



Resilient and Sustainable Leadership in Higher Education

Toward a Four-Axis Integrative Framework

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Abstract. Higher education institutions are entering the second half of the 2020s under compounding pressure — geopolitical instability, demographic decline, financial volatility, and the rapid integration of artificial intelligence into teaching, assessment, research, and governance. Against this backdrop, resilience and sustainability have become the two dominant discourses through which contemporary policy and scholarship articulate what good leadership in higher education ought to be. Yet the two discourses have largely evolved in parallel, addressing different time horizons, units of analysis, and operational moves.

This paper argues that resilient and sustainable leadership are theoretically reconcilable, that their integration is already articulated piecewise across recent policy and scholarly discourse, and that an organizing approach can be derived to support both research and practice. Through a discursive synthesis of contemporary contributions, the paper identifies four bridging constructs — emotional intelligence, distributed leadership, alignment with the Sustainable Development Goals, and AI-augmented decision support — and proposes a four-axis integrative framework defined by time horizon, locus of action, resource logic, and accountability frame. The framework is offered not as a complete playbook, but as a defensible compass for leaders navigating universities through a turbulent decade.

Keywords: Resilient Leadership; Sustainable Leadership; Higher Education; Artificial Intelligence; Integrative Framework.

1 Introduction

Higher education institutions are being asked to do two demanding things at once. They must absorb shocks — geopolitical, demographic, financial, and above all the rapid reconfiguration of academic work by artificial intelligence — while simultaneously bequeathing structures that will serve students, societies, and ecologies long after the present cohort of leaders has retired. Resilience and sustainability are not optional concepts in this setting. They are the two dominant registers through which contemporary policy

bodies, accreditors, and scholars articulate what good leadership in higher education ought to be (UNESCO, 2021; OECD, 2025; ENQA, 2015).

These registers, however, have largely evolved in parallel rather than in conversation. Resilient-leadership scholarship, sharpened by recent disruptions and increasingly by the AI-driven transformation of academic life, foregrounds adaptive capacity under acute stress, decision-making with incomplete information, and the algorithmic augmentation of human judgement (Southwick et al., 2014; Țîmbaliuc, 2024; Riti et al., 2025). Sustainable-leadership scholarship, with longer roots in Hargreaves and Fink's (2006) seven principles, foregrounds intergenerational stewardship, justice, succession, and the conservation of institutional purpose against short-term pressure (Vesudevan & Abdullah, 2025; Flori et al., 2025). Those share normative commitments — to people, to institutions, to learning — yet they speak in different time horizons, theorize different units of analysis, and recommend different operational moves.

Practitioners do not have the luxury of choosing one direction. Institutional management representatives must reconcile a quality-assurance review whose horizon is twelve months with a sustainability commitment whose horizon spans two decades; they must decide which AI tools to adopt for the current or upcoming academic year and which institutional values must remain inviolable across decades; they must satisfy ESG-aligned accreditors and Sustainable Development Goal-aligned funders simultaneously. The tension is structural, not stylistic, and is not adequately addressed by either literature on its own.

Elements used to describe a leadership decision shapes the questions asked of it, the metrics chosen to evaluate it, and the time over which its consequences are tracked. A decision named as resilient invites quarterly reviews; a decision named as sustainable invites generational ones. Holding both directions simultaneously requires an epistemic analysis that contemporary university leadership has developed only partially. The paper's contribution is to make that discipline explicit by deriving a small number of organizing axes that practitioners and scholars can use to test whether a given decision is being held in both registers at once.

This paper argues that resilient and sustainable leadership in higher education are theoretically reconcilable, that their integration is empirically observable in the contemporary register of educational policy and research, and that an organizing approach capable of supporting both research and practice can be derived. The argument unfolds in four moves. The next two sections set out, in turn, the sustainability strand and the resilience strand of educational-leadership scholarship. The fourth section then traces the four bridging constructs through which the two strands meet in practice. The fifth derives from this synthesis a four-axis integrative framework, illustrated by a conceptual figure. A short closing section draws out implications for governance, leader development, and quality assurance, and acknowledges the limits of an essentially theoretical contribution.

2 Sustainable Leadership in Higher Education

The sustainability strand in educational-leadership scholarship is most coherently anchored in Hargreaves and Fink's (2006) seven principles, formulated as a deliberate counterpoint to the short-cycle accountability regimes that came to dominate school and university management in the early 2000s. The seven principles — depth (focus on learning that matters), length (succession planning that outlasts a single leader), breadth (distributed leadership across the organization), justice (do no harm to surrounding institutions or communities), diversity (cultivate variety rather than enforce uniformity), resourcefulness (renew people, money, and energy rather than deplete them), and conservation (build on what came before rather than discarding it) — together specify a leadership posture that takes the long view as its operational discipline rather than as a rhetorical add-on.

Although developed primarily for school systems, the framework has been productively transferred into higher education, where its insistence on intergenerational stewardship aligns directly with the public-good rationale that underwrites university autonomy. Vesudevan and Abdullah (2025), studying Malaysian higher education institutions, position sustainable faculty leadership as a learning-organization phenomenon distributed across faculty members, programme directors, and quality-assurance staff rather than concentrated in deans or rectors. Flori, Raulea, and Raulea (2025) extend the framework further with a sustainability-driven vector model for higher education governance in which leadership, sensing, and strategic decisioning are distributed across institutional sub-systems through continuous feedback loops; the model's mathematical formulation foregrounds distribution as a structural rather than rhetorical claim.

Recent contributions also link sustainable leadership explicitly to the Sustainable Development Goals — particularly SDG 4 (quality education) and SDG 10 (reduced inequalities) — supplying a globally legible accountability anchor that internal quality-assurance cycles cannot supply on their own (Chigbu & Makapela, 2025; UNESCO, 2021). At the same time, scholars have begun to articulate sustainable leadership as a relational rather than purely strategic posture, foregrounding the emotional and ethical labor required to keep long-horizon commitments alive when short-cycle pressures intensify. This relational turn has become particularly acute under the pressure of AI-driven curricular and assessment change, which raises distinctively intergenerational questions about what counts as learning, who owns the learning record, and how academic integrity is preserved across decades of accelerating technological substitution.

What is genuinely new in the present moment is the speed at which artificial intelligence is collapsing the distance between short-cycle and long-cycle questions. A decision to adopt a generative-AI assessment tool today commits the institution to a multi-year trajectory of pedagogical retraining, integrity infrastructure, and governance learning whose end state is not yet legible. Sustainable leadership in this setting is forced to operate without the comfort of established precedent: the long view must be constructed prospectively, often without the canonical sources that would have guided an analogous decision a generation ago. This temporal compression places fresh demands on Har-

greaves and Fink's resourcefulness principle, which originally assumed a relatively stable institutional ecology, and on their conservation principle, which presupposed a clear sense of what is worth preserving across leadership cycles.

3 Resilient Leadership in Higher Education

The resilience strand has a different intellectual provenance. Southwick et al. (2014), in their integrative review, define resilience as a multilevel construct that operates simultaneously at the individual, team, organizational, and community levels, and that resists reduction to any single one of them. For higher education, this multilevel framing matters acutely under AI-induced pressure: a personally resilient rector cannot, by that fact alone, make the institution resilient in the face of an AI-driven restructuring of teaching, assessment, and research workflows; a financially resilient university can still fail with regard to student preparation if its faculty and academic units are exhausted by the pace of technological change. Țîmbaliuc (2024) extends this organizational-resilience perspective explicitly to academic settings, naming emotional intelligence, self-awareness, adaptability, and a growth mindset as constitutive components of leadership resilience — the capacities that allow a leader to maintain team morale and psychological safety through volatile conditions.

Adjacent to resilience scholarship is the older but durable adaptive-leadership tradition associated with Heifetz, Grashow, and Linsky (2009) and recently revisited by Brown and Jones (2025) in their study of Australian schools during the pandemic disruption. Adaptive leadership shifts the analytical question from "how does the leader recover?" to "how does the leader help the system learn?" and is, therefore, the conceptual link between resilience (recovering from this shock) and sustainability (being able to recover from many shocks, across many decades). Brown and Jones explicitly argue that relational work — listening, signalling, holding ambiguity — is not auxiliary to adaptive leadership but constitutive of it.

The most recent contribution to this strand is the Neural-Adaptive AI Leadership Model proposed by Riti, Abrudan, Bacali, and Bâlc (2025), which formalizes adaptive leadership through the combination of pattern-recognition algorithms, feedback loops, and predictive decision support. Although developed in an engineering-management setting, its underlying claim — that AI augments rather than replaces leader judgement — is directly relevant to higher education and informs the bridging discussion below. The model's positioning matters because it does not treat AI as a tool to be deployed by an unchanged leadership role; it treats AI as a constitutive feature of the leadership environment, requiring new competencies in pattern interpretation, model evaluation, and ethical attribution. For higher education, where decisions routinely involve incomplete data and competing legitimate interests, the implication is that resilience itself must be reconceived as a hybrid human–algorithmic capacity rather than as a purely human one. Southwick et al. (2014) multilevel definition becomes useful here precisely because it accommodates this hybridity: resilience can operate simultaneously at the level of the leader, the algorithmic system, the team that interprets its outputs, and the institution whose decisions it informs. Daher-Armache, Armache, and Ismail (2025)

supply a complementary practical mechanism: continuous capacity renewal through lifelong learning and upskilling, particularly under the AI-induced obsolescence of established academic practices.

4 Where the Two Registers Meet: Bridging Constructs

Four constructs operate as connecting elements between the resilience and sustainability strands and recur across recent policy and research contributions: emotional intelligence, distributed leadership, alignment with the Sustainable Development Goals, and AI-supported decision-making. These are the channels through which resilient and sustainable leadership in fact intersect in practice, even when they are theorized separately in the literature.

Emotional intelligence functions as the relational substrate that makes both crisis recovery and intergenerational continuity humanly possible. Anchored conceptually in the Salovey and Mayer (1990) and Goleman (1998) tradition, the construct has been extended into academic-leadership settings by Ciuciuc (2022), whose monograph on decision-making in university-level educational organizations argues that without affective competence even well-designed governance structures degrade under sustained pressure. Țîmbaliuc (2024) reaches the same conclusion from a different vantage point, framing emotional intelligence as a constitutive condition of leadership resilience rather than as a desirable personal trait. Brown and Jones (2025) register the parallel claim from yet another methodological tradition: that the affective work of leading through volatility is structural rather than ornamental. The institutional dimension of emotional intelligence becomes particularly visible in moments of organizational transition — a leadership succession, an accreditation review, a curricular reform under regulatory pressure, the integration of an AI-driven assessment platform. In each case, the affective reading of the institution — who is exhausted, who is afraid, who has reserves of trust to deploy — is not separable from the strategic reading; the two are aspects of a single act of judgement. Recent contributions converge on the conclusion that institutions whose leadership lacks this dual literacy fail not because their strategies are wrong but because the human substrate cannot carry them. Of the four bridging constructs, emotional intelligence is the one most often treated as a personal trait and least often as a structural condition for institutional leadership — a treatment that recent contributions collectively contest by linking individual affective competence directly to institutional outcomes.

Distributed leadership operates as the scaling mechanism that prevents both resilience and sustainability from collapsing onto the individual leader. Across recent contributions, distribution is theorized at increasingly fine grain — from cultural posture (Vesudevan & Abdullah, 2025) to mathematical structure (Flori et al., 2025) to empirical mechanism (Khudhair, Mat Daud, Mustafa, & Al-Zubaidi, 2025), whose study of performance budgeting adoption in Iraq's higher education sector shows that leadership styles interact with structural facilitators to determine adoption outcomes — a finding that would be unintelligible under a heroic-leadership assumption. Brown and Jones (2025) close the cluster by reading distributed leadership as the practical mechanism

that allowed Australian schools to absorb a major disruption without collapse. The underlying claim across these contributions is consistent: leadership that is not distributed cannot be both resilient and sustainable simultaneously.

Alignment with the Sustainable Development Goals supplies the outcome anchor that justifies short-term sacrifice with long-term commitment. Chigbu and Makapela (2025), in a systematic review of data-driven leadership in higher education, anchor their conceptual model in SDG 4 and SDG 10 and argue that the SDGs supply the externally legible accountability frame that internal quality-assurance cycles cannot supply on their own. Vesudevan and Abdullah (2025) frame sustainable faculty leadership as the institutional posture through which universities pursue SDG-aligned transformation, and Flori et al. (2025) operationalize sustainability-driven leadership at the level of model design, embedding sustainability criteria directly in the institution's decision-making feedback loops so that compliance and aspiration are evaluable through the same instrument. Across these contributions, SDG anchoring works as a temporal translator: it lets leaders justify short-cycle decisions in the language of long-cycle outcomes, and it lets external stakeholders evaluate long-cycle outcomes in the language of short-cycle progress. A persistent silence remains, however, around how to handle SDG-internal trade-offs — for example between SDG 4 (quality) and SDG 10 (equity) when budget constraints bind — a silence that the integrative framework will need to make explicit.

AI-augmented decision support is the most recently articulated of the four bridging constructs, and the one whose theoretical grounding is still being stabilized. Riti et al. (2025) formalize the Neural-Adaptive Artificial Intelligence Leadership Model as a combination of pattern-recognition algorithms, feedback loops, and predictive decision support, and position it as a leadership theory — not merely a tool — for environments in which algorithms participate in executive cognition. Chigbu and Makapela (2025) develop a parallel claim within the data-driven leadership tradition, arguing that the integration of analytics into higher education decision-making improves institutional efficacy while requiring careful balance with ethics and human-centric leadership. Daher-Armache et al. (2025), in their study of leadership development for higher education, frame lifelong learning and upskilling as the practical antidote to AI-induced obsolescence, thereby reading AI as both a structural stressor and an occasion for capability renewal. Read together, these contributions show that AI-augmentation enables both resilience (real-time pattern recognition under uncertainty) and sustainability (long-horizon scenario modelling), but does so under conditions for which a coherent governance frame has not yet been established. The construct's contribution to the integration question is therefore double-edged: it is the most powerful of the four bridging constructs and the one most in need of theoretical scaffolding.

5 Toward a Four-Axis Integrative Framework

Read together, the bridging constructs reveal that the integration of resilient and sustainable leadership is already articulated piecewise across contemporary discourse —

emotional intelligence supplying the substrate, distributed leadership the scaling mechanism, SDG alignment the outcome anchor, AI augmentation the cognitive scaffolding — but the architecture that would connect the four into a coherent leadership model is rarely made explicit. This section provides that architecture, proposing a four-axis integrative framework that organizes the points of convergence and tension identified in the bridging constructs into a working model for theorizing and practicing resilient and sustainable leadership in higher education simultaneously.

The four axes are derived inductively from the synthesis rather than imposed deductively from any single source. Each axis names a dimension along which resilient and sustainable leadership in fact differ, and along which their integration becomes operationally legible. The axes are, respectively, time horizon, locus of action, resource logic, and accountability frame (Fig. 1).

Figure 1. Four-Axis Integrative Framework for Resilient-Sustainable Leadership in Higher Education

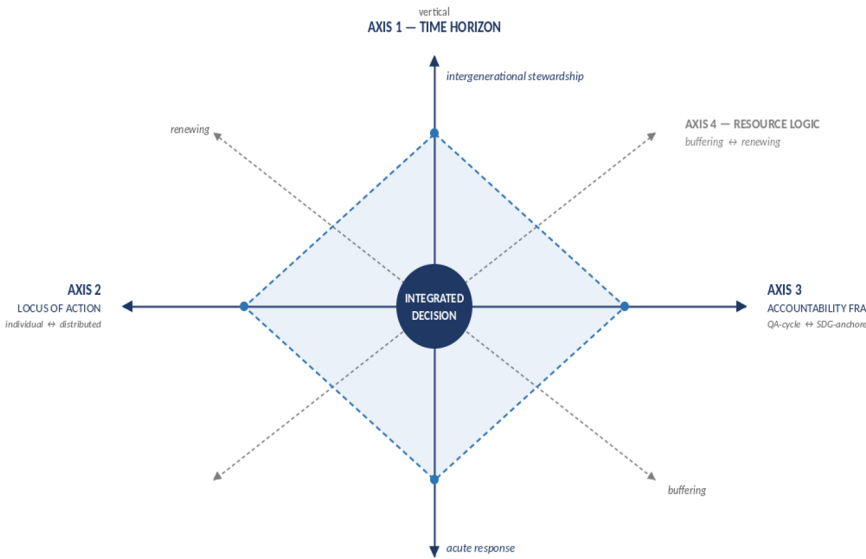


Fig. 1. Four-axis integrative framework for resilient and sustainable leadership in higher education. Vertical: time horizon (short-cycle ↔ intergenerational); horizontal: locus of action (individual ↔ institutional/systemic); diagonals: resource logic (deplete-and-replenish ↔ renew-and-distribute) and accountability frame (compliance ↔ public-good).

The first axis registers the time-horizon stretch implicit in contemporary leadership work. Resilience operates predominantly at the short-cycle end — the institution must absorb a shock now and recover within months. Sustainability operates predominantly at the intergenerational end — the institution must endure across decades and bequeath structures that outlast a single leader. Hargreaves and Fink's (2006) length principle,

EUA's (2021) long-horizon vision for European universities, and UNESCO's (2021) intergenerational framing of educational futures together insist that the two ends are not alternatives but a single temporal field whose extremes must be held in productive tension. Operationally, this means that any consequential decision must be evaluated against both its twelve-month adequacy and its twenty-year legibility.

The second axis registers the assumption of distributed governance that runs quietly across both registers. Heroic-leadership accounts place the locus of action on the individual end — the rector, the dean, the senate chair. Distributed-governance accounts place it on the institutional and systemic end — committees, learning organizations, mathematical-feedback structures (Flori et al., 2025), performance-budgeting facilitators (Khudhair et al., 2025), faculty-level sustainable leadership (Vesudevan & Abdullah, 2025). Brown and Jones (2025) offer the practical rule: distribution works when authority and accountability are co-distributed; it fails when authority is delegated and accountability is retained at the apex.

The third axis registers the resource logic that distinguishes a managerial from a sustainable posture. Conventional managerial logic treats resources as a stock to be drawn down and topped up: depletion is acceptable as long as replenishment follows. Sustainable-leadership logic treats resources — including human energy, institutional memory, and trust — as a renewable system whose carrying capacity is finite and whose distribution across the institution is itself a measure of health. The lifelong-learning posture defended by Daher-Armache et al. (2025) and the relational-labor emphasis of Ciuciuc (2022) and Țimbaliuc (2024) jointly suggest that every resource decision must be evaluated twice — once for sufficiency, once for distribution and renewability.

The fourth axis registers the dual accountability frame within which contemporary leadership operates. Compliance frames anchor leadership in internal quality assurance, external review, and structural reform indicators (ENQA, 2015). Public-good frames anchor it in the contribution institutions make to society across decades (UNESCO, 2021; Chigbu & Makapela, 2025). The integrative move is to treat the two not as competing frames but as a single accountability field whose endpoints must each be addressed by every consequential decision. The Neural-Adaptive Artificial Intelligence Leadership Model proposed by Riti et al. (2025) is instructive here because it embeds AI-augmented decision support inside a leadership-theory frame rather than a pure compliance frame, illustrating that the two ends can be reconciled within a single instrument.

Figure 1 should be read as a compass rather than a map. The four axes do not specify which decisions to make; they specify the four dimensions along which any consequential decision must be evaluated if it is to count as resilient and sustainable simultaneously. The dashed quadrilateral at the centre marks the equilibrium zone — the region within which a leadership decision balances all four axes. Decisions that pull strongly toward a single axis (pure short-cycle compliance, pure individual heroism, pure stock-depletion, pure compliance accountability) fall outside the equilibrium zone and signal a fragility that the framework is designed to surface. A useful corollary follows. Because the four axes are conceptually orthogonal, weakness on any single axis cannot be compensated by strength on the others; a decision that excels on accountability but ignores resource renewability does not count as integrated, but as fragile in a specific,

identifiable way. The framework's diagnostic value lies in this irreducibility, which forces practitioners to name the dimension on which their leadership is exposed rather than to offset it rhetorically.

6 Implications and Conclusion

The framework carries three concrete implications. For institutional governance, it suggests that resilience and sustainability should not be assigned to separate committees or risk registers but evaluated jointly along all four axes for every consequential decision; the obstacles identified above — around financial trade-offs, around AI as a governance object, around the emotional and relational labor of leadership — are precisely the obstacles that emerge when the axes are evaluated in isolation. For leader development, the framework supports a shift from leader-as-hero training toward distributed-leadership formation that builds emotional intelligence, AI-literacy, and SDG-fluency as joint competencies rather than separate modules; this aligns with the lifelong-learning posture defended by Daher-Armache et al. (2025) and with the resilience-as-organizational-capacity argument advanced by Țîmbaliuc (2024). For quality assurance, it suggests that ENQA-style internal review cycles can be productively augmented by SDG-aligned external indicators (Chigbu & Makapela, 2025) so that compliance and public-good accountability are evaluated through the same instrument rather than through competing instruments.

The contribution remains essentially theoretical and inherits the limits of that genre. The framework's fourth axis, in particular, is the most empirically tentative of the four because the AI-augmentation literature is itself recent and not yet independently replicated. The framework also does not test whether leaders who follow the four-axis framework in fact achieve more resilient and sustainable outcomes than leaders who do not; that question requires longitudinal empirical work in a variety of governance settings, including those whose institutional traditions differ substantially from the Western European and Anglophone settings that have shaped much of the recent debate.

Higher education leaders entering the second half of the 2020s do not have the luxury of treating resilience and sustainability as alternative paradigms. They must hold both. The contribution of this paper is to show that holding both is feasible, that the integration is already articulated piecewise across contemporary policy and scholarship, and that an organizing framework — derived inductively from that articulation — is now available to those who lead universities through the turbulent decade ahead. What this discipline ultimately requires of universities themselves is a willingness to reorganize internal time — to make space for decisions whose horizons exceed any single planning cycle, and to protect that space from the steady erosion of urgent demands. Without such institutional protection, the four-axis framework remains an analytical exercise rather than a leadership practice. Resilient and sustainable leadership are, in the end, not two leadership styles to choose between but two facets of the same institutional discipline: the discipline of holding the long view and the immediate moment in a single, balanced act of judgement.

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