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AI and VUCA Are Here to Stay - What Should Business Schools Teach and How?

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Abstract

Drawing on recent conceptual and empirical work on metamodern education, Higher Education 4.0, and transdisciplinary AI-interoperable competencies, alongside European Commission and UNESCO policy frameworks, this food-for-thought article adopts an integrative approach that synthesises research evidence, policy analysis, and practice-based insights for business education leadership and management. As AI and persistent social crises and VUCA/BANI conditions have become structural features of contemporary organisational and educational life, business schools are now at the centre of intersecting technological, geopolitical, and societal disruptions. Against this backdrop, this article addresses a central question for higher education: what should business schools teach (and, more importantly, how) when uncertainty, crisis, and AI-mediated decision-making are no longer exceptional but systemic. The analysis demonstrates that traditional discipline-centred and tool-oriented pedagogies are, while still foundational, increasingly strained by the realities graduates face in AI-mediated and crisis-shaped environments and are no longer adequate on their own. Instead, effective business education requires a shift toward cultivating navigational capacities, including systems thinking, intercultural competence, ethical judgment, emotional resilience, and context-aware AI literacy. The article further argues that evolutionary pedagogies (such as case-based learning, simulations, project work under uncertainty, and reflective practice) are particularly effective in developing these capacities. It concludes that business schools can no longer define their mission primarily in terms of knowledge transmission or skills optimisation. Instead, they are called to assume a renewed social contract: preparing leaders capable of responsible action, ethical sensemaking, and sustained agency in AI-mediated, crisis-shaped environments, with significant implications for curriculum design, faculty roles, and higher education policy.

Keywords: Artificial Intelligence; Business Education; Digital Competence; Educational Leadership; Higher Education; Transdisciplinary Competences

1. Introduction

Business schools now operate at the epicentre of profound and overlapping disruptions. Artificial intelligence, geopolitical instability, climate-related shocks, supply-chain fragility, information warfare, and widespread psychological strain have collapsed the traditional distinction between periods of stability and moments of crisis. The VUCA and BANI conditions long discussed in executive education are no longer hypothetical scenarios; they constitute the everyday operating environment of organisations and leaders.

The concepts of **VUCA** (Volatility, Uncertainty, Complexity, and Ambiguity) and the more recent **BANI** framework (Brittle, Anxious, Non-linear, and Incomprehensible systems) were originally developed to describe strategic and organisational environments marked by rapid change and limited predictability (Bennett & Lemoine, 2014). While initially articulated in military and executive contexts, these frameworks have increasingly been applied to higher education to account for a structural shift rather than a temporary condition (Barnett, 2018; Morin, 2008). From a complexity perspective, contemporary organisations and HiEd institutions, business schools in particular) operate as systems in which outcomes are shaped by emergent qualities arising from interactions among actors, technologies, and institutional constraints rather than by linear cause–effect relationships.

Drawing on the **Cynefin framework**, Snowden and Rancati (2021) emphasise that in such complex contexts effective action depends on continuous sensemaking, attentiveness to contextual signals, and adaptive responses, rather than on the application of predefined best practices. Complementing this view, Juarrero (2023) demonstrates that context and constraints generate coherence in complex systems, underscoring that decision-making, learning, and leadership cannot be abstracted from the conditions in which they unfold. Universities therefore no longer operate through alternating cycles of stability and disruption; instead, they function within environments where technological acceleration, geopolitical instability, societal polarisation, and psychological strain coexist as persistent features of everyday academic and organisational life (OECD, 2019; UNESCO, 2021; World Economic Forum, 2025). In this sense, VUCA and BANI do not describe exceptional moments of crisis, but the baseline conditions under which teaching, learning, leadership, and decision-making now occur in higher and business education.

Recent scholarship on metamodern education, Higher Education 4.0, and transdisciplinary AI-interoperable competencies converges on a shared conclusion: knowledge is no longer scarce, and the transmission of knowledge is no longer the university's distinctive contribution. Education increasingly functions as a form of *co-navigation* while supporting individuals and organisations in orienting themselves within unstable, AI-saturated environments rather than supplying definitive answers (Shtaltovna, 2024, 2025; Shtaltovna & Makhachashvili, 2025). Universities are increasingly expected to move beyond knowledge transmission toward enhancing students' holistic capabilities for work, life, and sustained agency in complex and uncertain environments, reflecting a broader shift in the social and developmental role of higher education (Jakubik et al., 2023).

In this context, the central question facing business education is no longer whether curricula should be updated or whether new digital tools should be integrated. The more fundamental issue concerns re-centring educational purpose: what kinds of human capacities business schools are expected to cultivate when uncertainty, complexity, and AI-mediated decision-making are permanent features of professional life.

2. What to Teach: From Disciplinary Knowledge to Navigational Capacities

The shift from postmodern to metamodern educational paradigms highlights a movement away from fragmented knowledge toward the capacity to hold contradiction, ambiguity, and plurality (Shtaltovna, 2024). Within business education, this shift implies a critical reassessment of disciplinary primacy. While foundational knowledge remains necessary, it is no longer sufficient on its own to prepare graduates for decision-making under persistent uncertainty and AI-mediated conditions. Empirical evidence from business education delivered under conditions of prolonged crisis suggest that learners are less concerned with identifying correct answers than with developing judgment under uncertainty. Questions increasingly focus on decision-making with incomplete data, ethical action under pressure, cross-cultural coordination, and psychological sustainability in unstable environments.

Accordingly, contemporary business education is advised to prioritise **transdisciplinary capacities for preparing future leaders** (Shtaltovna & Makhachashvili, 2025), including:

- systems thinking and metacognitive awareness;
- intercultural and communicative competence as core professional infrastructure;
- digital and AI literacy understood as critical comprehension of algorithmic logic, limitations, and risks;
- inner development capacities, such as self-reflection, resilience, and values-based orientation (Inner Development Goals, 2021).

Research on transdisciplinary competencies indicates that these internal and socio-emotional capacities function as the connective tissue between labour-market expectations, AI-driven organisational contexts, and human viability under conditions of crisis. Within business schools, such capacities increasingly define leadership readiness more accurately than technical expertise alone.

3. How to Teach: Education without the Illusion of Stability

The acceleration of AI adoption and the persistence of systemic crises have rendered the limitations of traditional pedagogical models more visible, particularly when these models are applied in isolation from experiential, reflective, and context-aware learning designs. Lecture-based knowledge transmission proves increasingly ineffective, not because learners have changed, but because the environments in which knowledge is applied have become non-linear, time-compressed, and context-dependent (Aoun, 2017; Barnett, 2018).

Effective business education in AI- and crisis-shaped contexts increasingly relies on the systematic integration of evolutionary pedagogies, which in many institutions already exist but often remain peripheral to core curriculum design, including:

- learning through real-time and real-crisis cases;
- simulations of complex managerial, ethical, and intercultural situations;
- project-based and team-based work conducted under high uncertainty;

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- structured reflective practices enabling learners to process emotional, ethical, and cognitive responses.

Within such pedagogical designs, AI functions neither as a substitute for educators nor as a shortcut to solutions. Instead, it operates as a cognitive mirror, a hypothesis-testing partner, and a tool for scenario exploration, provided that ethical boundaries and accountability remain explicit (UNESCO, 2023).

From a pedagogical perspective, the European Commission's AI Excellence agenda provides a concrete orientation for *how* AI should be taught in higher education, particularly in business schools operating under conditions of persistent uncertainty. Its focus on enabling conditions for AI development and uptake underscores the need for graduates to understand AI as an infrastructural and organisational phenomenon rather than a standalone technology, which calls for curricula that integrate AI across disciplines and decision contexts (European Commission, 2022a). At the same time, the Commission's emphasis on ensuring that AI works for people foregrounds ethical reasoning, human oversight, and responsibility, reinforcing the need to embed reflective practice, values-based deliberation, and ethical sensemaking into AI-related teaching (European Commission, 2022b).

Building strategic leadership in high-impact sectors builds on AI education with leadership development, suggesting pedagogies that emphasise systems thinking, strategic judgment, and action under uncertainty rather than technical optimisation alone (European Commission, 2022c). Finally, the focus on thriving from the lab to the market highlights the importance of experiential and project-based learning, where students engage with AI in realistic innovation, governance, and implementation settings that mirror market and societal constraints (European Commission, 2022d). Taken together, these policy orientations reinforce a core implication for higher education: teaching AI is inseparable from teaching how to think, decide, and act responsibly within AI-mediated, crisis-shaped environments.

AI-enabled cases for intercultural competence development in business education illustrate a growing body of recent case-based and empirical studies examining how digital technologies (particularly AI-enabled and immersive tools) are being used to support intercultural competence development across higher education and business schools contexts. The latest international case studies analysis (Kasbekar & Shtaltovna, 2026) demonstrates that culturally responsive AI design shapes learning outcomes differently across regions and institutional settings, underscoring the importance of contextual sensitivity in AI-supported intercultural education (Arif, 2025; Shonfeld, 2024).

AI-driven frameworks and adaptive learning systems can enhance specific dimensions of intercultural communicative competence, including cultural awareness, attitudinal openness, and communication skills, when aligned with clearly structured instructional tasks and guided reflection (Ma & Yang, 2025; Zhang et al., 2025). Complementary studies in cross-cultural management education highlight that guided experiential learning and intercultural simulations (both digital, hybrid and face-to-face) are particularly effective when learners are supported through reflective cycles that foster behavioural adaptation, rather than surface-level cultural knowledge acquisition (Heidemann & Søndergaard, 2023).

In business management education, blended and technology-facilitated international collaboration formats further illustrate how AI-enabled tools, virtual exchanges, and case-based

pedagogies can bridge theory and practice when embedded in intentional experiential designs (Bleicher et al., 2025; Fletcher & Calixto, 2025). At the same time, emerging work on generative AI highlights both the pedagogical potential and the ethical risks of AI-simulated debates and AI-generated case materials, reinforcing the need for critical, inclusive, and bias-aware design principles in future-ready intercultural curricula (Huiying & Qiang, 2021; Jayasinghe et al., 2025; Li et al., 2025).

A much-awaited Digital Competence Framework from the European Commission gives their own answers and offers guidelines for AI integration in Higher Education (Cosgrove & Cachia, 2025). A key novelty of DigiComp 3.0 compared to DigiComp 2.0 (European Commission, 2022) lies in its systematic and transversal integration of AI competence as a pedagogical principle for higher education, rather than as a discrete technical subject. Instead of positioning artificial intelligence as a standalone or advanced add-on, DigiComp 3.0 frames AI as one digital technology embedded across broader digital competences, thereby shifting teaching away from tool training toward the development of judgment, responsibility, and contextual awareness.

AI-related knowledge, skills, and attitudes are embedded across all 21 competences and articulated at every level of the framework (from competence areas to concrete learning outcomes) signalling that AI should be taught through authentic learning tasks, interdisciplinary problem-solving, and reflective practice rather than isolated modules. Reinforced across the four proficiency levels (Basic, Intermediate, Advanced, and Highly Advanced), this approach supports progressive learning designs in higher education, in which students engage with AI in increasingly complex, uncertain, and ethically charged contexts. In this sense, DigiComp 3.0 operationalises the European Commission's broader message for higher education: teaching with AI is inseparable from teaching *how to think, decide, and act responsibly* in AI-mediated and crisis-shaped environments.

Within broader intercultural competence (ICC), international management, and cross-cultural leadership curricula, such cases can be strategically integrated at multiple stages of the learning cycle and across different course formats.

At the **Basic level**, they are particularly suitable for sensitisation and framing activities (such as early-semester discussions, diagnostic exercises, or scaffolded simulations) to surface cultural assumptions and ethical considerations surrounding AI-mediated interaction. At the **Intermediate level**, these cases can be embedded in experiential modules, including virtual intercultural negotiations, team-based problem-solving tasks, or blended Collaborative Online International Learning or COIL-style collaborations, where students actively apply ICC concepts to complex, technology-mediated scenarios. At the **Advanced level**, they can support scenario planning, leadership reflection, and strategic decision-making exercises, enabling learners to critically evaluate the cultural, organisational, and ethical implications of AI-enabled management practices across regions.

Across all levels, such cases are most effective when embedded within **reflective learning designs** (including guided debriefings, comparative cultural analysis, and leadership self-assessment) thereby linking intercultural competence development with international management judgment and cross-cultural leadership capacity under VUCA and BANI conditions.

4. Business Education in Prolonged Crisis: An Applied Laboratory

Between 2022 and 2025, business education in contexts affected by war and systemic disruption has operated as an applied laboratory for future-oriented learning. Business relocation, coordination with international stakeholders, distributed team leadership across borders, and decision-making under information pressure have become routine educational material rather than exceptional case studies. These conditions have clarified a central insight: intercultural competence, emotional resilience, and AI literacy are not auxiliary or “soft” skills; they are survival and leadership capacities (World Economic Forum, 2025).

Theoretical work on complexity reinforces this observation. Juarrero (2023) argues that context and constraints generate coherence in complex systems. Education, therefore, cannot be designed independently of context; it must enable learners to recognise situational frames, understand constraints, and act responsibly within them.

This logic is operationalised in the European Commission’s field guide *Managing Complexity (and Chaos) in Times of Crisis* (Snowden & Rancati, 2021), which applies the Cynefin framework to crisis decision-making. By emphasising context recognition, boundary management, informal sensing networks, and adaptive action, the guide provides a directly applicable framework for leadership development and business education in AI- and crisis-driven environments. As AI systems increasingly mediate information access and analysis, the role of business educators is undergoing a structural shift. Educators function less as sources of authoritative knowledge and more as architects of learning environments characterised by trust, psychological safety, and cognitive challenge.

Learners require spaces in which ideas can be tested, assumptions questioned, and failures explored with minimal reputational risk. Such environments depend on facilitation, moderation, and ethical guidance rather than control or surveillance. Notably, these relational and sensemaking functions remain among the least automatable dimensions of education.

5. Conclusions

Business schools have long recognised that predictability and linear career trajectories are increasingly difficult to promise; what has changed is the speed, scale, and permanence with which uncertainty, systemic fragility, and AI-mediated decision-making now shape professional life. Long-assumed stability underpinning managerial education has been replaced by persistent uncertainty, systemic fragility, and rapid technological change (OECD, 2019). AI may function as a destabilising force when deployed without ethical or contextual awareness. Alternatively, it can serve as a navigational instrument while supporting better questions, adaptive judgment, and informed action in complex environments (Snowden & Rancati, 2021).

As Food for Thought offered here, this article invites educators, curriculum designers, and institutional leaders to reflect on how existing practices might be repositioned (moving from the periphery to the centre) to respond more coherently to the baseline conditions of VUCA and BANI that now define higher education. Discussed developments do not suggest a wholesale rejection of existing business education models. Rather, they indicate a need to re-centre intercultural competence, AI literacy, and reflective sensemaking as core elements of leadership preparation under conditions of complexity and uncertainty. If and when embedded intentionally, AI-enabled

cases and simulations function less as technological enhancements and more as sensemaking infrastructures; these cases could consequently enable learners to engage with ambiguity, cultural difference, and ethical tension in ways that mirror contemporary organisational realities.

Seen in this light, the renewed mandate of business schools is not to predict or control an uncertain future, but to cultivate the human capacities required to navigate it. This orientation reframes the role of business education from knowledge transmission or skills optimisation toward supporting sustained agency, responsible decision-making, human-centred and intercultural leadership in AI-mediated environments.

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Ethics Statement

For studies involving human participants, the authors confirm that the research complied with relevant institutional and national ethical standards. Ethical approval was obtained where required, and informed consent was secured from all participants prior to data collection. If ethical approval was not required, the authors confirm that the study adhered to applicable ethical guidelines.

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