becomes a key site of legitimacy. AI-mediated initiatives are often positioned as evidence of institutional responsiveness and progress, while forms of pedagogical innovation not mediated through AI may be less visible or less readily recognised. For example, institutions may invest in AI-enabled feedback systems or prompt engineering workshops as markers of innovation, while relational teaching practices, dialogic assessment, or culturally responsive pedagogies are treated as routine rather than strategic. In this way, innovation with AI is privileged, while innovation without AI is comparatively decentred. This asymmetry contributes to the cycle of innovation and enervation. As AI-mediated practices become dominant, they reshape expectations of teaching, learning, and academic labour. Where these practices generate strain, uncertainty, or unintended consequences, further innovation is positioned as the solution. The space for questioning the underlying trajectory narrows, as institutional attention remains focused on refining and extending technological solutions rather than reconsidering their role. The Innovation–Enervation Paradox therefore provides a conceptual tool for analysing how AI adoption can become self-reinforcing within higher education. It highlights how innovation can generate the very conditions that call for its continuation, while simultaneously weakening the epistemic and pedagogical capacities that education depends upon.

This recursive dynamic is sustained, in part, by how confidence in AI is constituted within institutional contexts. In complex sociotechnical environments such as AI governance, no single actor holds comprehensive expertise across technical, pedagogical, ethical, and legal domains. As a result, institutional decision-making relies on fragmented knowledge assembled through policy discourse, vendor narratives, and strategic priorities. Within these conditions, confidence in AI can become stabilised not because systems are fully understood, but because technological fluency is symbolically aligned with leadership, innovation, and progress. This creates the conditions under which AI adoption can proceed with limited critical interrogation, even as its implications remain uncertain.

Theoretical foundations: recognition, performativity, and situated knowledge

The Innovation–Enervation Paradox is a conceptual account of how particular governance arrangements reorganise epistemic authority, discussed here in the context of higher education. In this sense, AI governance is analysed not as a neutral technical domain, but as a political field structured by struggles over recognition, authority, and participation. The paradox names a structural condition in which innovation is authorised and accelerated through institutional processes that simultaneously narrow the range of knowledges recognised as legitimate. Thereby generating the very forms of strain, uncertainty, and epistemic contraction that call for further innovation. To theorise this dynamic, this paper draws on Fraser's account of recognition and redistribution, Butler's theory of performativity, and Haraway's concept of situated knowledges. Here, performativity does not suggest that institutionally recognised expertise is inauthentic or merely symbolic; rather, it draws attention to how particular claims to expertise become socially and organisationally stabilised as authoritative, even when they remain partial, contingent, and uneven in relation to the full demands of AI governance. Taken together,

these frameworks make it possible to analyse AI governance as a sociotechnical assemblage in which authority, legitimacy, and expertise are produced, stabilised, and contested under conditions of epistemic uncertainty.

Which is significant as ‘expertise is constructed, always “dangerous” and always something to be critiqued’ (p 16, Gerrard & Holloway, 2023). That is, expertise is not simply a fixed body of knowledge possessed by particular individuals. It is socially and politically constituted through processes that determine what counts as expertise, whose knowledge is recognised, and who is authorised to act as an expert. From this perspective, AI governance does not simply draw upon pre-existing expertise. Instead, as Gerrard and Holloway (p 29, 2023) demonstrated, it participates in producing and stabilising the boundaries through which forms of knowledge and judgement become institutionally authoritative, as it ‘is neither neutral nor categorical’.

First, Fraser’s work provides the normative and structural grounding for the paradox by framing justice in terms of participatory parity (Fraser, 1995, 2016). From this perspective, the central question is not whether AI is adopted effectively, but whether the governance arrangements through which it is authorised enable actors to participate as epistemic peers in shaping educational practice. Technical, managerial, and platform-based forms of knowledge are frequently elevated as strategic and authoritative, while pedagogical, relational, and context-specific knowledges are rendered less visible, less actionable, or less legitimate within institutional decision-making processes. This constitutes a form of misrecognition, not as simple exclusion, but as structured subordination in which some actors are positioned as decision-makers and others as implementers of decisions they did not meaningfully shape. The paradox reflects a redistribution of epistemic authority that advances innovation while narrowing the conditions under which diverse forms of knowledge can inform educational futures.

Second, Butler’s account of performativity provides an analytic explanation of how these hierarchies of authority become stabilised within institutional settings. Expertise in AI governance is not a fixed attribute held by particular actors but is constituted through repeated institutional practices that render certain forms of knowledge recognisable as legitimate and authoritative (Butler, 2009). Policy discourse, procurement processes, strategic planning, vendor partnerships, funding allocations, and institutional communication all contribute to the iterative production of what counts as credible expertise. Within these processes, technological fluency becomes aligned with leadership, innovation, and strategic capacity, not because it is epistemically comprehensive, but because it is repeatedly recognised and validated as such.

This performative stabilisation of expertise is inherently partial and contingent. Gerrard and Holloway (2023, p. 30) sharpen the political stakes of this point when they note that experts can sometimes ‘do violence, do further marginalise, do exacerbate inequalities’. Expertise, therefore, cannot be assumed to be normatively desirable simply because it is institutionally recognised as expert knowledge. The question is also what forms of authority particular expert claims enable, whose knowledge they displace, and whether their institutional recognition reproduces or challenges existing inequalities. The heuristic figures of the AI overseer and AI innovator capture these dynamics not as individual types, but as recurring positions within governance arrangements through which particular claims to expertise are authorised and enacted. This performative account of expertise clarifies the paper’s use of the Dunning-Kruger effect, which is

mobilised heuristically to explain how confidence can become institutionally stabilised under conditions of distributed and partial knowledge (Guan et al., 2025). As such, the differential relational politics through which expertise is performatively constituted establish the conditions of what counts as ‘better’ expertise. This is not in the sense of greater stability or epistemic truth, but in terms of its alignment with more socially just arrangements of recognition, participation, and accountability (Butler, 2009; Fraser, 1995, 2016; Haraway, 2013). This is not in the sense of greater stability or epistemic truth, but in terms of its alignment with more socially just arrangements of recognition, participation, and accountability.

In complex sociotechnical environments such as AI governance in higher education, no single actor possesses comprehensive expertise across technical, pedagogical, ethical, and legal domains. Institutional decision-making therefore proceeds through fragmented and context-dependent knowledge assembled across multiple sites. Within these conditions, confidence may become attached not to epistemic completeness, but to those forms of knowledge that are most institutionally legible as innovation and leadership. As Weber and Glynn (2006) suggest, institutional environments shape sensemaking processes, influencing which claims appear credible and actionable. The paradox emerges where confidence in AI is stabilised through performative recognition, even as the underlying knowledge base remains partial, contested, and unevenly distributed. This enables AI adoption to proceed with limited critical interrogation, while redistributing the burden of uncertainty, interpretation, and risk onto educators and other institutional actors. Where dissenting expertise challenges an authorised innovation trajectory, those raising concerns may be rendered less credible as knowers, while the authority of those already recognised as legitimate experts remains comparatively protected (Gerrard & Holloway, 2023).

Third, Haraway’s concept of situated knowledges provides a critical epistemological lens through which to interrogate the consequences of this redistribution (Haraway, 2013). Her critique of the *god-trick* exposes how claims to objectivity and universality obscure the partial, located, and contingent nature of all knowledge. This emphasis on partiality also connects with Gerrard and Holloway’s (2023) discussion of ignorance and the limits of expertise because it directs attention not only to what experts know, but to the limits and unknowns through which expertise is constituted. In the context of AI in higher education, systems are frequently framed as scalable solutions (Williamson, 2019), however, as AI becomes embedded within educational practice, it tends to privilege what is measurable, standardizable, and computationally tractable. ‘While these practices are often framed as producing more reliable and better knowledge, they can ... simply produce different forms of ... ignorance’ (Gerrard and Holloway, p. 41, 2023). This can produce a form of epistemic flattening in which relational, embodied, culturally specific, and context-dependent ways of knowing are rendered less visible or less legitimate. At the same time, Haraway’s framework foregrounds the possibility of alternative epistemic arrangements by insisting on accountability to the conditions of knowledge production. In this sense, the paradox is not only about epistemic loss, but about the governance arrangements required to sustain the plurality of situated knowledges.

Taken together, these theoretical perspectives provide a coherent explanation of the Innovation–Enervation Paradox. Fraser identifies the problem as one of epistemic justice, where participatory parity is undermined through the differential recognition

and redistribution of authority. Butler explains how these hierarchies are produced and stabilised through performative institutional practices that render some forms of expertise authoritative while marginalising others, while Haraway clarifies the epistemic consequences of this process. Here, we can demonstrate how privileging scalability can obscure the situated nature of knowledge and contribute to epistemic narrowing. When read alongside the heuristic use of the Dunning–Kruger effect, these frameworks reveal how confidence in AI can become institutionally stabilised under conditions of uncertainty, enabling innovation to proceed while displacing critical interrogation. As such, the Innovation–Enervation Paradox names a specific configuration of governance in which innovation is authorised through performatively stabilised oversight, legitimised through institutional narratives of progress, and enacted through sociotechnical systems that privilege particular epistemic forms of innovation. In this configuration, the adoption of AI redistributes epistemic authority, labour, and risk in ways that can generate enervation, which are then mobilised as justification for further innovation. Which in turn, produces a recursive cycle in which the expansion of AI systems both depends upon and intensifies epistemic narrowing.

Application of the innovation-enervation paradox

In applying the Innovation–Enervation Paradox to concrete educational scenarios, this section examines how AI practices framed as innovative, such as prompt engineering and AI-enabled academic integrity systems, can generate unintended epistemic and organisational consequences. Rather than presenting empirical case studies, the analysis develops two heuristic scenarios designed to surface recurring tensions within contemporary AI governance in higher education. These cases function analytically to examine how particular configurations of authority, expertise, and legitimacy shape the authorisation and institutionalisation of AI.

The purpose of these scenarios is to trace how the Innovation–Enervation Paradox operates in practice. And to examine how particular configurations of expertise are produced, recognised, and contested, with consequences for whose knowledge counts and under what conditions participation is made possible. In each case, AI is introduced as a solution to an institutional problem, with the analysis guided by three interrelated concerns drawn from the theoretical framework. First, following Fraser (1995, 2016), the scenarios examine how AI governance may differentially recognise and redistribute epistemic authority, shaping who is able to participate in decisions about teaching and learning. Second, drawing on Butler (2009), they consider how particular claims to expertise become stabilised through institutional practices, influencing which forms of knowledge are treated as credible or actionable. Third, informed by Haraway (2013), the analysis explores how AI systems privilege particular epistemic forms, potentially narrowing the diversity of knowledge practices within educational settings. To structure this exploration, the scenarios are developed through the following analytical questions:

- (1) Under what conditions are AI-driven practices framed as innovation, and how might these framings obscure processes of epistemic narrowing?

- (2) How do governance arrangements shape the distribution of authority between those who authorise AI systems and those who implement or are subject to them?
- (3) In what ways does AI adoption redistribute labour, responsibility, and risk within educational institutions?
- (4) How is confidence in AI established and sustained within institutional decision-making processes, particularly under conditions of uncertainty?
- (5) What forms of knowledge are privileged, marginalised, or rendered invisible through the integration of AI into teaching, learning, and assessment?

The scenarios are designed to be read not as instances of technological enactment, but as sites in which particular configurations of expertise are produced, recognised, and contested. They aim to highlight the consequences for whose knowledge counts and under what conditions participation is made possible.

Scenario 1. Prompt engineering and the case of iterative cycling

This scenario examines the introduction of prompt engineering as a pedagogical innovation within a university. An AI innovator promotes prompt engineering as a future-oriented capability, while institutional leadership, the AI Overseer in this case, endorses tools such as ChatGPT to enable student interactivity. Prompt engineering becomes embedded across curricula as an expected component of teaching and learning. Prompt engineering is authorised as a strategic capability before the pedagogical, epistemic, and equity implications are fully understood across the institution. What is stabilised, therefore, is not comprehensive expertise, but confidence that enough is known to proceed. Through the Innovation–Enervation Paradox, attention shifts to how this practice redistributes epistemic authority, labour, and responsibility. Rather than extending pedagogical capacity, we start to consider how prompt engineering could be reorganising how knowledge is accessed, produced, and evaluated. Notably, this dynamic is not reducible to individual misunderstanding; rather, it reflects the difficulty of evaluating emergent practices across distributed institutional contexts where expertise is necessarily partial.

Across the institution, engagement with prompt engineering is engaged with. However, it is quickly noted that it assumes familiarity with AI systems, including the ability to iteratively refine inputs and interpret outputs. But student support services and academics flag that these capacities are unevenly distributed. As students enter higher education with differing levels of digital fluency and experience with algorithmically mediated environments, the ability to produce effective prompts varies dramatically, shaping how students participate in learning. This reflects a redistribution of epistemic participation, where what appears as a neutral innovation has differentially structured access to knowledge practices. A few months down the track, and a related dynamic emerges for students whose ways of knowing are relational, embodied, or culturally situated. It is noticed that AI systems tend to privilege knowledge that is standardizable and draws on English, as linguistically dominant. Success therefore becomes aligned with producing outputs that conform to these systems, highlighting the claims of prompt engineering offering equal access to education; or the neutrality, have in fact obscured the

partial and situated conditions of knowledge production. Within this scenario, prompt engineering therefore, does not explicitly exclude alternative epistemologies, but it contributes to conditions in which some forms of knowledge are more easily translated into valued outputs than others.

Third, it is when students start to complain about the iterative nature of prompt engineering, that we see the paradox unfold. Students wanting to be better, and better, refine prompts through repeated cycles of input and output. Each time, they adjust phrasing until an ‘acceptable’ response is produced. Then they try again. Using a different persona. Adding in the rubric. Asking the prompt again. This, creating a recursive dynamic that draws students into repeated cycles of prompting. But when they feel like they are getting closer but not quite, they find themselves prompting again. And again. And again. A parallel dynamic is visible institutionally. As students are encouraged to persist with prompting, staff and leaders read repeated use as evidence that the practice is working. They do not read it as evidence of epistemic uncertainty or cognitive fatigue. In heuristic terms, we can consider how visible activity and apparent fluency can be mistaken for deeper pedagogical success, as each iteration appears productive.

What becomes visible here is not simply uneven participation. Instead, it appears to be a particular performative construction of expertise. One, in which proficiency with AI-mediated optimisation is recognised as legitimate academic competence. This configuration privileges students already familiar with iterative, platform-based interaction while marginalising those whose knowledge practices are relational, embodied, or culturally situated. In this sense, what counts as ‘better’ expertise is not more epistemically robust, but more aligned with system-readable outputs, raising questions about whether such arrangements support socially just conditions of participation and recognition.

However, the accumulation of iterations shifts effort away from disciplinary reasoning, and toward an optimisation of outputs. Exhausted from iterative cycling through prompting, we see innovation and enervation emerge together. The repeated cycles of near success produce cognitive fatigue, dependency, and a narrowing of epistemic engagement; while their tutors encourage, advise and suggest increased usage. Through this scenario, the Innovation–Enervation Paradox becomes visible as a recursive dynamic grounded in practice. Prompt engineering is introduced as an innovation to enhance learning and institutional relevance. In practice, its iterative use redistributes epistemic authority, shifts student effort toward optimisation, and expands academic labour as staff respond to emerging tools and practices. The repeated cycles of prompting, partial success, and re-prompting generate cognitive fatigue and dependency for students, while simultaneously reinforcing the perceived need for further guidance, refinement, and technological support. As students strive to achieve acceptable outputs and staff work to stabilise these practices, further innovation is positioned as the solution, but the result is a recursive cycle in which innovation generates enervation, and enervation becomes the rationale for continued innovation.

Scenario 2. Prompt engineering and academic integrity in assessment

Imagine the same university where prompt engineering has been established as an innovative pedagogical practice. The AI innovator has been widely celebrated as a future-oriented leader, and institutional leadership, acting as AI overseer, continues to celebrate

and endorses its integration across teaching and learning. Prompt engineering is now embedded within assessment design, supported through workshops, curriculum guidance, and institutional messaging that positions AI use as both necessary and progressive. At the same time, academic integrity policies are revised, and AI-enabled plagiarism detection systems are introduced through formal governance processes, including academic integrity committees, policy updates, and vendor procurement. These developments are framed as essential innovations. The tensions that follow do not arise from poor decision-making per se, but from the interaction of multiple legitimate institutional imperatives, innovation, integrity, accountability, which are difficult to reconcile in practice. That is, confidence in governance arrangements can become detached from the depth of institutional understanding needed to sustain them. Prompt engineering is endorsed as pedagogical innovation, while AI detection is authorised as a governance solution, despite limited clarity about how the two practices will interact in assessment. Institutional certainty is therefore assembled before the epistemic and procedural contradictions have been worked through. Prompt engineering is positioned as enhancing student capability, while detection systems are introduced to safeguard academic standards.

However, through the Innovation–Enervation Paradox, however, attention shifts to how these practices interact. The promotion of AI-mediated learning and the simultaneous expansion of AI surveillance introduce competing expectations, where students are taught to iteratively refine prompts and generate responses yet are assessed through systems that do not fully account for these practices. This produces a redistribution of epistemic authority in which students are required to navigate unclear and shifting boundaries between legitimate engagement and misconduct. This misalignment becomes operational through the routine functioning of academic integrity processes, where detection systems flag student submissions. Further faculty are required to interpret, report and follow up on these cases, under time constraints shaped by workload models unchanged since AI disruption, and reporting expectations to ‘catch the cheaters’. The Innovation–Enervation Paradox becomes visible through the iterative handling of these cases.

In this configuration, expertise is differentially constituted across governance and pedagogy. Technical and compliance-oriented forms of knowledge are stabilised as authoritative within institutional processes, while pedagogical judgement and contextual interpretation are redistributed as labour rather than recognised as expertise. This produces a misalignment in which those responsible for implementing and mediating AI practices have limited authority in shaping the conditions under which they operate. From this perspective, the issue is not inconsistency alone, but whether the prevailing configuration of expertise enables equitable participation and accountability across institutional actors. So, while, each flagged submission generates further cycles of review, clarification, and decision-making, rather than prompting a reconsideration of the original assumptions, these escalating cycles are interpreted as evidence that the innovation requires further refinement. Perhaps more training by the AI Innovator? Or perhaps the AI overseer should enable more refined tools? In this sense, the Dunning–Kruger effect helps illuminate how institutional overconfidence is sustained: not through the absence of difficulty, but through a tendency to treat difficulty as evidence that the innovation must be extended rather than questioned.

As cases increase, the institution responds through additional interventions. We see revised policies, staff training, and refinements to detection tools continue to be 'needed'. These responses are framed as necessary innovations to make assessment secure. At the same time, they expand the volume and complexity of academic labour required to sustain the system, whilst the innovation generates new demands, and those demands justify further innovation. Over time, institutional confidence in the combination of prompt engineering as a practice, and detection system begins to erode. Concerns raised through committees, student appeals, and faculty workload reporting expose inconsistencies. Within a relatively short period, the system is withdrawn from use, producing a reconfiguration of governance. The AI overseer, whose authority had been stabilised through the authorisation and institutionalisation of the detection system, is left without a clear mechanism through which to operationalise oversight.

Responsibility shifts to localised practices, managed through changes to assessment design and teaching. Prompt engineering, once positioned as a marker of innovation, becomes reframed within these practices as a source of confusion and instability, and staff are again asked to make adjustments to tasks, instructions, and expectations. At the same time, the AI innovator looks for new innovations, as their previous work is subject to scrutiny. The alignment between pedagogical innovation and institutional governance weakens, as forms of AI engagement that were legitimised within teaching become difficult to reconcile with revised expectations of academic integrity. The innovator's role persists, but under altered conditions, where they now talk to the latest 'need', whether that be ethics, or workplace skills or environmental impacts.

Through this scenario, the Innovation–Enervation Paradox is observable as a recursive governance process. The introduction of prompt engineering and AI detection systems redistributes epistemic authority and expands institutional labour. The instability that follows is addressed through further interventions, including policy revision, assessment redesign, and the removal of the detection system itself. These responses do not resolve the underlying conditions that students were taught to use AI, then called 'cheaters' for using AI. Instead, they generate new uncertainties regarding acceptable practice, responsibility, and authority that shifts from academic integrity to assessment reform. Innovation and enervation are therefore not sequential but co-constitutive, with the introduction of innovation producing conditions of strain, ambiguity, and expanded labour. Those conditions, in turn, become the rationale for further innovation in assessment design. What emerges is not a stable resolution, but an ongoing cycle in which governance arrangements continually attempt to manage the effects they also produce.

Concluding remarks

This paper has argued that the governance arrangements through which AI is authorised, normalised, and enacted can be considered through the Innovation–Enervation Paradox. By doing so, it gives name to a recursive condition in which innovation generates forms of strain, ambiguity, and redistributed labour, and those very conditions are then mobilised to justify further innovation. The participatory injustices at stake are not limited to access, but include the differential recognition of expertise, uneven capacity to participate in AI-mediated practices, and the

redistribution of labour without corresponding authority in shaping the systems that govern educational work. In this sense, the paradox is not about the unintended consequences of AI adoption, but about the institutional dynamics through which those consequences are repeatedly produced and managed. Read in this way, the Dunning–Kruger effect provides a useful heuristic for understanding how confidence in AI can become institutionally stabilised under conditions of partial and distributed knowledge. Meaning that calls for more ‘expert-driven’ AI governance, risk reinforcing existing hierarchies unless the composition of expertise itself is interrogated for the differential recognition of which forms of expertise are authorised to shape institutional decision-making.

Across the scenarios developed in this paper, confidence attached to prompt engineering and AI-enabled academic integrity systems exceeded the epistemic depth available to fully anticipate their pedagogical, ethical, and organisational effects. Which reveals that the participatory injustices at stake are not limited to access, but include the differential recognition of expertise, uneven capacity to participate in AI-mediated practices, and the redistribution of labour without corresponding authority in shaping the systems that govern educational work.

What emerged was not the absence of expertise, but a governance environment in which forms of knowledge became sufficiently authoritative to proceed, while uncertainty, contradiction, and downstream labour were redistributed elsewhere; and relatively silenced. The scenarios showed how this process unfolds in practice. The paper thus, makes visible how AI governance can narrow epistemic plurality while presenting itself as institutional progress. Importantly, the paper has shown that without sustained attention to how authority, labour, risk, and responsibility are distributed, innovation can proceed in ways that weaken the pedagogical and epistemic conditions it claims to improve. This does not lead to a straightforward rejection of AI in higher education. Rather, it suggests that AI must be understood as a contested sociotechnical formation, whose integration requires ongoing negotiation, resistance, and the capacity to refuse forms of AI use. In this sense, the question is not whether AI should be adopted, but under what conditions it can be governed in ways that sustain epistemic plurality and participatory justice.

Future research should build on this framework by examining how AI governance redistributes labour across academic and professional roles, how institutions construct and stabilise expertise in conditions of rapid technological change, and how AI-mediated reforms reshape epistemic participation in teaching, learning, and assessment. There is also a need for closer examination of how these dynamics intersect with workload, emotional labour, digital inequality, and the marginalisation of non-dominant knowledge practices. And the right to refuse AI. Such work would help move debates beyond simplistic accounts of AI as either risk or opportunity, and toward a more precise analysis of the institutional conditions through which its effects are produced. The Innovation–Enervation Paradox ultimately offers a way of understanding recursive cycles of technological intervention, where innovation produces enervation, and enervation becomes the rationale for further innovation. The task, then, is not merely to govern AI better, but to interrogate the governance logics that make repeated intervention appear both necessary and inevitable.

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