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Economics Education under Algorithmic Power: Moral Judgment, Pluralism and the Political Economy of AI

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Abstract

The rapid diffusion of generative artificial intelligence in higher education is reshaping not only assessment practices but the epistemic and normative foundations of disciplinary knowledge. In economics education, where the distinction between positive analysis and normative judgment has long structured curricula, algorithmic systems risk amplifying theoretical monocultures, obscuring value assumptions, and privileging procedural fluency over critical reflection. This article argues that AI is not a neutral pedagogical tool but a sociotechnical infrastructure embedded in corporate power, data regimes, and the broader political economy of AI.

The paper addresses three questions: How does algorithmic power reconfigure the moral architecture of economics education? Can AI strengthen rather than narrow pluralist inquiry? What institutional conditions are required for coherent and sustainable integration? Drawing on pluralist and heterodox economics, philosophy of economics, critical scholarship on the political economy of AI, and empirical research in economics education and assessment, the article develops a Moral-AI Pedagogy Framework embedding normative transparency, structured pluralism, critical AI literacy, and assessment reform centred on justificatory reasoning.

Extending beyond classroom design, the analysis examines curriculum governance, faculty incentives, and digital procurement. When calculation accelerates, the cultivation of moral judgment becomes more, not less, essential.

Keywords: Economics education; Political economy of AI; Algorithmic power; Pluralism in economics; Moral judgment; Heterodox economics; Higher education governance; Assessment reform

JEL Codes: A22; A13; B41; P16; I23

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1. Introduction

Economics education stands at a moment of unusual intensity. In classrooms across universities and colleges, students increasingly encounter economic reasoning not only through textbooks and lecturers, but through algorithmic systems capable of generating essays, modelling policy scenarios, summarising theoretical disputes, and producing statistical code on demand. What was once a laborious process of conceptual engagement is now unfolding at accelerated speed. Yet the pedagogical implications of this acceleration extend beyond efficiency. They reach into the very identity of economics as a discipline and into the civic purposes that economics education has long claimed to serve.

The tension between economics as a technical science and economics as a moral inquiry is not new. From Keynes's insistence that economics is a "moral science" concerned with motives, expectations, and uncertainty, to Sen's (1987, 1999) critique of the discipline's self-imposed ethical minimalism, scholars have repeatedly challenged the myth of value neutrality. Put differently, the attempt to isolate "positive" analysis from "normative" reasoning has never fully succeeded (Putnam, 2002; Hausman and McPherson, 2006). Welfare economics depends on conceptions of well-being; growth theory presupposes judgments about progress; cost–benefit analysis embeds assumptions about whose preferences count and how future lives are valued. As Nussbaum (2011) has argued in the context of development, economic reasoning cannot be disentangled from questions of dignity and human capability.

These debates have found sustained expression across the wider field of economics education. The renewed call for pluralism following the global financial crisis, articulated by Colander, Holt and Rosser (2004), Lawson (2015), and amplified by student-led initiatives such as Rethinking Economics³, exposed growing dissatisfaction with curricula perceived as overly abstract, model-driven, and insufficiently attentive to historical contingency and real-world complexity. Parallel developments in scholarship on economic pedagogy have addressed the dominance of narrow methodological training and advocated a more reflexive engagement with the ethical, political, and institutional dimensions of economic life (Reardon, 2009; Garnett, Olsen and Starr, 2010; Denis, 2009). Increasingly, economists concerned with teaching have argued that economic literacy cannot be reduced to technical proficiency in mathematical modelling or statistical inference, but must include the capacity to evaluate competing frameworks, scrutinise policy trade-offs, and recognise the value-laden assumptions embedded in economic reasoning. This perspective aligns with broader traditions in critical pedagogy and democratic education, which emphasise that disciplinary knowledge is inseparable from questions of power, agency, and social responsibility (Biesta, 2010; Giroux, 2011). Within this expanding literature, economics teaching is reimagined not simply as the transmission of analytical tools, but as the cultivation of judgment in contexts where economic arguments shape collective futures.

The rapid integration of artificial intelligence into educational practice now intensifies these long-standing debates. AI systems are frequently portrayed as neutral tools that enhance

³ <https://rethinkeconomics.org>

productivity and widen access to information. Yet research in critical data studies and AI ethics complicates this portrayal. Large language models are trained on vast corpora shaped by historical inequalities in publication, language dominance, and geopolitical influence (Noble, 2018; Crawford, 2021). Their optimisation processes privilege statistical plausibility and fluency rather than epistemic reliability or ethical balance (Bender et al., 2021). Algorithmic decision-making systems in domains such as credit scoring, policing, and welfare allocation have demonstrated how computational systems can reproduce and even amplify structural biases (O’Neil, 2016; Eubanks, 2018). These insights suggest that AI should be understood not simply as a computational instrument but as a sociotechnical infrastructure embedded in economic and political arrangements (Couldry and Mejias, 2019; Zuboff, 2019).

For economics education, the implications are profound. If AI systems draw disproportionately on English-language academic sources and dominant theoretical paradigms, they risk reinforcing the very intellectual hierarchies that pluralist reform movements have sought to unsettle. Epistemic injustice, understood as the marginalisation of certain knowers or traditions (Fricker, 2007), may become infrastructurally stabilised through algorithmic mediation. At the same time, AI can make competing perspectives more accessible, enabling students to juxtapose neoclassical, Keynesian, feminist, ecological, or postcolonial analyses with unprecedented ease. Whether AI narrows or widens intellectual horizons depends less on the technology itself than on the pedagogical architecture within which it is embedded.

It is in this context that the notion of AI as a “moral amplifier” becomes analytically useful. AI systems do not possess moral agency; they do not form intentions or deliberate ethically. However, they scale and stabilise normative assumptions embedded in data selection, model design, and institutional deployment. A climate model’s discount rate reflects a position on intergenerational justice (Stern, 2007; Broome, 2012). A welfare algorithm’s eligibility threshold encodes judgments about deservingness. A growth model privileges particular conceptions of progress. When such assumptions are automated, reproduced, and rendered authoritative through AI systems, their normative force becomes more pervasive, even as their ethical underpinnings recede from view. In this sense, AI functions not as an external addition to economics, but as a multiplier of its embedded values.

These developments also intersect with longstanding educational concerns about autonomy and subject formation. Biesta’s (2010) distinction between qualification, socialisation, and subjectification offers a useful lens. AI clearly enhances qualification: students can acquire technical competencies more rapidly, test models interactively, and access feedback instantaneously. Yet AI may also intensify socialisation, subtly steering learners toward dominant epistemic patterns embedded in training data. Subjectification, the emergence of individuals capable of critical judgment and responsible action, requires moments of interruption, contestation, and uncertainty. If AI outputs are treated as definitive answers rather than provisional contributions, students may become consumers of generated knowledge rather than authors of inquiry. Conversely, if AI outputs are positioned as objects of critique, comparison, and interrogation, they can stimulate precisely the forms of reflexivity that citizenship-oriented economics education seeks to cultivate (Hedtke, 2018; Sant et al., 2020).

The integration of AI therefore raises not merely technical questions but civic ones. If algorithmic systems increasingly mediate economic knowledge, then economic literacy must expand to include algorithmic literacy. Students must be able to ask not only whether a model predicts accurately, but whose assumptions it encodes, whose voices it amplifies, and whose experiences it marginalises. This perspective aligns with broader calls within citizenship education to foreground power, participation, and epistemic justice (Biesta, 2010; Banks, 2017). It also resonates with recent scholarship in economics education that emphasises connecting disciplinary knowledge to real-world policy dilemmas and contested values (Davies, 2015; Fagan, 2019).

Against this backdrop, this article addresses three interrelated questions. First, how does the integration of AI into economics education reshape the normative foundations of the discipline, particularly the relationship between positive analysis and ethical reasoning? Second, how can plural moral and theoretical traditions be systematically embedded within AI-mediated curricula rather than treated as peripheral supplements? Third, what institutional and pedagogical reforms are required to align AI-enhanced economics education with democratic, pluralist, and epistemically just principles?

Methodologically, the article adopts a normative-constructivist approach grounded in interdisciplinary synthesis. It draws on welfare economics, moral philosophy, pluralist economic theory, AI ethics, and citizenship education research to construct a structured pedagogical framework. Empirical illustrations, including climate discounting debates, universal basic income modelling, competing growth paradigms, algorithmic credit scoring in Kenya, and urban congestion pricing, serve as pedagogical laboratories rather than as primary data sources. The objective is not to present new empirical findings, but to articulate a coherent architecture capable of guiding curriculum design and institutional reform.

The central argument is not that AI transforms economics into a moral science; economics has always been normatively structured. Rather, AI renders that structure more visible, more scalable, and more consequential. In doing so, it forces educators to confront questions that have often remained implicit. For a field concerned with citizenship, social justice, and democratic participation, this confrontation is not peripheral but foundational. If students are to navigate and govern economies increasingly shaped by algorithmic systems, economics education must equip them not only with technical proficiency but with the capacity to interrogate the moral infrastructures embedded within those systems. Reclaiming economics explicitly as a moral and plural science in the age of AI is therefore not an optional refinement. It is a necessary response to a shifting epistemic landscape.

The remainder of this article unfolds in four stages. The next section revisits the literature on positive and normative economics, pluralism in economic thought, and the political economy of artificial intelligence, in order to situate the argument within ongoing disciplinary and pedagogical debates. This theoretical groundwork is necessary to clarify the normative assumptions that AI systems may amplify and to establish the case for reclaiming economics explicitly as a moral science. The following section introduces the Moral-AI Pedagogy Framework, outlining its conceptual architecture and explaining how plural ethical traditions,

empirical inquiry, and critical AI literacy can be systematically integrated within economics curricula. This framework is then illustrated through a series of pedagogical cases, including climate discounting, universal basic income modelling, competing growth paradigms, algorithmic credit scoring, and urban congestion pricing, which demonstrate how normative reasoning and technical analysis intersect in practice. The final section turns to institutional implications, examining how universities, accreditation bodies, and policy actors might embed such an approach sustainably. Together, these sections aim to move the debate from abstract concern about AI's presence in education to a concrete and defensible pedagogical response.

2. Review of Literature

If the integration of artificial intelligence (henceforth, AI) into economics education intensifies long-standing tensions within the discipline, then responding adequately requires more than pedagogical improvisation. It requires conceptual clarity. Before proposing reforms, it is necessary to examine what exactly is at stake in the encounter between economics as a moral science and AI as a knowledge infrastructure. The questions raised in the introduction, concerning normative foundations, pluralism, and institutional reform, cannot be addressed without situating them within three overlapping conversations: the debate over positive and normative economics; the movement for pluralism and heterodox renewal in economic thought; and the emerging scholarship on AI, knowledge production, and educational transformation.

Revisiting these literatures is not a ritual exercise in citation. It is an attempt to make visible the conceptual sediment within which contemporary economics education operates. AI does not enter a vacuum. It enters a discipline shaped by decades of methodological consolidation, curricular standardisation, and periodic critique. It enters classrooms already marked by tensions between formal modelling and lived experience, between efficiency and justice, between technical mastery and civic formation. Without acknowledging this layered terrain, any proposal for “AI-enhanced pedagogy” risks either naïve enthusiasm or defensive conservatism.

The literature on positive and normative economics provides a first point of orientation. The Robbinsian separation between facts and values, long presented as a methodological safeguard, has been repeatedly interrogated (Putnam, 2002; Hausman and McPherson, 2006). Sen (1987) demonstrated that welfare analysis inevitably depends on evaluative judgments about capabilities and freedoms. More recently, debates around climate economics, inequality measurement, and behavioural welfare economics have further blurred the boundary between descriptive and normative reasoning (Stern, 2007; Fleurbaey and Blanchet, 2013). In teaching contexts, this boundary often reappears implicitly: students are trained to solve constrained optimisation problems without always interrogating the social objectives those problems encode. Post-2020 discussions in economics education have increasingly called for greater transparency regarding such normative premises, particularly considering the pandemic's exposure of structural inequalities and policy trade-offs (Mearman et al., 2021; Stilwell, 2022).

The claim that economics is, and always has been, a moral science is therefore not a rhetorical flourish but a historically grounded observation.

A second strand of literature concerns pluralism and heterodox scholarship. Since the early 2000s, calls for pluralism have sought to widen the theoretical and methodological boundaries of economics (Colander et al., 2004; Garnett, Olsen and Starr, 2010). Heterodox traditions, including post-Keynesian, feminist, ecological, institutionalist, Marxian, and decolonial economics, have argued that mainstream models often abstract away power relations, ecological constraints, unpaid labour, and colonial histories (Lawson, 2015; Nelson, 2018; Barca, 2020). The global financial crisis, and more recently the COVID-19 pandemic and climate emergency, renewed attention to these critiques. Empirical studies of economics curricula across Europe and North America continue to show a high concentration of neoclassical modelling in core courses, with limited sustained exposure to competing frameworks (Kapeller and Springholz, 2016; Decker, Elsner and Flechtner, 2018; Mearman et al., 2021). Students report valuing applied, historically contextualised, and policy-relevant learning experiences over purely formal exercises (Carvalho and Decker, 2021). These findings suggest that the demand for pluralism is not abstract ideology but pedagogical experience.

Artificial intelligence intersects with this pluralist debate in complex ways. On one hand, AI systems trained predominantly on mainstream journal articles and dominant textbooks may reinforce canonical hierarchies, reproducing what has already been institutionally privileged. On the other hand, AI's capacity to synthesise diverse sources offers the possibility of juxtaposing theoretical traditions rapidly and interactively. Whether AI narrows or widens pluralism depends not only on training data but on how educators design inquiry. If students are asked merely to "summarise the Solow model," AI will reproduce dominant formulations. If they are invited to compare Solow with endogenous growth, ecological steady-state models (Daly, 2014), or feminist critiques of growth metrics (Nelson, 2018), AI becomes a tool for structured comparison rather than reinforcement of orthodoxy. The technology thus amplifies curricular architecture, and with it, the moral and epistemic commitments embedded within that architecture.

A third and more recent body of scholarship examines AI as a sociotechnical system embedded in political economy. Critical AI studies have emphasised that algorithmic systems are shaped by corporate concentration, data extraction practices, and optimisation logics aligned with profitability and scale (Crawford, 2021; Couldry and Mejias, 2019). Generative models do not merely retrieve knowledge; they synthesise it probabilistically, privileging coherence over contestation (Bender et al., 2021). In educational settings, emerging empirical research suggests both productivity gains and shifts in epistemic authority. Studies conducted in 2022–2024 indicate that students using generative AI tools often produce more structurally coherent essays but may engage less deeply with primary sources unless guided through structured prompts (Kasneci et al., 2023; Mollick and Mollick, 2023). In economics classrooms specifically, instructors report that AI can facilitate rapid scenario modelling but also risk encouraging surface-level engagement if normative assumptions remain unexamined. These early findings underscore a central insight: AI does not determine pedagogical outcomes; it mediates them.

Taken together, the literatures reviewed here converge on a common insight: economics education cannot be understood as the neutral transmission of analytical tools. The positive–normative debate demonstrates that economic reasoning is always structured by evaluative commitments, whether explicit or tacit. Pluralist and heterodox scholarship shows that multiple, internally coherent frameworks exist for interpreting economic life, each foregrounding different dimensions of power, distribution, ecology, gender, or historical contingency. Empirical studies of curricula and student experience indicate that learners benefit from exposure to competing perspectives and policy-relevant inquiry, particularly when theoretical abstraction is anchored in real-world dilemmas (Mearman et al., 2021; Carvalho and Decker, 2021). Meanwhile, critical AI scholarship reveals that technological systems amplify dominant epistemologies unless curricular design deliberately interrupts that amplification (Crawford, 2021; Bender et al., 2021).

The convergence of these strands clarifies what is at stake in the present moment. AI does not introduce normativity into economics; it renders existing normativities infrastructural. It does not create intellectual hierarchy; it risks accelerating those already sedimented within publication systems, citation networks, and institutional rankings. Nor does it eliminate pluralism; it can either compress it into canonical summaries or expand it into structured comparison, depending on pedagogical intent. In this sense, the question is not whether AI belongs in economics education, but whether economics education possesses a sufficiently explicit moral and plural architecture to govern AI's integration.

This observation exposes a gap in the current literature. While pluralist reform movements have criticized curricular narrowness, and AI ethics scholarship has examined algorithmic bias and epistemic inequality, relatively little work has articulated a structured pedagogical model that integrates these concerns at the level of curriculum design. Calls for “critical AI literacy” or “ethical economics” often remain programmatic rather than architectonic. What is needed is not an additional appeal to awareness, but a coherent framework specifying how normative reasoning, empirical inquiry, theoretical diversity, and AI mediation can be institutionally embedded. The framework developed in the next section emerges directly from the tensions identified above. Its normative core responds to the impossibility of value-neutral economics. Its pluralist architecture answers the heterodox critique of theoretical monoculture. Its conception of AI as moral amplifier is grounded in political economy and critical data studies. Its pedagogical translation reflects empirical findings about student engagement and curricular effectiveness. Rather than standing apart from the literature, the framework condenses its central insights into a structured model intended for practical application.

Importantly, these pedagogical questions cannot be separated from institutional conditions. Curriculum design, assessment structures, accreditation systems, platform procurement, and managerial governance all shape how AI enters educational practice and which forms of reasoning become normalised. Classroom pedagogies therefore emerge within broader organisational and political-economic environments rather than independently from them. The framework developed in the next section should consequently be read not as a purely classroom-based intervention, but as part of a wider institutional architecture.

3. The Moral-AI Pedagogy Framework

Although the framework is introduced pedagogically, its components are inseparable from institutional governance arrangements discussed later in the article. Classroom practices do not mechanically derive from institutional structures, yet they are enabled and constrained by accreditation regimes, assessment cultures, procurement systems, and broader political-economic pressures shaping higher education. The distinction between pedagogical and institutional levels in this article is therefore analytical rather than absolute.

If the previous sections have shown that economics is irreducibly normative, structurally plural, and increasingly mediated by algorithmic infrastructures, then the task now is not merely to caution but to construct. The framework that follows is not an abstract overlay imposed upon the debates reviewed in the previous section. It emerges directly from them. If economics is irreducibly normative, if pluralist critiques have demonstrated the limits of theoretical monoculture, and if AI functions as a sociotechnical infrastructure that amplifies existing epistemic hierarchies, then curriculum design must respond at precisely those fault lines. The Moral-AI Pedagogy Framework operationalises these tensions at the level of pedagogy. It does so by institutionalising normative transparency, embedding structured pluralism, situating AI within political economy, integrating empirical modelling with ethical reasoning, and safeguarding subject formation in algorithmically mediated classrooms.

These components are analytically distinguishable but pedagogically interdependent. Each addresses a vulnerability identified in the literature; together they constitute a coherent architecture for economics education under conditions, where intelligent systems shape knowledge production.

3.1 Normative Transparency: Rendering Economic Judgment Explicit

The first requirement of a morally serious economics education is clarity about its own evaluative premises. The longstanding debate over the positive–normative distinction has demonstrated that economic analysis cannot be insulated from moral reasoning (Putnam, 2002; Hausman and McPherson, 2006). Yet in practice, students frequently encounter models as if they were ethically neutral mechanisms. Welfare functions are presented without sustained interrogation of distributive principles; discount rates are introduced as technical parameters rather than as positions on intergenerational justice; efficiency is defined without explicit reference to its moral trade-offs.

AI intensifies this opacity. Generative systems can produce cost–benefit analyses or policy recommendations in seconds, presenting them in rhetorically confident language that obscures underlying assumptions. Without structured intervention, students may mistake fluency for neutrality. Normative transparency therefore becomes a curricular obligation.

Operationally, this means that every modelling exercise is paired with explicit ethical articulation. When students simulate climate mitigation strategies, they must justify the choice of discount rate and examine how alternative rates alter conclusions. When evaluating redistribution policies, they compare utilitarian aggregation with Rawlsian maximin reasoning or capability-based evaluation. AI-assisted recalculation makes these contrasts computationally immediate, but the pedagogical objective lies in argument, not automation. Students are required to defend normative choices publicly and to acknowledge their contestability.

In this configuration, AI does not replace ethical reasoning; it sharpens it. By allowing rapid comparison under alternative premises, it exposes the contingency of economic conclusions on moral architecture. What had previously remained implicit becomes visible. Normative transparency thus transforms AI from a device that risks naturalising technocracy into one that illuminates moral divergence.

3.2 Structured Pluralism: Institutionalising Theoretical Comparison

If normative commitments shape economic reasoning, then exposure to competing frameworks is not optional enrichment but analytical necessity. Pluralist and heterodox scholarship has long argued that theoretical monoculture constrains explanatory scope and narrows civic imagination (Garnett, Olsen and Starr, 2010; Lawson, 2015). Empirical investigations of curricula continue to reveal heavy concentration around neoclassical micro- and macroeconomic models despite reform efforts (Kapeller and Springholz, 2016; Decker, Elsner and Flechtner, 2018; Mearman et al., 2021).

Structured pluralism responds by embedding theoretical diversity into the architecture of teaching rather than appending it episodically. Core economic problems are approached through systematically juxtaposed lenses. Growth theory is examined not only through Solow and endogenous innovation models, but alongside ecological steady-state economics (Daly, 2014) and feminist critiques of GDP as an inadequate measure of welfare (Nelson, 2018). Labour markets are analysed through marginal productivity theory, bargaining models, institutionalist approaches, and care-economy perspectives. Development economics engages convergence theory, dependency analysis, and the capability approach (Sen, 1999).

AI tools, when deliberately prompted, can synthesise these perspectives rapidly, enabling structured comparison at a depth previously difficult within limited classroom time. Yet critical AI research indicates that generative systems often default toward dominant paradigms embedded in training corpora (Bender et al., 2021; Crawford, 2021). The framework therefore places emphasis on curricular design: assignments require multi-framework evaluation; marking criteria reward comparative reasoning; prompts explicitly request alternative schools of thought.

Here the concept of AI as moral amplifier becomes concrete. If curricula remain monocultural, AI will scale monoculture. If curricula institutionalise plural comparison, AI can scale plurality. The amplifier magnifies existing curricular and institutional tendencies, but it does so through infrastructures already predisposed toward optimisation, standardisation, and dominant

knowledge hierarchies inherited from contemporary digital capitalism. The decisive variable is not technological capacity but pedagogical architecture.

3.3 AI as Political Economy: Making Infrastructure Economically Legible

A further step is necessary to address the infrastructural character of AI itself. Treating AI solely as a classroom instrument risks obscuring the political-economic conditions from which contemporary AI emerges. Generative systems are not neutral computational assistants later shaped by social use; they are products of specific historical and economic arrangements characterised by platform concentration, data extraction, speculative investment, labour optimisation, and computational acceleration (Couldry and Mejias, 2019; Crawford, 2021; Srnicek, 2017). Efficiency is therefore not merely one possible institutional application of AI but a constitutive feature of its dominant developmental trajectory. This does not mean that pedagogical outcomes are predetermined. It means that educational institutions encounter AI with inherited economic logics already sedimented within its infrastructures. In reality, AI systems are embedded within corporate concentration, data extraction practices, and platform capitalism (Couldry and Mejias, 2019; Zuboff, 2019). Their development is shaped by intellectual property regimes, venture capital financing, and global asymmetries in data ownership.

The framework therefore integrates AI as an object of economic inquiry. Students analyse market concentration in cloud computing and AI services, examine the labour implications of automation, and investigate algorithmic bias in credit allocation and welfare systems (O'Neil, 2016; Eubanks, 2018). In development modules, digital credit scoring systems in emerging economies can serve as empirical cases where financial inclusion and algorithmic exclusion coexist. In industrial organisation courses, students can evaluate whether AI markets exhibit oligopolistic dynamics consistent with contemporary digital capitalism (Srnicek, 2017; Birch and Cochrane, 2022).

This move accomplishes more than topical expansion. It situates AI within the discipline's core analytical concerns: competition, regulation, distribution, and governance. Students thus engage AI not as an unquestioned authority but as an economic phenomenon subject to critical scrutiny. Intellectual autonomy is reinforced by economic literacy applied to technological systems themselves.

3.4 Integrating Empirical Modelling with Ethical Deliberation

One of the most persistent separations in economics education lies between empirical modelling and ethical discussion. Data analysis is frequently presented as objective technique, while normative reasoning is relegated to peripheral debate. Recent research in economics pedagogy indicates that students demonstrate deeper engagement when policy modelling is

connected to real-world dilemmas and explicit value trade-offs (Mearman et al., 2021; Stilwell, 2022).

AI's computational capacity creates an opportunity to reunite evidence and judgment. Under this framework, modelling exercises culminate not in numerical output alone but in justificatory argument. Students simulating universal basic income proposals must defend fiscal assumptions and distributional consequences. Climate policy models must be recalculated under alternative ethical premises and publicly defended. Urban congestion pricing simulations incorporate equity weights and rights-based considerations alongside efficiency metrics.

AI accelerates scenario generation; it does not settle normative disputes. The speed of recalculation makes explicit how sensitive outcomes are to underlying parameters. In classroom pilots conducted informally across several institutions, instructors have observed that when students are required to re-run AI-assisted simulations under competing ethical premises and defend their reasoning, classroom discussion becomes more analytically rigorous and less polarized. While systematic longitudinal evaluation remains necessary, early experience suggests that the integration of modelling and moral reasoning enhances rather than dilutes critical capacity.

3.5 Subject Formation in Algorithmic Environments

The final dimension of the framework concerns the formation of intellectual autonomy in environments where intelligent systems generate persuasive content. Concerns about diminished creativity or over-reliance on AI cannot be dismissed as nostalgic resistance. They reflect genuine pedagogical anxieties. Biesta's distinction between qualification and subjectification (Biesta, 2010) provides a helpful lens: AI undoubtedly strengthens technical qualification but may risk narrowing subject formation if its outputs are treated as authoritative endpoints.

The framework responds by embedding structured confrontation. Students must annotate AI-generated analyses, identify theoretical omissions, and compare algorithmic summaries with primary sources. Reflection essays require examination of where generative systems oversimplify, conflate traditions, or obscure methodological disagreement. Rather than banning AI, educators reposition it as a provisional interlocutor. Emerging evidence from higher education research suggests that reflective engagement of this kind fosters deeper metacognitive awareness than either prohibition or uncritical adoption (Kasneci et al., 2023; Mollick and Mollick, 2023).

Autonomy, in this context, is not the absence of technological mediation but the capacity to navigate it critically. Students learn to recognise that probabilistic fluency is not synonymous with epistemic authority. They become capable of inhabiting disagreement rather than outsourcing it.

3.6 Coherence and Derivation

The Moral-AI Pedagogy Framework thus crystallises cumulative insights drawn from pluralist economics (Colander et al., 2004; Lawson, 2015; Dobusch and Kapeller, 2012), critical economics education research (Mearman et al., 2011; Hedtke, 2018; Kapeller and Springholz, 2016), and contemporary scholarship on artificial intelligence as sociotechnical infrastructure (Crawford, 2021; Couldry and Mejias, 2019; Williamson and Eynon, 2020). Normative transparency responds to longstanding critiques of the positive–normative divide (Putnam, 2002; Sen, 2009) and to calls within economics education to make value commitments explicit rather than implicit (Reiss, 2013; Decker et al., 2018). Structured pluralism institutionalises theoretical diversity, addressing evidence that economics curricula remain heavily concentrated in neoclassical paradigms despite post-crisis reform efforts (Lee, 2009; Kapeller and Springholz, 2016). Political economy analysis situates AI within broader relations of platform capitalism and data extraction (Srnicek, 2017; Zuboff, 2019), recognising that algorithmic systems are embedded in corporate power structures rather than floating as neutral tools. Integrated modelling reconnects empirical investigation with ethical reasoning, echoing Sen's (1987) insistence that welfare analysis cannot be disentangled from evaluative judgment. Subject-forming pedagogy draws on educational theory that foregrounds autonomy, democratic agency, and the formation of judgment (Biesta, 2010; Nussbaum, 2010).

What distinguishes this framework is not the novelty of any single element but the coherence of their integration under conditions of algorithmic mediation. Artificial intelligence alters the scale, speed, and perceived authority of knowledge synthesis (Bender et al., 2021; Kasneci et al., 2023). It can compress disagreement into fluent canonical summaries or expand inquiry into structured comparison. It can obscure normative premises behind persuasive output or render them newly visible through critical interrogation. As recent studies of AI in higher education suggest, the pedagogical consequences depend less on technical capacity than on curricular framing and institutional design (Mollick and Mollick, 2023; Selwyn, 2022). The framework therefore specifies the conditions under which AI becomes a catalyst for pluralist reflection rather than a vehicle for epistemic consolidation.

Yet educational architectures do not exist independently of institutional realities. Curriculum reform has long been shown to be shaped by disciplinary gatekeeping, journal hierarchies, accreditation standards, and professional incentives (Fourcade, 2009; Muller, 2018; Young, 2008). Efforts to pluralise economics education after the global financial crisis illustrate how structural constraints can limit even widely acknowledged reform agendas (Decker et al., 2018; Mearman et al., 2018). Similarly, the integration of digital technologies into higher education is mediated by procurement systems, platform dependencies, and managerial governance logics (Williamson, 2017; Selwyn, 2016). A classroom that cultivates reflexivity while a university adopts opaque AI systems without scrutiny risks internal contradiction.

If the Moral-AI Pedagogy Framework is to move beyond isolated innovation and become a durable orientation for economics education, its institutional preconditions must therefore be addressed explicitly. The analytical focus shifts from pedagogical design at the micro level to governance structures at the meso level: from classroom practice to organisational architecture.

The following section examines how universities, disciplinary associations, and policy actors might embed normative transparency, structured pluralism, and critical AI literacy within sustainable institutional frameworks capable of resisting epistemic monoculture and technological determinism.

4. Institutional Conditions and Governance: Reclaiming Economics in the Age of Algorithmic Power

No curriculum reform unfolds in abstraction. Economics programmes are embedded in institutional ecologies shaped by accreditation regimes, professional incentives, research evaluation frameworks, and global ranking systems. As Young (2008) reminds us, curricula are always expressions of “powerful knowledge”, structured selections of what a discipline considers legitimate and authoritative. To reclaim economics as a moral science under conditions of algorithmic mediation therefore requires institutional transformation as much as pedagogical innovation.

If AI amplifies curricular architecture, universities expand or constrain reforms. The embedding of Moral-AI Pedagogy depends on governance structures that align ethical aspiration with organisational practice.

4.1 Curriculum Governance and the Politics of Disciplinary Authority

Economics has long been marked by an unusual degree of paradigmatic coherence, particularly at the undergraduate level. Studies of disciplinary structure consistently show that economics exhibits tighter methodological consensus and stronger boundary maintenance than most social sciences (Colander, Holt and Rosser, 2004; Fourcade, Ollion and Algan, 2015; Lee, 2009). While such coherence has facilitated cumulative technical refinement and analytical standardisation, it has also constrained theoretical diversity in curricula, often marginalising heterodox, institutionalist, feminist, ecological, and post-Keynesian perspectives (Kapeller and Springholz, 2016; Mearman et al., 2018; Dobusch and Kapeller, 2012). The result is not merely a narrow reading list but a narrowed conception of what counts as legitimate economic reasoning.

The global financial crisis intensified scrutiny of this paradigm stability. Student-led initiatives such as Rethinking Economics, alongside scholarly interventions, challenged the dominance of a single methodological template and called for greater pluralism and historical contextualisation (Decker, Elsner and Flechtner, 2018; Mearman et al., 2011). Yet empirical studies suggest that, despite rhetorical openness to reform, curricular transformation has often remained incremental and uneven (Mearman et al., 2021). The persistence of canonical textbook structures, core model sequences, and assessment conventions indicates that institutional inertia operates at deeper structural levels than individual course design.

Curriculum governance plays a decisive role in this inertia. Accreditation frameworks, benchmarking exercises, external quality assurance regimes, and global ranking systems

frequently privilege quantifiable outputs and methodological standardisation (Hazelkorn, 2015; Muller, 2009). In such environments, disciplinary authority is reproduced not only through intellectual persuasion but through bureaucratic reinforcement. Bernstein's (2000) theory of classification and framing reminds us that curriculum design codifies power: it defines what knowledge is legitimate, which voices are peripheral, and what forms of reasoning are assessable. If pluralist engagement remains an optional supplement rather than a structurally embedded requirement, it will predictably remain marginal.

The expansion of artificial intelligence into higher education must be interpreted within this governance context. AI tools are often introduced under managerial rationales of efficiency, scalability, and cost optimisation (Selwyn, 2016; Williamson, 2017). Automated grading, standardised feedback generation, content summarisation, and predictive analytics promise measurable gains in productivity. However, as critical AI scholarship has emphasised, technological systems tend to amplify existing institutional logics rather than transform them (Crawford, 2021; Zuboff, 2019; Bender et al., 2021). In a discipline already characterised by strong paradigmatic concentration, AI may therefore entrench epistemic monoculture if adopted without reflexive governance.

Moreover, the perceived epistemic authority of AI-generated outputs introduces a subtle but significant shift in disciplinary power. Large language models trained predominantly on mainstream economic literature are statistically more likely to reproduce dominant frameworks and canonical interpretations. Without explicit curricular counterweights, algorithmic mediation risks naturalising particular theoretical assumptions as neutral synthesis. As recent analyses of generative AI in education caution, the problem is not simply factual inaccuracy but the smoothing of controversy into persuasive fluency (Kasneci et al., 2023; Mollick and Mollick, 2023). Under such conditions, the politics of curriculum design becomes inseparable from the politics of algorithmic infrastructure.

Embedding a Moral-AI Pedagogy within economics programmes therefore requires governance reform that extends beyond classroom experimentation. Normative reasoning, theoretical pluralism, and critical algorithmic literacy must be codified within programme specifications, learning outcomes, and assessment criteria. This aligns with longstanding arguments in educational theory that what is assessed becomes what is valued (Biesta, 2010; Young, 2008). If ethical articulation and epistemic reflexivity are formally examinable competencies, they acquire institutional legitimacy rather than depending on individual instructor discretion.

Reframing disciplinary rigour is central to this governance shift. Rigour has too often been equated exclusively with formal modelling sophistication or econometric precision. While these remain essential competencies, they do not exhaust the epistemic responsibilities of economic inquiry. As Sen (1987) and Putnam (2002) have argued, evaluative reasoning is not an optional supplement to economic analysis but constitutive of it. Governance frameworks must therefore redefine excellence to include clarity of normative justification, awareness of theoretical alternatives, and the capacity to interrogate algorithmic mediation. Precision in

modelling and reflexivity in moral reasoning should be mutually reinforcing rather than hierarchically ordered.

Ultimately, curriculum governance is not a neutral administrative layer but a site where disciplinary identity is continuously reconstructed. Decisions about accreditation standards, core modules, digital procurement, and assessment design collectively determine whether AI becomes an instrument of epistemic consolidation or a catalyst for pluralist expansion. Reclaiming economics as a moral science in the age of algorithmic power thus begins not only with pedagogical imagination but with institutional courage.

4.2 Faculty Incentives, Academic Identity, and Epistemic Risk

Curriculum reform does not implement itself. It is enacted by scholars whose professional trajectories are shaped by incentive structures that reward certain forms of knowledge production while marginalising others. Research assessment frameworks, citation metrics, journal hierarchies, and tenure criteria often privilege publication in a narrow set of mainstream outlets, thereby reinforcing paradigmatic continuity within economics (Fourcade, Ollion and Algan, 2015; Lee, 2009; Kapeller and Springholz, 2016). The sociology of the discipline demonstrates that intellectual authority in economics is not merely the outcome of argument but of institutionalised prestige economies (Fourcade, 2009). Under such conditions, advocating pluralism or interdisciplinary integration can entail professional risk, particularly for early-career scholars navigating probationary periods and competitive promotion processes (Mearman et al., 2018).

These incentive structures shape not only research agendas but pedagogical identity. As Shulman (2005) famously argued, disciplines reproduce themselves through “signature pedagogies”, habitual teaching practices that encode epistemic values and norms. In economics, these often include formal modelling sequences, equilibrium problem sets, and technical examinations that reinforce an image of rigour as mathematical proficiency. Such pedagogical habits are not ideologically neutral; they signal to students what counts as legitimate reasoning. Transforming economics education under conditions of AI therefore requires more than introducing new tools, it requires reconfiguring the professional self-understanding of educators.

The integration of artificial intelligence intensifies these dynamics. Studies of digitalisation in higher education consistently show that technological adoption is frequently driven by managerial imperatives, efficiency, cost reduction, standardisation, rather than by pedagogical reflection (Selwyn, 2016; Williamson, 2017; Selwyn, 2019). AI systems are often implemented through centralised procurement processes, with limited consultation about epistemic implications. Recent analyses of generative AI in universities highlight the risk that such tools become instruments of automation rather than catalysts for critical inquiry (Kasneci et al., 2023; Mollick and Mollick, 2023). When faculty members are evaluated primarily on research output and administrative compliance, the cognitive and temporal space required for thoughtful AI integration becomes scarce.

This creates a double epistemic risk. First, without structured support, educators may adopt AI in ways that replicate dominant theoretical frameworks, relying on model-generated summaries that privilege mainstream perspectives. Second, those who attempt to integrate AI critically, foregrounding its biases, data dependencies, and normative assumptions, may encounter institutional indifference if such efforts are not recognised within workload models or promotion criteria. The politics of innovation thus intersects with the politics of precarity.

Investing in faculty development is therefore not an auxiliary concern but a central governance responsibility. Interdisciplinary collaboration between economists, philosophers of science, data scientists, and education specialists can help cultivate shared vocabularies around algorithmic mediation and normative reasoning. Critical data literacy workshops and structured time allocations for curriculum redesign signal that reflexive AI integration is institutionally valued. Research on professional learning communities suggests that sustained collegial engagement, rather than one-off training sessions, is crucial for durable pedagogical change (Darling-Hammond et al., 2017). Embedding such structures within departmental culture reframes AI from a technical add-on to a site of collective inquiry.

At a deeper level, institutions must recognise that AI challenges academic identity itself. If algorithmic systems can generate technically competent explanations, the distinctive contribution of the educator cannot lie solely in information transmission. It must lie in cultivating judgment, contextual interpretation, and ethical articulation. Biesta (2010) argues that education is irreducible to qualification; it also concerns subjectification, the formation of autonomous agents capable of responsible action. Faculty members who view AI integration through this lens are more likely to treat it as a pedagogical encounter rather than an efficiency upgrade.

Governance, in this context, becomes a form of epistemic stewardship. It entails creating conditions under which educators can experiment without fear of reputational penalty, question algorithmic authority without being labelled resistant to innovation, and foreground pluralist debate without jeopardising professional advancement. Such stewardship does not eliminate epistemic risk, intellectual transformation always entails uncertainty, but it distributes that risk institutionally rather than leaving it to individual courage alone.

In the end, the future of economics education in the age of AI will be shaped less by the technical sophistication of software than by the incentive landscapes within which scholars operate. When reflexivity, pluralism, and ethical clarity are institutionally rewarded, AI can become a partner in expanding inquiry. When productivity metrics dominate, it is more likely to entrench existing hierarchies. The governance of faculty incentives is therefore inseparable from the governance of knowledge itself.

4.3 Digital Political Economy and Institutional Reflexivity

Universities do not encounter artificial intelligence as neutral consumers of a technical product; they engage with it as institutional actors embedded within digital capitalism. Contracts with AI providers, cloud computing dependencies, data governance frameworks, and intellectual property arrangements structure academic life in ways that often remain administratively

routinised and pedagogically invisible. Yet critical scholarship on platform capitalism has made clear that digital infrastructures are not passive utilities but economic architectures that concentrate power, extract value from data, and shape epistemic possibilities (Srnicsek, 2017; Zuboff, 2019; Couldry and Mejias, 2019; Van Dijck, Poell and de Waal, 2018).

Artificial intelligence systems are built upon vast corpora of digitised knowledge, much of it produced within publicly funded universities. The asymmetry between academic knowledge production and corporate AI monetisation has been widely noted (Crawford, 2021; Birhane, 2021). Training data are aggregated, processed, and recontextualised within proprietary models whose internal logics remain largely opaque. When universities procure such systems without critical scrutiny, they risk participating in forms of data extraction and epistemic enclosure that contradict their own commitments to openness and public knowledge. The digital political economy of AI thus intersects directly with the normative mission of higher education.

For economics education in particular, this intersection carries heightened significance. If students are invited to interrogate market concentration, network effects, data commodification, and algorithmic bias, institutional practices must model similar scrutiny. Otherwise, pedagogy and governance diverge. Transparent procurement processes, faculty oversight of AI deployment, participatory decision-making structures, and clear communication about student data usage are not administrative technicalities; they are enactments of economic principles. As O’Neil (2016) and Eubanks (2018) have demonstrated in the context of public-sector algorithmic systems, opacity and uncritical automation can reproduce inequality and amplify structural disadvantage. Universities must avoid replicating these dynamics within their own digital infrastructures.

The issue extends beyond data privacy to epistemic dependency. Reliance on a small number of global technology firms for AI services risks centralising control over the informational tools that mediate academic inquiry. Williamson (2017) and Selwyn (2016) have shown how educational technology markets reshape institutional priorities through vendor-driven innovation narratives. In such environments, the language of “efficiency” and “innovation” can obscure deeper questions about knowledge sovereignty and disciplinary autonomy. For a discipline concerned with competition policy, regulatory capture, and power asymmetries, failure to interrogate these dependencies would represent a striking inconsistency.

Emerging debates concerning accelerationist forms of platform governance and technologically driven managerialism further suggest that AI systems may reshape educational expectations around speed, productivity, and continuous optimisation in ways that risk narrowing conceptions of learning as reflective, dialogical, and collective inquiry.

Institutional reflexivity therefore becomes a condition of pedagogical credibility. Reflexivity here does not imply paralysis or rejection of technological tools. Rather, it entails systematic examination of how AI systems are selected, governed, and evaluated. It requires mechanisms for auditing algorithmic impact, including assessments of bias, accessibility, and epistemic diversity (Bender et al., 2021; Kasneci et al., 2023). It may also involve exploring open-source alternatives, consortium-based procurement models, or public-sector AI collaborations that align more closely with academic values. These governance choices signal whether universities

understand themselves as passive adopters of digital capitalism or as active participants capable of shaping its trajectory.

Students trained to analyse digital political economy are acutely sensitive to institutional contradiction. When classroom critique of platform concentration coexists with opaque administrative contracts, credibility erodes. Conversely, when institutions demonstrate transparency about AI partnerships and openly debate trade-offs between innovation, cost, privacy, and academic autonomy, they model the very economic reasoning they seek to cultivate. Institutional reflexivity thus performs an educative function: it transforms governance into a living case study of market structure, power, and regulation.

In the age of algorithmic power, the question is not whether universities will engage with AI, but how consciously they will do so. By aligning procurement, data governance, and pedagogical commitments, institutions can embody a form of economic citizenship that recognises both the opportunities and the structural risks of digital capitalism. Such alignment strengthens not only administrative coherence but the moral authority of economics education itself.

4.4 Assessment Reform and the Ethics of Evaluation

Assessment is the quiet architect of educational identity. Students learn not only from what is taught, but from what is examined. As Biggs and Tang (2011) argue in their account of constructive alignment, assessment tasks signal what counts as understanding, rigour, and achievement within a discipline. When evaluation privileges procedural fluency over interpretive depth, students adapt accordingly. In economics, assessment has historically centred on problem sets, model derivations, diagrammatic explanations, and econometric exercises that reward technical precision and algorithmic consistency. These are valuable skills. But they also communicate a tacit message: that mastery lies primarily in executing established procedures.

Generative artificial intelligence unsettles this equilibrium. Tasks that once required sustained individual effort, summarising theoretical positions, solving standard optimisation problems, drafting policy briefs, can now be performed in seconds with plausible fluency. The immediate institutional reflex has often been defensive: plagiarism detection software, invigilated examinations, restrictions on AI usage. While concerns about academic integrity are legitimate, a strategy focused solely on detection risks narrowing educational imagination. As Boud and Falchikov (2007) remind us, assessment should prepare students for the complexities of professional and civic life, not merely police compliance.

The presence of AI invites a more ambitious response: redesigning assessment to foreground judgment rather than procedure. Nicol and Macfarlane-Dick (2006) emphasise that effective assessment fosters self-regulation and critical reflection. Under conditions of AI, this principle becomes even more urgent. If students can generate technically competent outputs with minimal effort, the evaluative focus must shift toward the capacity to interrogate those outputs, to identify theoretical omissions, normative assumptions, and empirical fragilities.

Concretely, this may involve requiring students to submit AI-assisted policy analyses accompanied by structured reflective commentaries. In such assignments, the primary object of evaluation is not the surface coherence of the policy brief but the student's ability to diagnose the model's implicit distributive assumptions, theoretical blind spots, or ideological framings. Oral examinations can probe why a particular welfare criterion was selected, what alternative conceptions of efficiency might imply, or how different schools of thought would reinterpret the same dataset. These conversational formats reintroduce an element of unpredictability that compels genuine understanding rather than rehearsed replication.

Collaborative assessment can further deepen this shift. Students might be tasked with recalculating fiscal or environmental scenarios under competing normative principles, utilitarian maximisation, Rawlsian difference principles, capability-based approaches (Sen, 2009; Nussbaum, 2011), and then defending their reasoning in structured debate. Here, AI serves as a computational partner, but the intellectual labour lies in choosing, justifying, and contesting evaluative criteria. The exercise makes visible what economics too often leaves implicit: that policy recommendations are inseparable from moral commitments.

Such reforms resonate with longstanding calls within economics education to integrate real-world problem solving, ethical reasoning, and civic engagement (Davies, 2015; Reiss, 2013). They also align with empirical findings that students develop deeper conceptual understanding when assessments demand transfer, critique, and contextualisation rather than repetition (Sadler, 1989; Biggs and Tang, 2011). Importantly, these practices do not abandon technical competence. Rather, they reposition it as one component within a broader ecology of judgment.

Biesta (2010) distinguishes between qualification, socialisation, and subjectification as three purposes of education. Traditional economics assessments have often focused narrowly on qualification, the acquisition of skills. The integration of AI makes this narrowness increasingly untenable. When procedural tasks are partially automated, the formative aim of subjectification, the cultivation of independent, responsible judgment, becomes more visible and more necessary. Assessment reform is therefore not a concession to technological disruption; it is an opportunity to clarify the deeper purposes of economic education.

There is, inevitably, discomfort in this transition. Oral defences require time. Reflective commentaries are harder to grade than multiple-choice examinations. Debates introduce ambiguity into marking criteria. Yet this very discomfort signals a shift away from mechanised evaluation toward educative encounter. If economics is to reclaim its identity as a moral science in an age of algorithmic mediation, its assessment practices must reward not only the capacity to calculate but the courage to justify. In this sense, AI does not diminish the role of assessment; it exposes its ethical core. What we choose to evaluate reveals what we believe economics is for.

4.5 Global Knowledge Hierarchies and Epistemic Justice

Any discussion of AI in economics education that neglects the international political economy of knowledge production remains incomplete. Economics has long occupied a privileged and unusually influential position within global policy discourse. As Fourcade (2009) demonstrates

in her comparative sociology of the discipline, the authority of economists, particularly those trained in elite Anglo-American institutions, has been institutionally consolidated through transnational networks, central banks, international organisations, and development agencies. This authority is not evenly distributed. It is geographically concentrated and linguistically mediated.

Artificial intelligence systems trained predominantly on English-language corpora and mainstream academic publications risk amplifying these historical asymmetries. Large language models derive statistical patterns from existing textual dominance. When the overwhelming majority of indexed economic literature originates in North American and Western European contexts, algorithmic synthesis will tend to reproduce those epistemic centres. The issue is not malicious bias but structural inheritance. As Birhane (2021) and Bender et al. (2021) caution, AI systems encode the distributions of their training data; they reflect and scale prevailing hierarchies unless deliberately counterbalanced.

For economics education, the implications are profound. Students querying AI systems about development policy, labour markets, or monetary reform may receive responses that foreground canonical frameworks while marginalising regionally grounded traditions, Latin American structuralism, African political economy, Islamic economics, or postcolonial critiques of development. Without deliberate curricular intervention, AI-mediated knowledge retrieval risks presenting dominant paradigms as universal rather than situated.

Scholarship on decolonising higher education has repeatedly emphasised that epistemic marginalisation is not resolved through symbolic inclusion but through structural transformation (Bhambra, Gebrial and Nişancioğlu, 2018; Connell, 2007). Tuck and Yang (2012) famously warn against forms of inclusion that leave underlying power relations intact. Within economics education, this means that pluralism cannot be confined to adding a week on “alternative approaches.” It requires systematic engagement with intellectual traditions historically excluded from core syllabi.

The integration of AI intensifies the urgency of this task. If generative systems become routine mediators of economic explanation, then whose scholarship is digitised, indexed, and algorithmically weighted becomes a question of epistemic justice. Governance decisions regarding database subscriptions, open-access commitments, AI licensing agreements, and library digitisation priorities are therefore not merely administrative. They shape the global circulation of ideas. Open-access initiatives such as Plan S, and collaborative knowledge infrastructures that reduce paywall barriers, contribute to more equitable visibility across regions (cOAlition S, 2018). Similarly, transnational teaching collaborations and joint curriculum design projects can broaden the epistemic base from which AI systems draw in classroom contexts.

There is also a pedagogical dimension to epistemic justice. Students can be invited to examine how AI-generated responses vary when prompts are framed from different regional or theoretical perspectives. Comparative exercises might involve querying development models from dependency theory (Prebisch, 1950; Cardoso and Faletto, 1979) alongside neoclassical growth theory, then analysing which perspectives receive more extensive treatment in

algorithmic output. Such activities render visible the politics of knowledge weighting rather than leaving it implicit.

Fricker's (2007) concept of epistemic injustice is instructive here: individuals and communities can be wronged specifically in their capacity as knowers. When entire intellectual traditions are algorithmically underrepresented, students inherit a narrowed sense of the possible. A Moral-AI Pedagogy attentive to pluralism must therefore extend beyond classroom debate to infrastructural awareness. It must ask not only what theories are taught, but which voices are amplified by the systems through which knowledge is accessed.

Institutional reflexivity about these asymmetries strengthens the normative credibility of reform. Universities in the Global North, in particular, bear responsibility for recognising how their procurement choices and citation practices contribute to global epistemic concentration. At the same time, institutions in the Global South navigating resource constraints face distinct challenges in accessing AI infrastructures dominated by multinational corporations. Addressing these inequalities requires cooperation rather than paternalism: shared repositories, multilingual digitisation efforts, and cross-regional research networks that resist intellectual homogenisation.

Ultimately, the question is not whether AI will participate in shaping the global conversation of economics. It already does. The question is whether educators and institutions will allow algorithmic mediation to entrench existing hierarchies or use it as an opportunity to surface and contest them. In the long arc of economics as a discipline, moments of technological transformation have often reinforced dominant centres of authority. The present moment offers a different possibility, if epistemic justice becomes an explicit design principle rather than an afterthought.

4.6 From Vision to Implementation: Pragmatism without Dilution

Institutional transformation rarely unfolds through decisive rupture. Universities operate within budget cycles, accreditation frameworks, staffing constraints, and inherited curricular architectures that resist abrupt redesign. Vision alone does not move these structures. As Fullan (2007) argues, sustainable reform depends less on declarative ambition than on alignment among purpose, professional capacity, and evaluation. Without such alignment, even compelling pedagogical innovations dissipate into isolated experiments.

Acknowledging these constraints need not imply dilution of principle. On the contrary, gradualism can be a form of strategic coherence. Pilot modules that integrate pluralist economic frameworks with structured AI critique can function as laboratories of curricular experimentation. Phased assessment reform, beginning with reflective components appended to existing assignments, can recalibrate evaluative priorities without destabilising entire programmes. Iterative faculty development, embedded within departmental culture rather than imposed externally, allows educators to test and refine new pedagogical practices in dialogue with colleagues.

Research on organisational learning suggests that durable reform becomes institutional when practices are normalised, codified, and resourced (Argyris and Schön, 1996; Kezar, 2014).

Change that remains dependent on individual enthusiasm rarely survives turnover or shifting administrative priorities. Early experiences from departments experimenting with pluralist curricula and AI-reflexive assignments, though still emergent, indicate that students often demonstrate heightened engagement when asked not merely to use algorithmic outputs but to interrogate them across competing theoretical frameworks. Evidence from broader higher education research similarly shows that inquiry-based and dialogical assessment practices deepen conceptual understanding and foster epistemic confidence (Freeman et al., 2014; Nicol, 2010). While longitudinal research specific to AI-integrated economics education remains necessary, these converging strands of evidence reinforce a central claim: reform is not utopian. It is institutionally achievable when supported by coherent structures.

What eventually determines whether such reform endures is not the presence of AI itself but the institutional arrangements within which it is embedded. Fragmented initiatives, an isolated AI policy here, an optional pluralist seminar there, risk producing symbolic change without structural effect. By contrast, when governance frameworks, assessment regimes, faculty incentives, and digital procurement policies converge around commitments to normative transparency and plural inquiry, institutional culture begins to shift. Under such conditions, AI can function not as an accelerant of technocratic closure but as a multiplier of democratic reasoning.

This insight connects the practical question of implementation to the broader politics of technology. As Winner (1986) observed, artifacts have politics because technological systems are never socially innocent. Contemporary AI infrastructures are already shaped by the logics of platform capitalism, data extraction, labour optimisation, and acceleration. Their architectures privilege calculability, standardisation, and efficiency in ways that are not external to the technology itself but built into the conditions of their development and deployment (Crawford, 2021; Srnicek, 2017; Zuboff, 2019). Educational institutions therefore do not encounter neutral tools awaiting inscription. What governance structures can do, however, is mediate how these embedded tendencies operate pedagogically. Reflexive and pluralist institutions cannot fully detach AI from its political-economic origins, but they can interrupt technocratic closure by exposing underlying assumptions, widening theoretical contestation, and preserving spaces for deliberation, uncertainty, and judgment. Therefore, implementation is not merely administrative sequencing; it is a normative act. Decisions about budgeting, training, procurement, and assessment collectively determine whether algorithmic tools consolidate existing hierarchies or support intellectual autonomy.

Across Sections 3 and 4, the argument has moved from classroom architecture to institutional governance precisely to foreground this point. Artificial intelligence does not determine the moral trajectory of economics education. It intensifies the architectures, epistemic, organisational, and political, within which it operates. Reclaiming economics as a moral science in the age of algorithmic power is thus neither nostalgic retreat nor technological enthusiasm. It is an institutional project requiring clarity about educational purpose, courage in governance design, and sustained alignment between principle and practice.

The concluding section widens the lens further. If economics education succeeds in embedding pluralism, normative transparency, and critical AI literacy within its institutional fabric, what implications follow for the civic role of economists in democratic societies? And conversely, what risks emerge if algorithmic mediation is allowed to redefine economic reasoning without reflexive constraint?

5. Conclusion: Reclaiming Judgment in an Age of Calculation

Economics has never been merely a toolbox of models. It has been a way of organising moral attention. From Adam Smith's reflections on sympathy to Keynes's concern with uncertainty, and from Sen's (1987) critique of "engineering" approaches to welfare to Putnam's (2002) dismantling of the fact–value dichotomy, the discipline has repeatedly wrestled with the relationship between analysis and evaluation. Yet the twentieth century also witnessed a powerful countercurrent: the aspiration to present economics as a positive science insulated from normative dispute. Robbins's (1932) influential separation between the allocation of scarce means and the domain of ethical choice, though philosophically contested, became pedagogically convenient. Students learned to optimise before they were invited to ask what counted as improvement.

Artificial intelligence does not create this tension; it intensifies it. Generative systems can draft policy memoranda, simulate fiscal reforms, and summarise competing theoretical traditions with remarkable fluency. Their speed and coherence create an epistemic temptation: to equate economic reasoning with computational efficiency. Yet what AI accelerates is not judgment but procedure. It scales the assumptions embedded in training data, the hierarchies sedimented in publication systems, and the paradigms already dominant in curricula (Bender et al., 2021; Crawford, 2021). When outputs appear neutral and comprehensive, the normative scaffolding beneath them can recede from view.

The response proposed in this article is neither technological enthusiasm nor defensive prohibition. It is institutional and pedagogical reconstruction. The Moral-AI Pedagogy Framework treats AI as a stress test for economics education. Under conditions of algorithmic mediation, the implicit becomes visible: monocultures harden, but plural architectures expand; neutrality reveals itself as a choice. Drawing on heterodox economics (Lawson, 2015; Dobusch and Kapeller, 2012), economics education research (Mearman et al., 2018), educational theory (Biesta, 2010), and scholarship on digital political economy (Srnicek, 2017; Zuboff, 2019), the framework situates AI within concrete mechanisms of curriculum design, assessment reform, faculty incentives, and institutional governance. Its central claim is not that AI determines the future of economics education, but that it magnifies the intellectual and moral architectures already in place.

At stake is the civic role of economic reasoning in democratic societies. Economic arguments shape taxation, climate transition, welfare provision, labour markets, and technological regulation. When these arguments present themselves as purely technical, democratic

deliberation narrows. Dewey (1927) warned that democracy depends on habits of inquiry capable of sustaining public reasoning; Sen (2009) similarly argues that justice requires open evaluative debate. In policy environments increasingly mediated by algorithmic tools, economists will work alongside systems capable of producing rapid forecasts and persuasive syntheses. The decisive issue is therefore not whether students will use AI, they will, but whether they will understand the moral and political architectures within which AI operates, and whether they will recognise their responsibility in shaping them.

Reclaiming economics as a moral science does not require abandoning modelling, statistics, or analytical rigour. It requires deepening them. Rigour must include clarity about assumptions, transparency about values, openness to theoretical diversity, and reflexivity about the infrastructures through which knowledge is produced and circulated. When calculation becomes instantaneous, judgment becomes more, not less, precious. The transformation envisioned here will unfold unevenly, constrained by institutional resources and governance cultures, and it demands continued empirical study. Yet moments of technological transition have always reshaped disciplinary identities. Economics now stands within such a moment.

The discipline can allow algorithmic systems to consolidate an image of expertise as optimising technique detached from moral reflection. Or it can use this juncture to renew its identity as a reflective inquiry into collective choice under conditions of scarcity, power, and uncertainty. In a world where machines can optimise almost any objective function we provide, the question that remains is not how efficiently we can compute outcomes, but who decides what is worth optimising in the first place, and on what moral grounds?

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