

Dual-Horizon Quality Assurance for MBA and Doctoral Management Education: A Quality 5.0 Framework

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ABSTRACT

Purpose: This paper develops a quality-assurance architecture for comparing the added value of Master of Business Administration (MBA) and doctoral management education when application-oriented and research-oriented capabilities create organisational value through different mechanisms and time horizons.

Methodology/Approach: A targeted, mechanism-based conceptual synthesis integrates human-capital theory, educational-quality and assurance literature, workplace-transfer research, doctoral-education scholarship, and Quality 5.0. Sources are selected for direct construct relevance and integrated through a transparent six-layer mapping process.

Findings: The framework links programme purpose, capability formation, transfer context, near-term application, long-term capability, and organisational value. Its maturity levels and propositions show that apparent pathway superiority depends on outcome, context, and observation horizon.

Research Limitation/Implication: The framework requires empirical validation. A balanced initial target of 60 MBA and 60 doctoral management graduates is proposed for exploratory matched comparison; an a priori power analysis must confirm or increase the sample before fieldwork.

Originality/Value of paper: The model replaces credential ranking with human-centred, auditable, and time-sensitive quality assurance for programme design, employer dialogue, and continuous improvement.

Category: Conceptual paper

Keywords: quality 5.0; postgraduate management education; human capital; assurance of learning; workplace transfer

Research Areas: Quality 5.0; Strategic Quality Management

1 INTRODUCTION

Management education is increasingly expected to demonstrate value beyond enrolment, completion, and graduate satisfaction. Business schools, employers, and learners want evidence that advanced study improves managerial judgement, innovation, operational performance, and strategic adaptability. This question is difficult when programmes with different purposes are treated as substitutes (Orbánová & Urbančíková, 2026).

A Master of Business Administration (MBA) commonly emphasises the rapid integration and application of management knowledge. Doctoral management education commonly emphasises disciplined inquiry, methodological rigour, and the production or critical use of knowledge. Both pathways may strengthen human capital, but through different mechanisms and at different speeds.

Conventional assurance of learning (AoL) systems are essential but incomplete for this comparison. AoL demonstrates whether learners achieve programme-level competencies and whether assessment results inform curriculum improvement (Association to Advance Collegiate Schools of Business [AACSB International], 2020). It is usually strongest at the boundary that the educational institution controls: curriculum, assessment and graduation. Organisational value, however, emerges after that boundary. It depends on whether capability is transferred to work, whether the organisation provides opportunity and support, and whether an outcome is observed soon enough or long enough for the relevant mechanism to appear. Training-transfer research has long shown that learning does not automatically become workplace behaviour or performance (Baldwin & Ford, 1988; Blume, Ford, Baldwin, & Huang, 2010).

The time problem is especially important. Applied managerial tools may generate observable process improvements within a short period, while research capability may influence problem framing, evidence quality, innovation portfolios and strategic adaptation cumulatively. A single follow-up date can therefore favour what becomes visible first. Likewise, a single metric such as salary, promotion or self-reported competence cannot separate education from selection, experience, organisational opportunity and signalling effects. Quality assurance must acknowledge these attribution limits rather than hide them behind a composite score.

Quality 5.0 offers a human-centred design logic. Building on Industry 5.0, it treats advanced technology as a means of augmenting human capability, judgement, sustainability, and resilience rather than merely automating control (European Commission, 2021; Bucci, Fani, Rossi, Bandinelli, & Tucci, 2026).

Applied to management education, this logic calls for digitally enabled evidence with human interpretation. It also requires contextual meaning, ethical safeguards, and accountable curriculum decisions.

This paper is part of a wider research programme comparing the added value of MBA and doctoral management education in relation to human-capital efficiency.

Its specific research question is: How can postgraduate management programmes design a Quality 5.0 assurance architecture that captures both near-term application and long-term strategic capability without treating MBA and doctoral outcomes as interchangeable? The contribution is the Dual-Horizon Quality 5.0 Assurance Framework (DH-Q5AF), a conceptual model that connects programme purpose, capability formation, transfer conditions, temporal evidence and organisational value. Unlike a ranking or return-on-investment calculation, the framework asks whether each pathway creates the value it is designed to create, for whom, under what conditions and when.

2 METHODOLOGY

The study uses a targeted, mechanism-based conceptual synthesis. It is not a systematic literature review and does not report primary data. The method is appropriate because the problem spans several mature but partly separate literatures and requires explicit construct relationships, boundary conditions, and testable propositions. Six linked stages were followed.

First, the problem was bounded to postgraduate management education and two contrasting pathways: application-oriented MBA education and research-oriented doctoral management education. The aim was not to rank credentials, but to explain how their intended capability profiles may create different forms of organisational value.

Second, sources were selected purposively from five knowledge streams: human-capital theory; educational quality and assurance; learning and workplace transfer; professional and research doctorates; and Quality 5.0 with human-artificial intelligence (AI) complementarity. A source was retained when it directly defined a focal construct, explained a link in the education-to-value chain, specified a relevant boundary condition, or supplied an authoritative standard or policy frame. Priority was given to peer-reviewed research, established theoretical works, and authoritative institutional documents. The aim was conceptual coverage and complementarity, not exhaustive retrieval.

The retained sources were integrated in three steps. First, their core constructs and mechanisms were extracted. Second, each construct was mapped to one or more assurance layers and to its individual, programme, workplace, or organisational level. Third, convergent claims, tensions, and missing links were compared to define the framework's boundaries and propositions. This mapping links every framework component to a documented conceptual function while preserving differences among the source traditions.

Third, the synthesis specified six analytical layers: programme purpose, individual capability, transfer context, applied behaviour, organisational outcome, and time horizon. Keeping these layers separate prevents learning measures from being mislabelled as organisational performance and prevents organisational outcomes from being attributed to education without evidence of an intervening mechanism.

Fourth, the focal mechanism was mapped as programme design → capability formation → workplace enactment → organisational value. Transfer climate, job role, prior experience, sector, organisational size, digital maturity, and time since graduation were treated as moderators or controls. Selection, credential signalling, and career mobility were retained as rival explanations.

Fifth, the mapped relationships were converted into design propositions and a maturity model. The propositions are explanatory expectations rather than tested hypotheses. They specify what later empirical work should measure and the conditions under which the framework could be challenged.

Sixth, an empirical validation protocol was designed for the wider research programme. The initial target is 120 managers: 60 MBA graduates and 60 doctoral management graduates. Equal groups provide a balanced basis for 60 matched comparisons and feasible exploratory estimates of reliability, common-domain differences, and parsimonious adjusted associations. The target is not presented as sufficient for definitive causal inference. Before fieldwork, an a priori power analysis based on the final measures, the smallest meaningful effect, model complexity, and expected attrition must confirm or increase the recruitment target.

The 0–3-year near-term window is intended to capture early workplace application while programme exposure remains comparatively recent and transfer mechanisms can be documented. The 5+-year window captures cumulative strategic, research, leadership, and capability-building effects that often require repeated use and role progression (Baldwin & Ford, 1988; Blume et al., 2010; Creaton & Anderson, 2021). Years 3–5 form a transition interval for longitudinal observation; they are not excluded, and the two thresholds do not imply a causal discontinuity. Both windows are design choices to be tested empirically.

3 CONCEPTUAL FOUNDATIONS

3.1 Quality as Purpose, Transformation and Evidence

Educational quality has multiple legitimate meanings. Harvey and Green (1993) distinguish views that include excellence, consistency, fitness for purpose, value for money and transformation. For postgraduate management education, fitness for purpose and transformation are particularly relevant. Human-capital theory also frames education as an investment in productive capability rather than a credential alone (Becker, 1993). An MBA and a doctorate may therefore both be high quality while pursuing different transformations. Quality assurance requires a declared value profile before measurement begins; otherwise, the metric becomes the purpose by default.

AoL provides a disciplined foundation. Intended learning competencies, learning activities and assessment should be constructively aligned (Biggs, 1996), and assessment findings should close the loop through curriculum improvement (AACSB International, 2020). Nevertheless, programme-level learning evidence

cannot alone establish workplace value. A learner may demonstrate strategic analysis in a capstone assessment but lack the authority, data or support to use it at work. Conversely, organisational performance may improve for reasons unrelated to the programme. The assurance architecture must preserve this distinction.

3.2 Capability Profiles of MBA and Doctoral Pathways

The model uses knowledge, skills and attitudes (KSA) as a common vocabulary while allowing pathway-specific profiles. For MBA education, expected strengths often include cross-functional integration, decision speed, implementation, communication and operational improvement. For doctoral management education, expected strengths often include critical problem framing, methodological judgement, evidence evaluation, theory-informed explanation and sustained inquiry. These are stylised profiles, not fixed descriptions of every programme or graduate.

Professional-doctorate research challenges a simple academic/practical divide. Banerjee and Morley (2013) argue for practice-based doctoral education that integrates scholarly rigour with organisational problems. Creaton and Anderson (2021) show that doctoral impact is constructed through interactions among graduates, employers and professional networks and may develop over time. Neumann (2005) similarly notes differences and overlaps between professional doctorates and Doctor of Philosophy (PhD) programmes. Accordingly, DH-Q5AF does not equate MBA with practice and doctorate with theory. It treats pathway purpose as an empirical programme attribute that must be documented.

3.3 From Learning to Organisational Value

Transfer is the conversion mechanism. Baldwin and Ford (1988) identify trainee characteristics, training design and work environment as central influences on the generalisation and maintenance of learned material. Later meta-analytic evidence confirms that transfer depends on individual and contextual factors (Blume et al., 2010). The implication is decisive: the value of a postgraduate programme is jointly produced by the educational institution, the graduate and the organisation.

Organisational value is multidimensional. Near-term value may be visible in faster decisions, process redesign, cost avoidance, project delivery or the implementation of management tools. Long-term value may appear through innovation quality, strategic adaptability, evidence governance, capability building or resilience. Salary and promotion are useful contextual outcomes, but they are affected by labour markets, occupation and signalling. They should not be treated as direct proof of educational effectiveness.

3.4 Quality 5.0 and Human-AI Complementarity

Industry 5.0 reframes industrial transformation around sustainability, human-centricity and resilience (European Commission, 2021). Quality 5.0 extends this

orientation to quality systems. Its emerging literature argues that digital technologies must be aligned with human judgement, ethical governance and broader stakeholder value (Bucci et al., 2026). In management education, generative AI and analytics can support learning, evidence collection and decision modelling, but their presence also increases the value of verification, causal reasoning, methodological literacy and responsible judgement.

The automation–augmentation paradox explains why technology may replace some tasks while increasing the importance of complementary human capabilities (Raisch & Krakowski, 2021). Effective human–AI collaboration requires appropriate task allocation and a clear understanding of the limitations of both people and systems (Jarrahi, 2018).

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023) likewise stresses human-centred, ethical, and pedagogically justified use of generative AI in education. A Quality 5.0 assurance system should therefore evaluate whether graduates can frame problems, validate outputs, document evidence, manage risk, and remain accountable – not merely whether they use AI.

4 THE DUAL-HORIZON QUALITY 5.0 ASSURANCE FRAMEWORK

As shown in Table 1, DH-Q5AF consists of six connected assurance layers. The layers make the value chain visible and auditable while preventing a single outcome from representing the whole system.

Table 1 – Assurance layers of the Dual-Horizon Quality 5.0 assurance framework

Layer	Core assurance question	Illustrative evidence	Principal risk
1. Programme purpose	What distinctive value is the programme intended to create?	Mission, intended capability profile, stakeholder needs	Credential categories substitute for an explicit purpose
2. Capability formation	What knowledge, skills and attitudes have learners demonstrably developed?	Direct assessment, authentic tasks, portfolios, rubrics	Self-report or course completion is treated as competence
3. Transfer context	Do graduates have opportunity, support, data and authority to apply capability?	Role analysis, supervisor assessment, transfer-climate indicators	The programme is blamed for blocked application, or credited for unrelated success
4. Near-term application (0–3 years)	What changes in behaviour and operational practice become visible relatively soon?	Implemented improvements, decision quality, project and process evidence	Only rapid, easily measured outcomes are valued
5. Long-term strategic capability (5+ years)	What cumulative effects appear in innovation, adaptation and evidence-based leadership?	Innovation portfolios, strategic decisions, capability building, resilience narratives	Late effects are inferred retrospectively without a credible chain of evidence
6. Organisational value and feedback	How are verified effects translated into curriculum and portfolio decisions?	Triangulated outcome dashboard, review minutes, curriculum actions	Measurement becomes reporting rather than continuous improvement

The model operates as a closed learning system. It begins with a programme-specific value profile, establishes baseline and context, assures capability formation, monitors enactment across two time horizons, triangulates organisational evidence and feeds findings back to programme design. Each cycle should record what changed, why it changed and what evidence would show improvement in the next cycle.

The dual horizon does not assign MBA effects to the short term and doctoral effects to the long term. It is an anti-bias device: both pathways are observed in both windows. Years 3–5 are treated as a transition interval, so the thresholds guide comparison without implying that an effect begins or ends at a fixed date.

4.1 Measurement Architecture

The framework recommends an evidence portfolio rather than a single ranking. It measures four domains: capability, transfer, application, and value. Capability evidence covers knowledge, skills, and attitudes through authentic assessment. Transfer evidence covers opportunity, supervisor support, data access, role fit, and implementation autonomy.

Application evidence documents changed behaviour and completed interventions. Value evidence uses financial and non-financial proxies aligned with the programme mission. The separation makes it easier to identify where the education-to-value chain is supported or interrupted.

Triangulation is essential. Graduate self-assessment reveals perceived development but is vulnerable to recall, identity and social-desirability effects. Supervisor assessment adds external observation but may reflect organisational politics or incomplete visibility. Organisational proxies provide relevance but rarely establish attribution on their own. A credible value claim requires convergence across at least two evidence types and a plausible mechanism connecting the programme to the outcome.

Digital tools can strengthen longitudinal tracking, portfolio analysis and dashboarding. In a Quality 5.0 system they must remain explainable and governed. Automated text analysis, for example, may help identify recurring capability themes in portfolios, but humans must define categories, verify ambiguous cases and decide whether the evidence warrants curriculum change. Data minimisation, consent, access control and documented decision responsibility are part of quality, not administrative additions.

4.2 Maturity Model

Institutions differ in their ability to implement longitudinal assurance. As shown in Table 2, the maturity model provides a development path rather than an accreditation label.

Table 2 – DH-Q5AF maturity model

Level	Dominant practice	Evidence profile	Improvement priority
0. Credential compliance	Inputs, attendance and completion dominate	Administrative records	Define programme purpose and graduate capability profile
1. Learning-outcome control	AoL operates at course and programme level	Rubrics, examinations, capstones	Connect assessed capability to authentic managerial practice
2. Transfer-aware assurance	Work context and opportunity to apply are monitored	AoL plus graduate and supervisor evidence	Separate education effects from transfer barriers and rival explanations
3. Dual-horizon assurance	Near-term and long-term outcomes are tracked for each pathway	Longitudinal, triangulated portfolio	Use matched comparisons and transparent attribution rules
4. Adaptive Quality 5.0 ecosystem	Human judgement and governed analytics continuously improve programmes	Integrated evidence with documented human oversight	Anticipate capability needs while protecting ethics, context and accountability

Progression requires stronger causal discipline, not merely more data. A Level 4 institution should be able to explain how a specific curriculum decision followed from evidence, who validated the evidence, how AI-assisted analysis was governed and how unintended effects were considered.

5 PROPOSITIONS AND DISCUSSION

Proposition 1: Purpose-aligned assurance will produce more valid comparisons of MBA and doctoral management education than undifferentiated credential ranking.

The same measure cannot fairly represent programmes whose intended transformations differ. Purpose alignment does not remove comparability; it makes comparison explicit. Common domains such as critical thinking, implementation and strategic judgement can be retained, but weights and evidence standards must reflect declared programme purposes. A programme should first be judged against its own value proposition and then compared on transparent shared dimensions.

Proposition 2: The apparent relative value of MBA and doctoral management education will vary with the observation horizon.

Outcomes have different maturation periods. An operational intervention may generate evidence within months, whereas the capacity to lead an innovation portfolio may emerge through repeated use. A cross-sectional study at one date confounds pathway with time. Dual-horizon measurement tests rather than assumes temporal differences and requires both pathways to be observed in both windows.

Proposition 3: Workplace transfer climate will moderate the relationship between demonstrated graduate capability and organisational value.

Capability is necessary but insufficient. A manager cannot apply advanced analytics without access to data, introduce process change without authority or sustain inquiry without organisational support. Measuring transfer climate protects the programme from invalid negative attribution and protects the organisation from invalid positive attribution. It also creates actionable dialogue: a low-value result may call for curriculum change, workplace redesign or both.

Proposition 4: Human-AI complementarity will strengthen organisational value when graduates possess verification, problem-framing and accountability capabilities.

AI can accelerate analysis and expand access to technical methods, but it can also create overconfidence, opaque reasoning and evidence-quality risks. The value of postgraduate education therefore shifts from tool exposure to responsible orchestration. MBA and doctoral pathways may contribute complementary strengths: rapid integration and implementation on one side; critical validation and methodological governance on the other. The proposition should be tested without assuming that either credential guarantees those strengths.

Proposition 5: Triangulated, context-adjusted evidence will reduce attribution error compared with self-report or organisational metrics used alone.

No observational design fully eliminates selection and endogeneity. Matching and statistical controls can improve comparability, while qualitative process evidence can test whether the proposed mechanism is credible. The framework therefore treats causal language as graded. Evidence may support association, contribution or plausible influence without necessarily supporting exclusive causation.

Together, the propositions shift the managerial question from “Which qualification wins?” to “Which capability profile fits the role, transfer environment and time horizon, and what evidence would justify that decision?” This is consistent with Quality 5.0 because it combines data discipline with human interpretation and stakeholder purpose.

6 IMPLICATIONS FOR PROGRAMME AND ORGANISATIONAL QUALITY

For business schools, DH-Q5AF requires programme differentiation that is empirically reviewable. Learning goals should state not only what graduates know at completion, but how capabilities are expected to transfer and what type of value should become visible over time. Alumni engagement then becomes part of assurance rather than marketing. Programme review boards should include employer and graduate evidence while retaining academic responsibility for interpretation.

For employers, the model provides a decision structure for educational investment. Sponsorship should be linked to the problem class and role trajectory. If the immediate need is cross-functional implementation, an application-oriented pathway may fit. If the need is research-led transformation, evidence governance or long-horizon innovation, doctoral capability may fit. The organisation must also provide a transfer environment; otherwise it purchases capability that it cannot use.

For learners, the framework clarifies expectations. A credential is not a uniform asset. Its realised value depends on prior experience, motivation, role, opportunity to apply learning and the time available for effects to develop. Transparent value profiles can reduce misleading comparisons based on title prestige alone.

For quality leaders, the maturity model provides an implementation roadmap. A practical first step is to map existing evidence to the six layers and identify breaks in the chain. Many institutions will discover strong learning evidence, weak transfer evidence and sporadic organisational outcomes. The next step is not necessarily a complex analytics platform. It may be a consistent supervisor instrument, an alumni portfolio protocol and a documented rule for how evidence changes curriculum.

7 FUTURE EMPIRICAL VALIDATION

The proposed validation uses a mixed-method matched-pair design. The planned starting target is 60 MBA and 60 doctoral management graduates with management experience, forming up to 60 pairs matched on relevant background and organisational characteristics. Equal group sizes support transparent matched and common-domain comparisons while remaining feasible for the first empirical test of a new framework.

This is an exploratory validation target, not a claim of population representativeness or definitive causal identification. Before recruitment, an *a priori* power analysis must use the final outcome measures, the smallest meaningful effect, the planned number of predictors, and expected attrition. If 60 participants per pathway are insufficient, recruitment must be increased. Propensity- or distance-based matching may supplement expert matching where data quality permits, and baseline differences must be reported.

Analysis should proceed in layers. Descriptive and reliability analyses first establish measurement quality. Paired or balanced group comparisons then estimate differences on common domains. Parsimonious regression models may test adjusted associations with pathway, experience, sector, role, and transfer climate, provided the achieved sample supports the planned model. Interaction effects should be estimated only where power is adequate.

Qualitative interviews with graduates and, where possible, supervisors should reconstruct critical incidents and test whether the proposed education-to-value mechanism is plausible. Multiple respondents and evidence types reduce common-

method bias. Pre-existing capability should be separated from educational development through baseline evidence or prospective follow-up where feasible. Findings must not be generalised beyond the sampled programmes, countries, and sectors without replication.

The purpose of validation is to test and revise the framework, not to confirm a predetermined hierarchy. Results should be reported by domain before any composite index is considered.

8 CONCLUSION

MBA and doctoral management education can create substantial but differently configured human-capital value. Comparing them through completion statistics, one-time satisfaction surveys or a single financial outcome obscures programme purpose, workplace transfer and time. The Dual-Horizon Quality 5.0 Assurance Framework addresses this problem by separating six assurance layers and requiring evidence across near-term and long-term horizons.

The framework makes four practical commitments. Quality is assessed against an explicit purpose; learning is separated from transfer and organisational outcome; digital evidence is governed by human judgement; and curriculum improvement is documented as part of the assurance cycle. Its maturity model allows institutions to progress from credential compliance to an adaptive Quality 5.0 ecosystem.

The paper provides a conceptual architecture rather than empirical proof. Its propositions and mixed-method validation protocol create a falsifiable research agenda. If supported and refined through empirical work, DH-Q5AF can help schools, employers, and learners decide which postgraduate management pathway fits a specific capability need, organisational context, and observation horizon.

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CONFLICTS OF INTEREST

The author declares that they have no conflict of interest. The funders had no role in the design of the study, in the collection, analysis, or interpretation of data, in the writing of the manuscript, or in the decision to publish the results.

DISCLOSURE OF ARTIFICIAL INTELLIGENCE ASSISTANCE

OpenAI Codex was used to support language editing, structural refinement, response-to-reviewer organisation, and reference-format checking. The author defined the research problem, selected and verified the sources, evaluated every argument, and reviewed and approved the complete manuscript. No empirical data, statistical results, or citations were generated or fabricated using AI. The author accepts full responsibility for the content.



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