

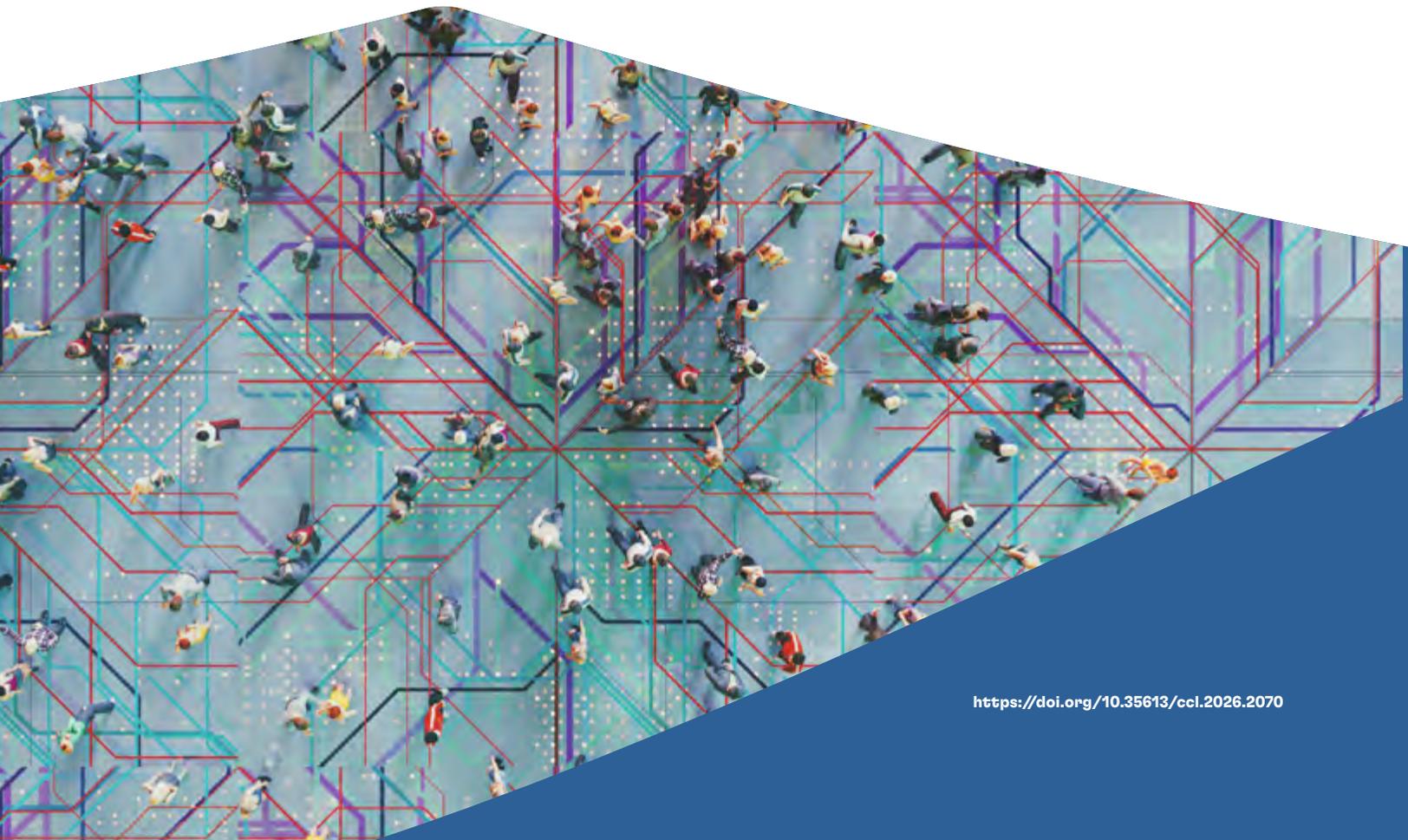
RESEARCH PAPER



Preparing Business Graduates for Polycrisis Conditions:

A LITERATURE SYNTHESIS ON EDUCATIONAL TRANSFORMATION

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Executive Summary

A growing body of scholarship argues that traditional business education leaves graduates ill-prepared for interconnected global disruptions. Researchers describe this context as a “polycrisis”—multiple, simultaneous crises that interact across economic, environmental, social, and technological domains. In response, academics call for fundamental transformation in how business schools teach, design curricula, and organize their institutions.

This paper synthesizes insights from 18 scholarly sources on preparing business students for a polycrisis world. The analysis highlights three interdependent domains of recommended reform. Pedagogically, scholars recommend experiential methods such as flexible planning, crisis simulations, and collaborative learning, which strengthen graduates’ critical thinking, emotional intelligence, crisis response, and collective problem-solving capabilities. Curricular reforms include integrating

systems thinking, crisis leadership frameworks, stakeholder engagement theories, and transformational action models to build capacity for navigating complex adaptive systems, managing uncertainty, fostering collaborative governance, and advancing regenerative business practices. At the institutional level, research underscores the need for alignment between educational missions and organizational practices, including resisting financialization pressures, fostering external collaborations, and managing political dynamics (World Economic Forum, 2025).

Taken together, these findings offer higher education leaders a roadmap for evaluating their institution’s “polycrisis readiness.” By addressing all three domains—pedagogical, curricular, and institutional—business schools can move beyond incremental adjustments and pursue the comprehensive transformation required to equip students for the challenges of a polycrisis world.



Introduction

Over the past two years, my research at the Center for Creative Leadership (CCL)® has focused on understanding how leaders can navigate polycrisis conditions. This work has included identifying the specific capabilities leaders need for polycrisis conditions and examining why capable leaders often struggle to create meaningful change during complex, cascading crises.

From a leadership development practitioner's perspective, CCL's research raises fundamental questions about how leaders are prepared for these challenges. While leadership development occurs throughout careers, foundational business education plays a significant role in shaping how future leaders think about problems, solutions, and their responsibilities to various stakeholders. If traditional business education approaches are not aligned with polycrisis realities, this has implications not only for academic institutions but for the organizations and communities that depend on effective leadership.

Higher education institutions, particularly business schools, serve as critical leverage points in leadership development ecosystems, operating at unprecedented institutional scale. Business represents the most popular field of study, accounting for 19% of all bachelor's degrees conferred (375,400 degrees) and serving as the declared major for 5.37% of all four-year undergraduates (National Center for Education Statistics, 2024; Education Data, 2025). At the graduate level, over 660,000 students were enrolled in master's programs at AACSB-accredited business schools in 2023-24, with enrollment growing 30% over the past

decade (AACSB, 2024). These institutions help shape the mental models, analytical frameworks, and professional values that influence how graduates approach complex challenges throughout their careers. Understanding what academic scholars are saying about polycrisis-ready educational foundations becomes relevant for anyone concerned with leadership effectiveness in a world order characterized by greater instability, polarizing narratives, eroding trust, and insecurity.

This paper synthesizes literature examining scholars' positions on necessary transformations in business education for polycrisis readiness, organizing findings around three interconnected domains: pedagogy (how students learn), curriculum (what students learn), and institutional change (the organizational conditions that enable or constrain educational transformation). The synthesis draws from scholarship spanning multiple business education contexts, reflecting how scholars addressing polycrisis-related educational challenges conceptualize transformation as a systems-level issue that transcends traditional degree-program boundaries. The paper offers these insights for higher education leaders to consider, as they are best equipped to assess their relevance within their own institutional settings.



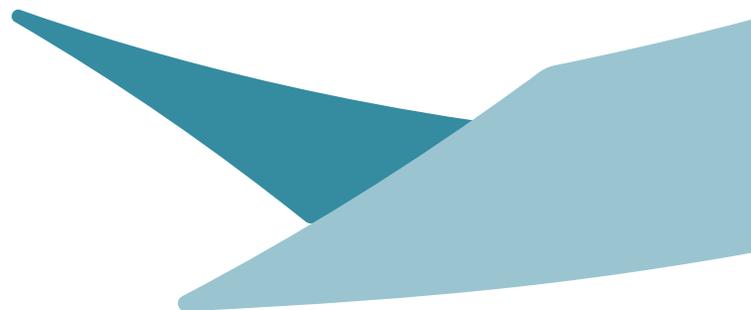
How Scholars Define Polycrisis

The concept of “**polycrisis**” was first introduced by Morin and Kern (1999) as describing “complex intersolidarity of problems, antagonisms, crisis, uncontrollable processes, and the general crisis of the planet” (1999:74). Davies and Hobson (2023) later refined this definition by identifying eight key characteristics: (1) multiple simultaneous crises, (2) feedback loops between crises, (3) amplification effects, (4) unbounded nature, (5) overlapping concerns from diverse groups, (6) breakdown of shared meaning, (7) impediments to resolution, and (8) unexpected emergent properties. To evaluate business educational reform recommendations against the full complexity of polycrisis conditions, this literature review expands Davies and Hobson’s eight polycrisis characteristics by incorporating additional dimensions from scholarship on grand challenges (National Academy of Engineering, 2008) and wicked problems (Rittel & Webber, 1973). Following Leslie and Simmons’ (2024) comparative analysis, these additional dimensions include ethical complexities that raise moral dilemmas and innovative requirements that demand novel approaches for managing multiple simultaneous crises.

COVID-19 exemplifies a polycrisis as it simultaneously triggered interconnected health, economic, social, environmental, technological, humanitarian, ethical, and geopolitical crises (Lawrence et al., 2024). The pandemic overwhelmed healthcare systems while causing widespread business closures and job losses, increasing social isolation and mental health issues, disrupting conservation efforts, exposing digital divides, straining international relations, and amplifying misinformation spread.

These interconnected crises demonstrated feedback loops and amplification effects characteristic of polycrisis, illustrating how multiple problems can interact and compound each other’s impacts across various domains simultaneously.

Polycrisis presents a challenge that is qualitatively different from traditional crisis management. Unlike sequential crises that can be tackled with established protocols, polycrisis involves simultaneous, mutually reinforcing disruptions that cross traditional boundaries and produce effects greater than the sum of individual crises. Three features set polycrisis apart from conventional crises: cascade amplification (solutions in one area create problems in others), boundary spanning (effects go beyond organizational, sectoral, and geographic limits), and temporal compression (multiple crisis cycles happen faster than institutional response capabilities) (Lawrence et al., 2024; Leslie & Simmons, 2024).



Recent research confirms that polycrisis has evolved beyond temporary disruptions to become a permanent feature of global systems. For instance, the 2025 World Economic Forum Global Risks Report reveals that cascading crises have hardened from temporary disruptions into permanent structural features of a fragmenting global system. The report shows that 88% of experts now expect sustained instability—a deterioration from already dire 2024 projections.

Moreover, all 33 surveyed risks are projected to simultaneously worsen over the decade ahead (World Economic Forum, 2025). The report's interconnection maps expose dense networks where inequality, conflict, climate breakdown, and technological disruption systematically trigger and amplify each other across traditional domain boundaries. These interconnected risks create self-reinforcing cycles that overwhelm institutional capacity for response (World Economic Forum, 2025, pp. 18-19), i.e., a polycrisis.

Most ominously, the cascading effects are now actively destroying the multilateral cooperation mechanisms needed to address them. As conflicts proliferate, peacekeeping capacity has shrunk from over 100,000 personnel in 2016 to around 68,000 in 2024; as polarization spreads, collective action becomes impossible; as trust erodes, the social foundations for managing any crisis collapse (World Economic Forum, 2025, pp. 22-24).

This represents not a convergence of separate problems that will eventually resolve independently, but evidence of a fundamental transition toward a world where cascading crises constitute the permanent operating environment—a polycrisis that has become the new structural reality rather than an aberrant moment (World Economic Forum, 2025, pp. 6-12).



Methods

A literature search and review were conducted over two months in 2025. The search on EBSCO Business and EBSCO Psychology using the search string (“polycrisis” OR “cascading crisis” OR “cascading crises” OR “interconnected crises” OR “multiple crises”) AND (“higher education”) yielded 66 results after applying filters for academic journals, conference papers, English language, and publication dates from 2013-2025.

The 66 papers underwent a three-stage screening process. **Stage 1** (title and abstract review) excluded papers focusing on K-12 or vocational education, purely theoretical papers without educational applications, non-English publications, conference abstracts without full papers, duplicate publications, disciplines other than business or management, narrow technical foci without broader educational implications, and abstracts with insufficient detail to assess relevance, reducing results to 38 papers. **Stage 2** (detailed abstract analysis) applied additional quality criteria, selecting papers that demonstrated clear connection to business education transformation, academic rigor, and practical relevance, narrowing to 25 papers.

Papers addressing business education broadly across undergraduate and graduate levels were included alongside graduate-focused studies because they share a critical characteristic: they conceptualize polycrisis educational transformation as systemic challenges that transcend degree-level boundaries. This systems-level thinking reflects the polycrisis concept itself—interconnected challenges that cannot be addressed through segmented approaches. During the screening process, papers were selected that addressed one or more of three domains: pedagogical methods, curricular content, or institutional conditions. This selection criterion reflected the assumption that comprehensive educational transformation requires alignment across these interdependent areas. **Stage 3** (full-text review) ensured substantive content (papers offer recommendations), balanced domain coverage (representation across all three domains), and practical applicability for leadership development professionals. A total of 18 papers were selected for inclusion, as shown in the Appendix.

Findings

The literature reveals both systematic problems with current business education and coordinated solutions across three domains. The following analysis first examines where scholars identify fundamental misalignments, then explores three interdependent domains for recommended reform: pedagogical methods, curriculum content, and institutional reforms.

CURRENT MISALIGNMENT WITH POLYCRISIS REALITIES

Scholars increasingly contend that business education is misaligned with the realities graduates face (Gurău, 2015; Shrivastava et al., 2013). These scholars argue that business schools largely remain designed for linear growth and isolated challenges, while graduates now enter a world defined by polycrisis—cascading, interconnected disruptions that overwhelm sequential problem-solving models taught in traditional curricula (Walsh & Powell, 2020).

This mismatch has led scholars to argue for a fundamental rethinking of the purpose, methods, and content of business education to prepare leaders capable of navigating complexity and uncertainty (Baloyi & De Jongh, 2019; Czerniewicz, 2024; Ng et al., 2023).

EVIDENCE OF EDUCATIONAL SHORTCOMINGS

The literature points to several ways in which scholars argue traditional management education falls short. Hristozov and Nozharov (2024) observe that efforts to solve a crisis in one area of an organization often generate unintended problems elsewhere due to their systemic nature, and business schools have not trained students to see systemic interdependencies. Similarly, Findler (2021) highlights how conventional strategic planning—anchored in long-range forecasts and stepwise execution—proves inadequate when crises cut across multiple systems simultaneously.

For instance, research on the 2008 financial-induced polycrisis suggested that business schools may have been complicit in promoting financial models and shareholder-focused approaches that proved problematic during the crisis. Currie et al. (2010) specifically noted that many of those implicated in Wall Street disasters were MBA graduates who applied financial economics learned in their MBA programs. Rather than preparing students with frameworks for understanding systemic risk, these institutions potentially contributed to the conditions that enabled the crisis (Currie et al., 2010; Phillips et al., 2016).

Several critiques emphasize structural flaws that constrain the ability of business schools to foster polycrisis-ready business leaders (Gurău 2015; Shrivastava et al. 2013). Gurău (2015) identifies three core problems: an emphasis on short-term profit that normalizes “ethical relativism,” fragmentation that leads to narrow specialization, and isolation from other disciplines that prevents students from grasping business’s broader societal impact. Shrivastava et al. (2013) echo this view, arguing that each crisis is inherently interdisciplinary, demanding integration across domains such as economics, ecology, and political science. Yet, they observe that many curricula continue to frame crisis management as a niche skill reserved for exceptional events, rather than as a core competence for everyday leadership (Shrivastava et al., 2013). Given that contemporary leaders have come of age amid recurring crises—9/11, climate disasters, pandemics, and financial collapses——Shrivastava et al. argue that business schools’ marginalization of crisis capabilities is increasingly untenable.



Scholarly Calls for Transformation

The pedagogical traditions of business education also come under scrutiny from other scholars. Walsh and Powell (2020) describe how reliance on lectures and case studies, both of which assume clear solutions, does little to prepare students for the indeterminacy of polycrisis contexts. Mason et al. (2024) go further, calling for a philosophical transformation that challenges the dominant ideals of efficiency, competition, and profit maximization. They argue that business schools have fostered an “edutainment” culture that privileges technical proficiency, student satisfaction rankings, and employability outcomes over ethical formation and collective responsibility. As an alternative, they advocate for more humanistic and reflexive pedagogies that cultivate self-awareness and ethical judgment, enabling students to situate their decisions within political, cultural, and historical contexts.

Lindebaum (2025) extends this call for transformation toward interdisciplinarity and systems thinking. He argues that students must stop treating business problems in isolation and instead learn to analyze how economic, social, and environmental systems interconnect. Waddock et al. (2024) similarly call for a paradigm shift away from linear and extractive approaches, urging business schools to embrace regenerative models that not only avoid harm but actively restore and sustain ecological and social systems. These scholars argue that such approaches require moving beyond siloed academic traditions to foster new modes of knowledge production capable of addressing today’s interconnected challenges.

Despite recognition of the need for reform, attempts at incremental change often falter when constrained by entrenched institutional structures that continue to privilege traditional business models and market logics (Beverungen et al., 2012; Baloyi & De Jongh, 2019; Waddock et al., 2024; Salajan & Jules, 2024). These scholars argue that without deep shifts in both philosophy and structure, business schools risk reproducing outdated modes of thinking while failing to equip leaders for the polycrisis conditions that they contend now define the global landscape.

Having identified these fundamental misalignments between current business education and polycrisis realities, the literature converges on three interconnected domains for transformation. These recommendations span pedagogical methods, curriculum content, and institutional reforms—reflecting scholars’ understanding that the comprehensive change requires coordinated action across all three areas.



Scholarly Recommendations

DOMAIN 1: PEDAGOGICAL RECOMMENDATIONS

Noted teaching methods that equip students for complex, uncertain challenges include flexible planning (Capolla, 2024), crisis simulations (Shrivastava et al., 2013), and collaborative learning (Ng et al., 2023; Capolla, 2024). Research on these specific approaches shows varied outcomes: crisis simulations develop team trust and decision-making skills under stress (Shrivastava et al., 2013), while collaborative learning enhances peer support behaviors that improve collective problem-solving (Ng et al., 2023). Additionally, studies of management education find benefits including emotional intelligence improvements—with Thompson et al. (2020) showing notable enhancement in 53 MBA students over one year—and critical thinking and teamwork skills. Ciccotosto et al.'s (2024) survey of 513 economics students across 21 Italian universities found that pluralistic learning environments significantly increased satisfaction and understanding of real-world issues including crisis, poverty, and environmental challenges.

Immersive Experientials: Shrivastava et al. (2013) argue that business students need approaches that help them “see and feel” a polycrisis in its entirety and recognize how solutions in one area can create problems in others. The authors advocate for instructional methods that go beyond intellectual understanding to include physical, emotional, aesthetic, and even spiritual engagement with crisis scenarios. Suggested experiential

techniques encompass crisis simulations, training drills, and participation in real-world crises, allowing students to experience elements of crisis decision-making under stress. Students who are accustomed to finding “right” solutions often struggle with the ambiguous and uncertain nature of polycrisis, requiring methods that combine traditional academic tasks with role-plays, real-time simulations, and open-ended exercises (Shrivastava et al., 2013). The authors use visual media especially video clips, to help students understand the emotional experiences of crises-affected stakeholders and motivate them to apply polycrisis concepts to personal situations they have experienced or might face.

Walsh and Powell (2020) describe their arts-based MBA program, which features group projects, real-world problem-solving, collaboration with external partners, and “live projects.” They emphasize that “reflecting on experiences” is essential, noting that experiential learning involves gaining explicit knowledge through reflection that might otherwise remain in episodic memory and be only used tacitly. This reflective process represents metacognitive skill development—learning how to learn from complex experiences—which research demonstrates is particularly valuable for navigating ambiguous situations where established frameworks provide insufficient guidance (Walsh & Powell, 2020).



Collaborative Learning: Ng et al. (2023) support educational methods that actively improve students' ability for productive collaboration. The authors highlight technology-enabled platforms—including learning management systems, social media, and video conferencing tools—that facilitate collaborative learning beyond traditional classroom settings. Their bibliometric analysis demonstrated that collaborative learning approaches like problem-based learning enabled students to "work in collaborative groups and learn by resolving authentic problems" in management settings, while technology platforms such as social media established "connections and relationships between students, alumni, and faculty" and video conferencing tools provided students with "more oral expressive opportunities" essential for business communication skills. AI technologies are also seen as tools for developing effective strategies, data-driven decision-making, and services when face-to-face interactions are not possible. Ng and colleagues emphasize that successful technological integration requires students to develop digital skills.

Collaborative techniques extend beyond peer groups to include stakeholder engagement methods that prepare students for the complex negotiation processes needed in a polycrisis. Shrivastava et al. (2013) present specific classroom exercises where students identify multiple stakeholders affected by crises, assume different stakeholder perspectives, and participate in role-playing negotiations to find crisis resolutions. This teaching approach involves dividing students into stakeholder groups, having each group define the crisis from their assigned perspective, and then guiding negotiations between groups to

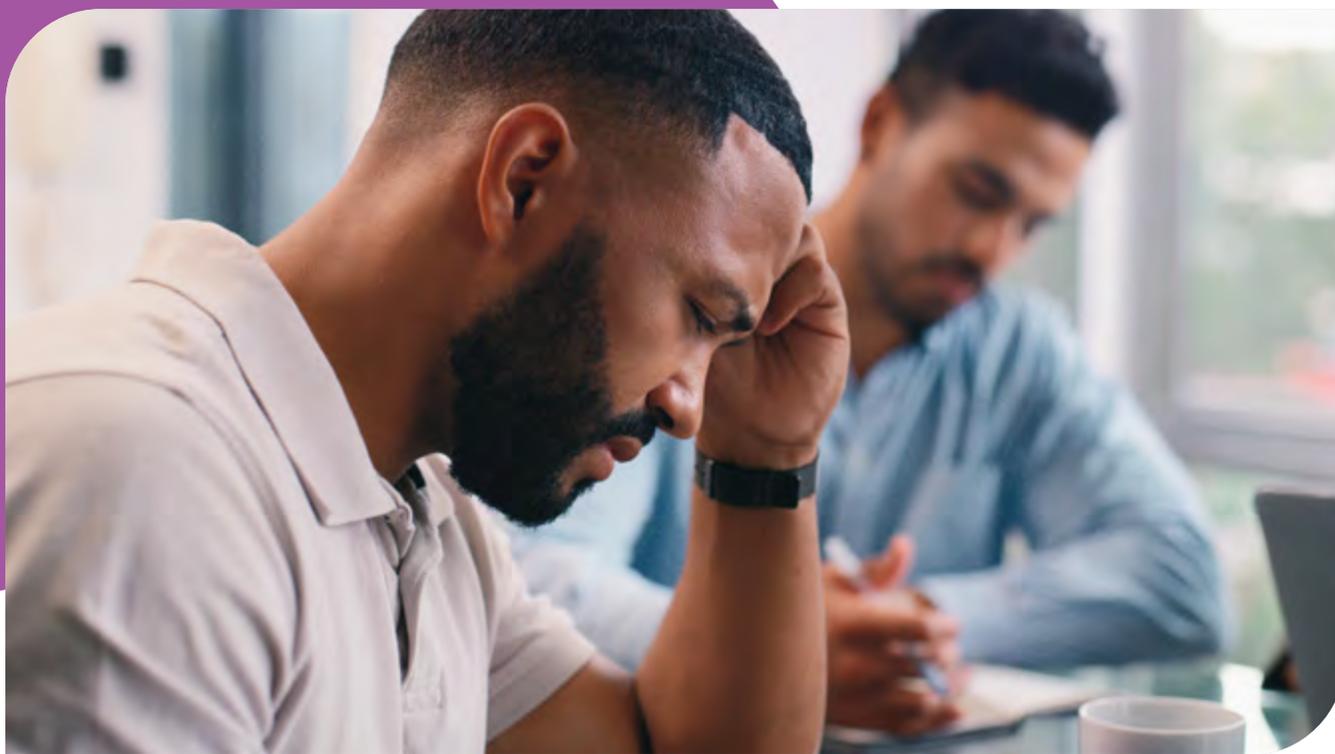
develop balanced solutions. The method helps students understand how different groups view crises differently. Students learn to recognize that balancing stakeholder interests requires both mental and ethical skills. Through these exercises, students discover that the process of resolving crises is just as important as the results.

Self-Directed and Resilient Learning – Ng et al. (2023) describe self-regulated learning methods that teach students cognitive, metacognitive, behavioral, motivational, and emotional/affective skills. These methods focus on helping students develop abilities in goal setting, self-monitoring, self-instruction, and self-reinforcement to better understand and manage their learning environment. Shrivastava et al. (2013) recommend psychological resilience training that guides students to understand their personal patterns of crises response through reflection exercises and analysis activities. This method emphasizes that effective polycrisis leadership depends on developing self-awareness through structured learning experiences that help students analyze their responses to stress and uncertainty. Lindebaum (2025) proposes a framework for teaching hope and maintaining agency when confronting overwhelming global challenges, including emotion regulation techniques that specifically address eco-anxiety and emotional paralysis as practical skills for polycrisis leadership. The author recommends instructing students to break down complex problems into manageable steps and to build momentum through "small wins" that create ripple effects for larger change. This approach helps students shift from "I cannot act" to "I can find pathways to goals," while encouraging them to see themselves as active problem-solvers rather than passive recipients of knowledge.



Adaptive Teaching Systems: Capolla (2024) proposes the Design for the Unexpected in Education (DUE) Framework, which recommends educational designs with “proceduralized flexibility”—planning multiple pathways from the beginning and switching between them as situations change. The DUE Framework’s key design principles include modularity (flexible course elements), redundancy (multiple ways to achieve goals), detour (creative pivots when plans fail), and anticipation (scenario planning). This framework helps educators learn the facilitation techniques needed to refine their adaptive teaching practices as situations evolve.

While pedagogical innovations provide the foundation for experiential learning, they must be paired with substantive curriculum reforms that equip students with the knowledge frameworks needed to navigate polycrisis conditions.



DOMAIN 2: CURRICULUM CONTENT RECOMMENDATIONS

In this domain, scholars propose broad content reforms including systems thinking, crisis leadership frameworks, stakeholder engagement theories, and transformational action models (Capolla, 2024; Czerniewicz, 2024; Walsh & Powell, 2020). These reforms aim to develop students' capabilities in understanding complex adaptive systems, managing uncertainty, collaborative governance, and regenerative business practices—moving business education beyond technical skills to prepare students who can navigate interconnected crises (Lindebaum, 2025; Waddock et al., 2024).

Systems and Transdisciplinary Thinking:

Shrivastava et al. (2013) argue that polycrisis involves multiple disciplines and represents “the ultimate interdisciplinary and cross-functional phenomenon.” They contend that educators should help students develop holistic understanding by recognizing that no single discipline can fully address the multifaceted nature of polycrisis. Students need to learn to recognize early warning signs and intervention points before a polycrisis worsens. Key concepts include “drift toward failure” (gradually sacrificing safety for efficiency) and “normalization of deviance” (slowly increasing acceptable risk levels).

Walsh and Powell (2020) distinguish between what they call “Mode 1 knowledge”—traditional academic knowledge learned through textbooks and lectures organized by discipline—and “Mode 2 knowledge” that emerges when teams solve real problems by combining insights from multiple fields. They argue that Mode 2

knowledge production is context-sensitive, eclectic, transient, and more inventive than traditional methods, laying the foundation for polycrisis leadership through collaborative problem-solving.

Managing Uncertainty and Complexity:

Capolla (2024) guides students through a framework for analyzing three types of uncertainty. “State uncertainty” involves environmental unpredictability and strategic planning challenges. “Effect uncertainty” requires understanding how events spread through interconnected systems with unpredictable outcomes. “Response uncertainty” involves decision-making frameworks for situations without clear precedents. This multi-dimensional approach helps students move beyond traditional risk management to comprehensive uncertainty management under profound ambiguity.

Shrivastava et al. (2013) identify three integrated competency areas for navigating ambiguous polycrisis situations: cognitive skills (generating creative solutions by challenging assumptions, identifying diverse stakeholders including marginalized groups, and synthesizing insights across multiple disciplines), emotional competencies (maintaining clarity and generating innovative responses despite high emotional intensity, complexity, and ambiguity), and ethical reasoning capabilities (developing creative solutions that balance competing responsibilities to immediate stakeholders, broader social systems, the natural environment, and future generations).



Creative Problem-Solving: Walsh and Powell (2020) teach students to distinguish between “high-ground” problems involving clear-cut issues with established solutions (such as supply chain optimization) and “swampy lowlands” problems characterized by ambiguity and complexity (such as crisis leadership affecting multiple stakeholder groups simultaneously). Swampy lowland challenges require students to develop “abductive logic” capabilities that enable creative problem-solving under uncertainty, learning to reframe constraints as opportunities for innovation rather than insurmountable barriers.

Understanding Organizational Dynamics: Shrivastava et al. (2013) describe organizational culture as institutional “DNA” that influences how organizations respond to crises. They argue students should learn to analyze cultural factors that determine whether organizations focus on maximizing shareholder value or minimizing stakeholder losses during crises, whether they maintain cultures of safety versus negligence, and whether they accept responsibility or blame others in polycrisis. This cultural analysis helps students develop skills to recognize patterns of organizational dysfunction and design interventions that address root cultural issues rather than just surface-level policy changes.

Regenerative and Transformational Business Models: Baloyi and De Jongh (2019) argue that business education has traditionally “focused mainly on teaching business students and executives about various ways of operating business with the end goal of maximizing profit, albeit at minimal financial loss.” Their recommended curricular transformation involves integrating content that prepares students to consider multiple stakeholder

interests and long-term societal impact. Waddock et al. (2024) additionally highlight the need for a paradigm shift from linear to regenerative approaches, arguing that business education must go beyond traditional sustainability efforts focused on “doing less harm” and instead adopt business practices that actively help restore and sustain social and ecological systems. The curriculum they envision covers both ecological restoration—including rewilding, reforestation, and regenerative agriculture—and social aspects such as community well-being, social justice, employee welfare, and inclusive development.

Even with transformed pedagogies and updated curricula, scholars emphasize that educational reforms cannot succeed without fundamental changes to institutional structures and practices that either enable or constrain transformation efforts.



DOMAIN 3: INSTITUTIONAL REFORM RECOMMENDATIONS

In this domain, scholars advocate for institutional changes, including resisting harmful financialization pressures (Beverungen et al., 2012), aligning institutional practices with educational goals (Baloyi & De Jongh, 2019), fostering external collaborations with industry and civil society (Waddock et al., 2024), and developing systems to manage political pressures that threaten educational transformation (Salajan & Jules, 2024). Research demonstrates that without aligned institutional practices, pedagogical and curricular reforms fail to achieve their intended outcomes because conflicting organizational signals undermine transformative educational goals (Baloyi & De Jongh, 2019; Muposhi & Shamhuyenzva, 2024). Muposhi and Shamhuyenzva (2024) and Czerniewicz (2024) observe that the environment in academic settings greatly influences whether business education develops students capable of systemic change or students who continue to uphold existing business paradigms despite being exposed to alternative approaches.

Institutional Alignment for Transformation:

Baloyi and De Jongh (2019) argue that effective educational transformation at the graduate level occurs when institutional operations strategically align with educational goals through resource allocation, faculty development, and performance measurement systems that support transformative approaches. They contend this creates institutional coherence where students receive consistent messaging and support rather than conflicting signals that weaken transformation efforts.

A critical component of internal transformation involves resisting financialization pressures that commodify education. Beverungen et al. (2012) discuss how institutions can foster alternative approaches that resist commodification while maintaining educational effectiveness. These institutions create conditions where students engage in collaborative learning and participate in research programs that emphasize social value rather than extracting value from educational relationships. The authors refer to these as “study” environments that resist financialized learning by fostering collaborative intellectual engagement that cannot be converted into measurable human capital or financial returns.

External Partnerships and Ecosystems:

Waddock et al. (2024) describe how business associations, foundations, and companies create learning opportunities through initiatives like the World Economic Forum’s “The Great Reset,” the World Business Council for Sustainable Development’s Vision 2050, and Seafood Business for Ocean Stewardship’s production system changes. Through institutional partnerships with these organizations, universities connect academic theory with practical transformation efforts, providing students with direct exposure to organizations implementing systemic change via capstone projects, consulting engagements, and collaborative research programs.

Collaborative ecosystems present complex challenges that become part of the learning experience (Waddock et al., 2024). Students learn why individual companies struggle to adopt sustainable practices—these practices often



increase costs compared to competitors using cheaper, less sustainable approaches. However, when entire industries coordinate through partnerships and collective action, no single company faces a competitive disadvantage, making regenerative transformation feasible across whole sectors. These interconnected partnerships prepare students to coordinate transformation across various stakeholders and sectors, developing collaborative leadership skills necessary for tackling polycrisis challenges that demand coordinated responses across multiple organizations, sectors, and stakeholder groups (Waddock et al., 2024).

Learning from Polycrisis and Failure:

Czerniewicz (2024) recommends that higher education explicitly acknowledges how a global polycrisis affects educational institutions and openly discuss their own challenges as part of the learning process. This approach recognizes that philosophical assumptions embedded within educational systems—especially neoliberal paradigms—must be directly addressed rather than avoided. Currie et al. (2010) and Phillips et al. (2016) documented how institutions failed to adapt to environmental changes and maintained theoretical approaches that collapsed under real-world complexity following the 2008 financial crisis, demonstrating that schools must establish conditions where students engage with adaptive, systems-level thinking. Shrivastava et al. (2013) argue that educational institutions must implement crisis management principles internally, forming dedicated crisis management teams that meet regularly, learn from other institutions' experiences, conduct realistic simulations, and test crisis plans annually. They propose ongoing readiness planning approaches that foster continuous learning and build adaptive capacity, recognizing that crisis response capabilities need constant refinement through practice and reflection.

Managing Political and External Pressures:

Salajan and Jules (2024) describe how institutions need to address fundamental questions about the purpose of education amid deep political, social, and economic divisions, while also responding to wars, climate change, pandemics, and migration crises that threaten traditional educational methods and institutional stability. The polycrisis context creates circumstances where institutions, they argue, must stay true to their transformative missions while developing new adaptive skills. Political hostility adds another layer of complexity.

Salajan and Jules (2024) further describe how institutions face challenges ranging from book bans to attacks on diversity, equity, and inclusion programs, requiring educational leaders to develop strategic skills for protecting educational values while pursuing transformation efforts under direct opposition. Institutions must learn to balance local action with global influence, learning to “discern, reflect, and act within our own situations before we attempt to influence the world” (Salajan & Jules, 2024).



Discussion

This literature review reveals a misalignment between business education and current polycrisis realities. Scholars identify key shortcomings, including an emphasis on short-term profits and narrow specialization, reliance on outdated pedagogies like lectures and case studies that assume clear solutions, isolation from other disciplines when crises are inherently interdisciplinary, and assessment systems that reward market-oriented thinking over collaborative engagement.

The recommendations and practices outlined here represent progress in reimagining business education. However, when measured against the ten key characteristics that define polycrisis conditions, some critical preparation gaps emerge. Regarding feedback loops and amplification effects (polycrisis characteristics 2 and 3), explicit curriculum content on identifying, mapping, and managing feedback loops in complex systems is receiving limited attention. This represents a fundamental oversight, as polycrisis conditions are defined precisely by these cascading interactions where solutions in one domain can create problems in others. Effective polycrisis navigation requires specific competencies in feedback loop analysis, including systems mapping techniques, cascade interruption strategies, and real-time monitoring of unintended consequences across system boundaries.

Concerning the unbounded nature of polycrises and overlapping concerns from diverse groups (polycrisis characteristics 4 and 5), global scale preparation receives minimal coverage in the literature. While scholars emphasize stakeholder engagement and collaborative leadership, few address the unique challenges of coordinating

responses across multiple nations, cultures, and governance systems simultaneously—a core requirement for addressing climate change, pandemics, or economic contagion. This gap becomes more concerning given that the 2025 World Economic Forum report identifies the breakdown of multilateral cooperation as both a consequence and accelerator of a polycrisis.

Most notably, the literature inadequately addresses unexpected emergent properties and innovative requirements (polycrisis characteristics 8 and 10). Educational approaches for early intervention, cascade interruption, and proactive systems monitoring to prevent polycrisis formation receive minimal attention. This reactive orientation may inadvertently train students to normalize crisis conditions rather than develop the anticipatory capabilities needed to prevent cascade formation. Given that polycrisis has become a permanent structural feature rather than an exceptional event, prevention-oriented education becomes essential for long-term system stability.

STUDY LIMITATIONS

This review has several limitations that affect the scope and generalizability of findings. The search strategy was constrained in multiple ways that may have excluded relevant perspectives. Limiting the search to English-language publications potentially excluded valuable international scholarship, particularly from regions experiencing different manifestations of polycrisis or employing alternative educational philosophies.



Relying on EBSCO alone may have missed relevant work published in specialized education journals, interdisciplinary publications, or emerging platforms where cutting-edge polycrisis research appears.

The evolving nature of polycrisis as a concept created additional search challenges. Different scholars may be addressing different phenomena under the same terminology, potentially creating false coherence in the synthesis. Many papers identified in the initial search mentioned polycrisis in their introduction or executive summary. However, they failed to address it substantively in the main analysis, highlighting the superficial treatment of the concept in much of the current literature.

Methodological choices further constrained the review scope. The three-stage screening process eliminated 73% of initially identified papers (from 66 to 18), suggesting selective criteria that may have excluded diverse viewpoints or alternative frameworks for understanding educational transformation in crisis contexts.

An additional limitation involves the conflation of undergraduate and graduate student populations in the analysis. The review treated recommendations for business education as universally applicable across degree levels, despite significant developmental and experiential differences between these populations. Undergraduate students typically require foundational skill development, while graduate students (particularly MBA students) bring work experience that enables more sophisticated analytical approaches. This conflation may limit the practical applicability of pedagogical recommendations, as implementation strategies likely need differentiation based on student developmental level and prior experience.

Class size and implementation context present another significant limitation not adequately addressed in the reviewed literature. Many of the pedagogical approaches identified—such as collaborative learning, crisis simulations, and interactive case discussions—appear designed for smaller classroom settings where faculty can facilitate complex group dynamics and provide individualized feedback. However, the literature rarely specifies optimal class sizes or discusses adaptation strategies for large lecture formats common in undergraduate business education. For instance, crisis simulations requiring role-playing and real-time decision-making may be feasible in seminars of 15-20 students but would require substantial modification for lecture halls with 200+ students. This gap limits the practical applicability of recommendations, as many institutions face resource constraints that necessitate large class sizes, particularly for foundational business courses.

The quality and nature of applicable papers presented the most significant limitations. Many of the reviewed papers were conceptual rather than empirical, providing limited evidence about implementation effectiveness or student outcome improvements. The scarcity of longitudinal studies tracking graduate performance in actual polycrisis situations means the review relies heavily on theoretical arguments rather than demonstrated results.

FUTURE RESEARCH PRIORITIES

The limitations point to 2 specific research priorities that can strengthen both the evidence base and immediate transformation efforts. The first priority should be an evaluation of transformation effectiveness through longitudinal tracking of graduates who experienced different educational approaches, comparing their performance in actual polycrisis situations. While this paper focuses on business education, future research should expand beyond disciplinary boundaries to examine interdisciplinary collaboration outcomes. Business graduates working alongside professionals trained in public health, social work, engineering, and other fields may demonstrate different polycrisis capabilities than those operating within traditional business-only teams. This research faces methodological challenges but could begin with smaller-scale comparative studies across institutions implementing different reform strategies. Particularly valuable would be studies examining how cross-disciplinary educational experiences—such as joint business-public health programs addressing healthcare system resilience, or business-environmental science collaborations on climate adaptation—produce graduates better equipped for polycrisis leadership.

Second, a comprehensive analysis of implementation barriers and contextual adaptation strategies is essential. Case study research documenting successful and failed transformation attempts across different institutional contexts would provide critical guidance for leaders planning reforms, while development of explicit feedback loop analysis curricula requires practical frameworks for systems mapping and cascade monitoring that can be integrated across disciplines.

While these research priorities develop over time, education leaders cannot wait for perfect evidence to begin transformation efforts. The urgency of polycrisis conditions demands immediate action based on available theoretical frameworks.



Implications for Practice

The reviewed literature provides broad directional guidance for transformation, though many studies are conceptual rather than empirical, offering limited evidence about specific implementation strategies or their effectiveness. This creates a significant gap for practitioners seeking concrete operational guidance.

Higher education leaders can conduct systematic audits of current programs by mapping which courses address systems thinking, how students practice managing uncertainty and ambiguity, and where collaborative stakeholder engagement occurs. Based on the literature reviewed, gaps likely exist in feedback loop analysis, cross-sector collaboration training, and prevention-oriented crisis education. Faculty development emerges as a critical factor, requiring educators comfortable with ambiguity, transdisciplinary thinking, and experiential facilitation.

Strategic sequencing of reforms shows promise, with pedagogical changes serving as potential entry points before comprehensive curricular restructuring. Experimental implementations might include testing crisis simulation exercises (Shrivastava et al., 2013), implementing collaborative learning platforms (Ng et al., 2023), or piloting flexible planning frameworks (Capolla, 2024) in select courses before broader adoption. External partnerships with organizations implementing systemic change could provide direct exposure to polycrisis leadership practice.

These transformations require significant resource investments, faculty development, and institutional restructuring. Institutions

should consider phased implementation approaches, starting with pilot programs in select courses or programs before attempting comprehensive reform. Strategic partnerships with other institutions could help distribute costs and share learning experiences.

While evidence continues to develop, scholarly perspectives suggest that educational innovation is warranted. Institutions may need to begin experimental implementations while continuing to evaluate effectiveness, recognizing that maintaining purely traditional approaches carries its own uncertainties in rapidly changing global conditions.



Conclusions

This literature review points to an educational system fundamentally mismatched with polycrisis conditions. Institutions that wait for perfect evidence or consensus will find themselves reacting to polycrisis-driven changes imposed by external forces rather than leading educational innovation. This paper suggests a roadmap, but implementation requires institutional courage to move beyond traditional approaches in favor of new educational models. The question is no longer whether business education should transform, but whether institutions will lead this transformation proactively or be forced to adapt reactively as polycrisis conditions increasingly overwhelm traditional educational approaches.

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Appendix: List of Reviewed Papers

TABLE 1: LIST OF REVIEWED PAPERS

N	AUTHORS	TITLE	YEAR	JOURNAL
1	Nhlamulo Decent Baloyi and Derick de Jongh	Progress towards the implementation of the PRME: Lessons from a South African business school	2019	South African Journal of Higher Education
2	Armin Beverungen, Stephen Dunne, and Casper Hoedemaekers	The financialisation of business ethics	2012	Business Ethics: A European Review
3	Lorenza Maria Capolla	Shaping educational strategies: A literature review on uncertainty and the unexpected	2024	Education Sciences
4	Michela Ciccotosto, Oleksandra Sokolenko, and J. Christopher Proctor	Teaching the polycrisis: assessing the effect of pluralist education in Italian economics programs	2024	Review of Evolutionary Political Economy
5	Graeme Currie, David Knights, and Ken Starkey	Introduction: A post-crisis critical reflection on business schools	2010	British Journal of Management



N	AUTHORS	TITLE	YEAR	JOURNAL
6	Lauren Czerniewicz	The entanglement of learning spaces, pedagogies, and technologies with the global polycrisis: A manifesto for higher education for good	2024	ASCILITE Conference Publications
7	Călin Guțău	Business education in the present society: Problems, challenges and solutions	2015	The Annals of the University of Oradea
8	Derk Lindebaum	Hope	2025	Academy of Management Learning & Education
9	Katy Mason, Lisa Anderson, Kate Black, and Ashley Roberts	A shout-out for the value of management education research: 'Pedagogy is not a dirty word'	2024	British Journal of Management
10	Asphat Muposhi and Roy Shamhuyenzva	Status of sustainability management education in African MBA programmes: A web-based research approach	2024	Journal of Environmental Education
11	Davy Tsz Kit Ng, Anthony Chun Hin Ching , and Sau Wai Law	Online learning in management education amid the pandemic: A bibliometric and content analysis	2023	The International Journal of Management Education



N	AUTHORS	TITLE	YEAR	JOURNAL
12	F. Phillips, Chih Hung Hsieh, Charles Arthur Ingene, and Lonnie Golden	Business schools in crisis	2016	Journal of Open Innovation: Technology, Market, and Complexity
13	Florin D. Salajan and Tavis D. Jules	US Education in the Age of Trumpism, Project 2025, American Isolationism, and the Global Polycrisis: Charting a New Role for Comparative and International Education	2024	Comparative Education Review
14	Paul Shrivastava, Ian I. Mitroff, and Can M. Alpaslan	Imagining an education in crisis management	2013	Journal of Management Education
15	Martin Sokol and Jennie C Stephens	Universities, polycrisis and regional redistribution	2025	Review of Regional Research
16	Claire Thompson, Adrian Kuah, Regina Foong, and Eddy Ng	The development of emotional intelligence, self-efficacy, and locus of control in Master of Business Administration students	2020	Human Resource Development Quarterly
17	Sandra Waddock, Irene Henriques, Martina K. Linnenluecke, Nicholas Poggioli, and Steffen Böhm	The paradigm shift: Business associations shaping the discourse on system change	2024	Business and Society Review



N	AUTHORS	TITLE	YEAR	JOURNAL
18	Anita Walsh and Philip Powell	Re-imagining the MBA: An arts-based approach	2020	Higher Education Pedagogies





About the Author

Jean Brittain Leslie is a Senior Fellow and Senior Research Scientist in the Research, Innovation, and New Content Creation Group at CCL. With 36 years of experience, Jean has made numerous contributions to research, publication, product development, and training. She has published over 100 works on leadership, assessment, and feedback, including peer-reviewed articles, popular press pieces, blogs, book chapters, and books. Her latest research explores leadership [capabilities for navigating polycrisis](#), [barriers to creating meaningful change](#) in polycrisis situations, how a multi-system transformation can occur during a polycrisis, organizational practices that successfully [navigate polycrisis while “doing good,”](#) the [leading multi-team systems](#) when crises cascade across organizational boundaries, and effective decision-making in a polycrisis.





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