Development of the Eight-Test Cube for Competency-Based Professional Banking Assessment: A Methodological Framework and Validation Protocol for Lending and Credit Administration Examinations

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ABSTRACT

Professional banking examinations should provide evidence not only that candidates possess technical knowledge, but also that they can analyse evidence, exercise judgement, manage risk, make commercially sound decisions and defend those decisions in realistic professional contexts. This paper develops the Eight-Test Cube (ETC), an eight-domain assessment framework for designing and quality-assuring competency-based professional banking examinations, and proposes a rigorous protocol for subsequent content validation and inter-rater reliability testing. The framework integrates competency theory, authentic assessment, higher-order cognitive assessment, the Nigerian banking competency architecture, contemporary credit-risk principles and financial reporting requirements. The eight domains are Job Relevance; Problem Solving; Profitability and Income; Practice Improvement; Strategic and Creative Thinking; Risk, Judgement and Ethics; Integration and Executive Decision; and Financial Knowledge. Each domain is operationalised through observable indicators and a four-point question-quality rubric. The proposed validation protocol uses a multidisciplinary expert panel, item- and scale-level content validity indices, modified kappa, iterative revision, and independent rating of professional banking examination questions to estimate inter-rater reliability using intraclass correlation coefficients. Lending and Credit Administration is used as the initial application domain because it requires integration of financial analysis, repayment capacity, risk, pricing, ethics, controls and judgement. The paper contributes a transparent route for converting competency statements into assessable examination tasks while explicitly separating conceptual development from empirical validation. The framework is intended for subsequent empirical testing before claims of validated measurement performance are made.

Keywords: competency-based assessment; professional banking examinations; lending; credit administration; authentic assessment; content validity; inter-rater reliability; Nigeria.

1. INTRODUCTION

Banking decisions have consequences for depositors, borrowers, shareholders, regulators and the stability of the financial system. Professional examinations in banking therefore carry a responsibility that extends beyond testing recall. They should provide credible evidence that a successful candidate can interpret incomplete information, distinguish material from immaterial facts, identify competing commercial and risk considerations, make a defensible decision, and specify controls appropriate to the decision. This requirement is especially visible in Lending and Credit Administration, where apparently strong accounting ratios can coexist with weak cash conversion, concentrated customer exposure, fragile collateral, governance weaknesses or deteriorating sector conditions.

The ETC originated in the author's professional experience across banking practice, training and examination assessment, where a recurring gap was observed between candidates' ability to reproduce technical knowledge and their ability to use that knowledge in consequential banking decisions. Professional experience served as the

generative source of the framework; it is not presented as validation evidence. The eight domains were subsequently articulated and mapped against competency theory, authentic assessment, higher-order cognitive assessment, Nigerian banking competency requirements, credit-risk governance and financial analysis. This distinction preserves the framework's practice-based originality while subjecting its claims to an explicit programme of scholarly and empirical scrutiny.

The Nigerian competency architecture provides a direct policy rationale for this orientation. The Central Bank of Nigeria's Competency Framework for the Nigerian Banking Industry was introduced to address identified skills and executive-capacity gaps and to establish sequenced competency development, certification and quality assurance. The Chartered Institute of Bankers of Nigeria (CIBN), as the industry's accreditation body under the framework, links training quality to the knowledge, skills and competencies required for banking job roles (Central Bank of Nigeria [CBN], 2012; CIBN, n.d.). This creates a clear assessment-design question: if the intended outcome is professional competence, what evidence should an examination question elicit?

Competency-based assessment literature similarly emphasises alignment among competencies, test specifications, item design, review, field testing and scoring. Authentic assessment scholarship adds that professional assessment should engage with the realities and demands of practice rather than reproduce decontextualised academic tasks (Gyll & Ragland, 2018; McArthur, 2023; Bearman et al., 2024; Vlachopoulos & Makri, 2024). In banking, this principle is particularly important because credit decisions combine technical analysis with judgement, ethics, regulation, uncertainty and commercial consequence.

This paper therefore develops the Eight-Test Cube (ETC) as a structured quality-assurance framework for professional banking assessment and sets out an empirical validation protocol. The present paper does not claim that the framework has already been psychometrically validated. Instead, it makes the development logic explicit, operationalises the eight domains, specifies the evidence required for content validity and rating reliability, and provides worked Lending and Credit Administration applications that can be used in the validation study.

1.1 Aim and objectives

The aim is to develop and establish a defensible validation pathway for an eight-domain framework that can be used to design, review and score the competency demand of professional banking examination questions.

- Define the theoretical and professional foundations of competency-based banking assessment.
- Derive and operationalise the eight ETC domains as observable assessment constructs.
- Create a four-point rubric and question-level scoring procedure.
- Specify expert content-validation procedures using I-CVI, S-CVI/Ave, S-CVI/UA and modified kappa.
- Specify inter-rater reliability testing for independent application of the rubric to banking examination questions.
- Demonstrate the framework using Lending and Credit Administration cases and identify testable propositions for subsequent field validation.

2. CONCEPTUAL REVIEW

2.1 Competence as performance, not possession of knowledge

Competence is commonly treated as an integrated capacity that becomes visible in effective performance rather than as the possession of isolated facts. Foundational competency scholarship distinguishes underlying knowledge and capabilities from the behaviour and performance through which competence is demonstrated (Boyatzis, 1982; Spencer & Spencer, 1993). For professional banking assessment, the implication is that

knowledge remains necessary but is not sufficient. An examination must create conditions in which the candidate has to use knowledge to reach a professionally defensible outcome.

The ETC therefore adopts a competence chain: KNOWLEDGE → ANALYSIS → JUDGEMENT → DECISION → RISK CONTROL → ACTION → VALUE CREATION. The chain is not intended as a rigid chronological model of every banking decision. Rather, it identifies the progressively integrated evidence that a competency-oriented examination can seek. A candidate may know a ratio, analyse its movement, judge its significance, decide whether a facility is acceptable, prescribe covenants or monitoring, and explain the expected commercial and risk consequences.

2.2 Authenticity and professional assessment

Authentic assessment has increasingly been used to describe assessment that connects learning to meaningful tasks, disciplinary practice and the world of work. Contemporary scholarship cautions against reducing authenticity to superficial imitation of workplace tasks; authenticity also concerns the intellectual, ethical and social demands that make professional practice consequential (McArthur, 2023; Bearman et al., 2024). A systematic review by Vlachopoulos and Makri (2024) found that authentic assessment is associated with the development of skills including critical thinking and problem solving, while also requiring careful implementation and staff capability.

For banking examinations, authenticity therefore means more than placing a calculation inside a story about a bank. The task should require evidence selection, interpretation, trade-offs, professional judgement and action. A realistic lending question, for example, may require the candidate to distinguish accounting profit from cash repayment capacity, evaluate leverage and collateral, identify information gaps, consider pricing and concentration, and recommend approval, restructuring, further investigation or decline with appropriate conditions.

2.3 Higher-order cognition and assessment design

Bloom's taxonomy and its subsequent revision distinguish lower-order remembering and understanding from applying, analysing, evaluating and creating (Bloom et al., 1956; Anderson & Krathwohl, 2001). The ETC does not equate professional competence with a single cognitive level. Instead, it uses higher-order cognition as one foundation for assessing whether a question requires interpretation, comparison, evaluation, synthesis and decision. Competency-based test development also requires a blueprint that specifies what the assessment is intended to sample and how items are reviewed and assembled (Gyll & Ragland, 2018).

2.4 Banking-specific requirements: risk, return and control

Banking competence is inseparable from risk management. The Basel Committee's 2025 Principles for the Management of Credit Risk organise sound credit-risk management around an appropriate credit-risk environment, sound credit-granting, credit administration/measurement/monitoring, and adequate controls (Basel Committee on Banking Supervision [BCBS], 2025). These principles make clear that a credit decision is not merely a calculation; it sits within governance, policies, monitoring and control. Financial reporting requirements also reinforce forward-looking judgement. IFRS 9 requires expected credit losses to incorporate probability-weighted outcomes, reasonable and supportable information and the time value of money. For assessment design, this supports questions that connect financial information to expected loss, repayment capacity and portfolio risk rather than treating accounting outputs as ends in themselves (IFRS Foundation, 2024).

3. THEORETICAL REVIEW

3.1 Development of the Eight-Test Cube

The ETC was developed as a construct-mapping framework rather than as a claim that eight domains are naturally occurring and mutually exclusive psychological traits. Its purpose is quality assurance: to help examination setters ask whether a question elicits the kinds of evidence expected from competent professional

banking practice. The eight domains were retained from the original professional model and strengthened through mapping to competency theory, authentic assessment, cognitive demand, Nigerian banking competency requirements, credit-risk governance and financial analysis.

The term 'Cube' is used as a design metaphor for integrated professional judgement, not to imply that eight domains are geometric axes. To remove the ambiguity in the earlier formulation, the revised model defines three organising axes—professional authenticity, decision complexity and consequence/control—within which the eight tests operate. Professional authenticity asks how closely the task reflects meaningful banking responsibility; decision complexity asks how much analysis, synthesis and judgement are required; consequence/control asks whether commercial, risk, ethical and implementation consequences must be managed. The eight tests are lenses applied within this three-axis assessment space.

Table 1. The Eight-Test Cube: domains and operational definitions

Domain	Operational definition	Observable indicators
1. Job Relevance	Extent to which the task represents a meaningful responsibility, decision or problem encountered in banking practice.	Role realism; decision ownership; contextual information; professional output.
2. Problem Solving	Extent to which the task requires diagnosis, evaluation of alternatives and an actionable response rather than reproduction of a taught procedure.	Problem diagnosis; alternatives; evidence use; recommendation.
3. Profitability & Income	Extent to which the task requires consideration of sustainable income, pricing, cost, capital or risk-adjusted return.	Pricing; funding cost; fees; expected loss; capital; sustainable return.
4. Practice Improvement	Extent to which the task converts analysis into an improvement in process, controls, customer management, monitoring or credit administration.	Controls; monitoring; process redesign; covenants; service improvement.
5. Strategic & Creative Thinking	Extent to which the task requires reasoning beyond routine procedure in response to changing, ambiguous or competing business conditions.	Scenario thinking; non-routine options; strategic fit; innovation within policy.
6. Risk, Judgement & Ethics	Extent to which the task requires identification and balancing of risk, professional judgement, regulatory/ethical considerations and mitigants.	Risk identification; ethics; compliance; mitigants; residual risk.
7. Integration & Executive Decision	Extent to which the task requires synthesis of financial, commercial, risk, operational and strategic evidence into a defensible decision.	Synthesis; materiality; trade-offs; decision; justification.
8. Financial Knowledge	Extent to which the task requires correct interpretation and application of financial statements, cash flow, ratios, pricing, leverage, liquidity and consequences.	Calculation; interpretation; cash flow; leverage; debt service; pricing.

3.2 Scoring rule

Each domain is rated on a four-point ordinal rubric: 0 = absent; 1 = limited; 2 = substantive; 3 = strong. The rating concerns the demand built into the examination question, not the quality of a candidate's answer. A domain receives 0 when the task does not require evidence of that domain; 1 when the domain is incidental or can be satisfied superficially; 2 when it is explicitly required and materially affects the answer; and 3 when it is central, integrated and necessary for a defensible professional response. The total score ranges from 0 to 24, but the total should not be interpreted as a validated pass/fail threshold until empirical evidence supports such use. Domain profiles are more informative than a single total during early implementation.

Table 2. Generic four-point rating anchors

Score	Anchor	Question characteristic
0	Absent	No evidence of the domain is required to answer the question.
1	Limited	The domain is present but peripheral, mechanical or weakly consequential.
2	Substantive	The domain is explicitly required and materially shapes the response.
3	Strong	The domain is central, integrated and indispensable to a defensible professional decision.

4. VALIDATION METHODOLOGY

4.1 Study design

The empirical phase is designed as a sequential methodological validation study with four stages: (1) expert face and content validation; (2) revision and second-round confirmation where required; (3) independent application of the rubric to a bank of examination questions; and (4) inter-rater reliability analysis. This design follows established instrument-development practice in which expert judgement is quantified before reliability is tested in intended use (Polit & Beck, 2006; Shi et al., 2012; Lim, 2026).

4.2 Expert panel

A purposive multidisciplinary panel of 10–15 experts is proposed. Eligibility should require at least one of the following: senior professional banking experience in lending/credit/risk; professional banking education or examination-setting experience; academic expertise in assessment/measurement; or senior regulatory/risk-governance experience. The panel should not be dominated by a single employer or professional role. A target composition is 5–7 senior bankers/credit-risk practitioners, 2–3 banking educators/examiners, 2 assessment/measurement specialists, and 1–2 regulatory or governance specialists. Experts should normally have at least 10 years of relevant professional experience or an equivalent record of specialist scholarship. Panel members will receive the construct definitions, the rubric, rating instructions and a short orientation that explains that they are evaluating the assessment framework rather than endorsing the author's professional standing. Conflicts of interest will be declared. Participation will be voluntary and responses will be anonymised in analysis.

4.3 Content-validity procedure

Experts will rate each domain definition and each observable indicator for relevance, clarity and representativeness using a four-point scale (1 = not relevant/clear/representative; 2 = major revision required; 3 = relevant/clear/representative with minor revision; 4 = highly relevant/clear/representative). Ratings of 3 or 4 will be treated as endorsement for CVI calculation. The item-level content validity index (I-CVI) will be calculated as the proportion of experts assigning a rating of 3 or 4. With a panel of at least six experts, I-CVI values of approximately 0.78 or higher are commonly treated as acceptable evidence of item relevance. Scale-level content validity will be reported using both S-CVI/Ave and S-CVI/UA because these indices answer different questions and can diverge (Polit & Beck, 2006; Shi et al., 2012).

Chance-corrected agreement will be estimated using modified kappa (κ^*). Items failing prespecified criteria will not be silently retained. They will be revised, merged or removed using both quantitative indices and qualitative comments. The proposed decision rules are: retain when I-CVI $\geq .78$ and $\kappa^* \geq .75$; revise when either index falls below its criterion but conceptual importance remains strong; and consider removal or substantial reconstruction when both are inadequate. The overall target is S-CVI/Ave $\geq .90$, while S-CVI/UA will be reported transparently rather than used as the sole criterion because universal agreement becomes increasingly stringent as panel size increases.

4.4 Inter-rater reliability study

After content validation, 30–50 examination questions will be sampled to represent calculation, interpretation, case analysis, credit recommendation, pricing, monitoring, ethics and restructuring tasks. At least three independent raters who were not involved in writing the sampled questions will score each question across the eight ETC domains. Raters will receive the final manual and a calibration exercise using separate examples. Calibration examples will not form part of the reliability dataset. Because each domain uses an ordered 0–3 rating and the intended use involves multiple raters applying the same rubric, reliability will be examined at domain level using an intraclass correlation coefficient (ICC) based on a two-way model appropriate to whether the raters are treated as fixed or sampled from a wider population. Absolute-agreement ICCs will be prioritised because identical scores, not merely rank ordering, are required for quality assurance. Weighted kappa may be reported as a sensitivity analysis for individual domains. The exact ICC form and confidence intervals will be prespecified in the statistical analysis plan before data are examined.

4.5 Construct evidence and known-groups hypotheses

Initial validation should avoid overstating what content validity and reliability can establish. They do not by themselves prove that the eight domains are independent latent factors or that a total ETC score predicts job performance. Subsequent construct evidence can be generated through prespecified hypotheses. For example, integrated case-based credit questions should score higher than recall-only questions on Job Relevance, Problem Solving, Risk/Judgement/Ethics and Integration/Executive Decision; calculation-only items should score relatively high on Financial Knowledge but lower on executive integration; and senior-level examination questions should, on average, demand greater integration and judgement than entry-level items. These hypotheses can be tested after the rating process without converting the framework prematurely into a psychometric scale.

4.6 Ethics and research governance

If the validation study collects identifiable expert responses, institutional or organisational ethics requirements should be checked before recruitment. Experts should receive an information sheet, consent statement, data-use explanation and confidentiality assurance. If only examination questions and anonymous expert ratings are analysed, the study may qualify for expedited review or exemption in some institutions, but that determination must be made by the relevant ethics authority rather than assumed by the researchers. No empirical results should be reported until the actual study has been conducted.

5. ISSUES ON ETC APPLICATION TO LENDING AND CREDIT ADMINISTRATION

5.1 Case 1: Financial statements and repayment capacity

A manufacturing company requests a ₦300 million five-year term loan. It reports annual revenue of ₦1.2 billion, EBITDA of ₦180 million, annual interest expense of ₦60 million, existing principal repayments of ₦50 million per year, current liabilities of ₦420 million, current assets of ₦600 million, total debt of ₦700 million and shareholders' funds of ₦500 million. The proposed new annual debt service is ₦90 million. The candidate is asked to calculate selected ratios, interpret repayment capacity, identify material information gaps and make a credit recommendation with conditions.

The current ratio is approximately 1.43:1 and debt-to-equity is 1.40:1. EBITDA/interest is 3.0 times, but EBITDA is not cash available for debt service. A competent response should therefore request or reconstruct operating cash flow, examine working-capital absorption, tax and capital expenditure, assess existing and proposed principal obligations, test downside scenarios, and consider collateral, covenants, industry conditions and management quality. The ETC distinguishes a candidate who can calculate ratios from one who can convert financial evidence into a controlled lending decision.

5.2 Case 2: Pricing and risk-adjusted profitability

A bank considers a ₦500 million one-year working-capital facility priced at 22%. Funding cost is 12%, expected credit loss is estimated at 2% of exposure, operating and monitoring cost is ₦8 million, and related fee income is ₦10 million. Assuming full utilisation for one year, gross interest is ₦110 million, funding cost is ₦60 million,

expected credit loss is ₦10 million, and net contribution before tax and capital charges is ₦42 million. The arithmetic is necessary but incomplete.

A competency-based question should require the candidate to consider utilisation assumptions, liquidity cost, collateral quality, tenor, concentration, relationship value, competitive conditions, covenant structure, expected loss uncertainty and the bank's required return on capital. This makes Profitability & Income interact with Risk, Judgement & Ethics and Integration & Executive Decision rather than treating margin as synonymous with value creation.

5.3 Case 3: Early warning, restructuring and practice improvement

A previously performing borrower shows a 25% fall in monthly credits, repeated excesses over approved limits, delayed supplier payments and a request to extend tenor. Collateral remains apparently adequate. A recall-oriented question might ask candidates to list warning signs. An ETC-oriented question asks candidates to diagnose the likely causes, identify information required, distinguish temporary liquidity pressure from structural deterioration, propose an immediate control plan, decide whether restructuring is justified, and specify monitoring triggers and escalation points. This case gives particular weight to Problem Solving, Practice Improvement, Risk/Judgement/Ethics and Integration/Executive Decision.

5.4 Case 4: Ethical pressure in credit approval

A senior relationship manager pressures a credit officer to support a facility for a commercially important customer before outstanding due-diligence information is completed. The transaction is profitable on headline pricing and the customer threatens to move its accounts to a competitor. The candidate must identify the professional and governance issues, distinguish commercial urgency from acceptable risk appetite, determine what cannot be waived, propose a compliant route to decision and document escalation. This scenario tests whether candidates can defend professional standards when profitability, hierarchy and customer pressure conflict.

Table 3. Illustrative ETC profiles for four case types

Case	JR	PS	PI	PImp	SCT	RJE	IED	FK
1 Financial/repayment	3	3	2	2	2	3	3	3
2 Pricing/profitability	3	2	3	1	2	3	3	3
3 Early warning/restructure	3	3	2	3	3	3	3	2
4 Ethical pressure	3	3	2	2	3	3	3	1

Note. These scores are illustrative design examples, not empirical validation results. JR = Job Relevance; PS = Problem Solving; PI = Profitability & Income; PImp = Practice Improvement; SCT = Strategic & Creative Thinking; RJE = Risk, Judgement & Ethics; IED = Integration & Executive Decision; FK = Financial Knowledge.

5.5. Examination Quality-Assurance Procedure

The ETC can be embedded in examination development as a pre-publication quality-assurance step. Setters first identify the intended competency and professional level. They then draft the task and expected evidence, score the question independently using the eight domains, and compare the profile with the examination blueprint. A question intended to test senior credit judgement but scoring only on financial knowledge and job relevance should be revised. Conversely, not every question must score highly on all eight domains; a balanced paper should provide deliberate coverage across the following blueprints.

(i) Specify the professional decision or responsibility being assessed.

(ii) Define the evidence a competent candidate must produce.

(iii) Map the question to the eight ETC domains using the 0–3 anchors.

(iv) Check whether cognitive demand matches the level of the examination.

(v) Check numerical accuracy, data sufficiency and realism.

(vi) Check risk, ethical and control implications where relevant.

(vii) Prepare a marking guide that rewards reasoning and evidence, not only the final conclusion.

(viii) Conduct independent moderation and reconcile material rating disagreements.

(ix) Review paper-level coverage before final approval.

5.6. Discussion

The ETC addresses a practical gap between competency statements and examination-question design. Competency frameworks can specify desired knowledge, skills and behaviours, yet examination setters still need a usable method for deciding whether an item elicits those competencies. The ETC makes this translation explicit by treating a question as a professional evidence-generating task. Its contribution is therefore not a new theory of competence, but an applied quality-assurance architecture for professional banking assessment.

The framework also resists a common false choice between technical knowledge and judgement. Financial Knowledge remains one of the eight tests because professional judgement without technical accuracy is unsafe. The distinctive claim is that technical accuracy should be connected to context, materiality, risk, commercial consequence, controls and decision. This is consistent with contemporary credit-risk governance, which places credit granting within a broader environment of risk strategy, administration, monitoring and control (BCBS, 2025).

A second contribution is the separation of domain profiles from premature total-score interpretation. In early use, the ETC should be used diagnostically. Two questions can obtain similar totals while demanding very different competencies. Examination quality therefore depends on blueprint coverage and domain balance, not simply maximising the total score of every item. This is consistent with competency-based assessment practice, where test specifications guide the composition of the assessment rather than requiring every item to measure every objective.

The proposed validation strategy is deliberately conservative. Expert agreement can establish whether the content appears relevant and representative; inter-rater reliability can establish whether trained raters apply the rubric consistently. Neither establishes predictive validity, factor structure or consequential validity. Those claims require additional studies. This distinction is important because new professional frameworks are often weakened by presenting expert endorsement as if it were complete psychometric validation.

5.7. Implications for Training and Professional Development

Training providers can use ETC profiles to identify curriculum imbalance. A programme may be technically strong but underdeveloped in judgement, ethics or executive integration. A credit-analysis workshop can therefore be sequenced from financial analysis to cash-flow interpretation, borrower diagnosis, recommendation, stress testing, risk controls and simulated credit-committee defence. Such progression converts information delivery into practice-oriented competence development.

The framework can also support continuing professional development. Experienced bankers may not need repeated instruction in basic ratios, but may benefit from scenarios involving climate-related risk, digital lending, model limitations, sector concentration, restructurings, governance pressure or competing stakeholder interests. The ETC provides a common language for specifying which professional capability is being reinforced.

5.8. Limitations and Future Research

The framework has four principal limitations at this stage. First, the eight domains originate in a professional conceptual model and require empirical content validation; they should not yet be described as validated constructs. Second, domain boundaries may overlap, particularly Problem Solving, Strategic & Creative Thinking and Integration & Executive Decision. Overlap may be appropriate for integrated professional work, but raters must be able to distinguish the scoring anchors. Third, the initial cases are concentrated in Lending and Credit Administration; transferability to treasury, operations, compliance, retail banking and digital banking requires testing. Fourth, no evidence is yet available that ETC scores predict candidate performance in the workplace.

Future research should therefore proceed in stages: complete the expert-validation study; test inter-rater reliability on authentic examination questions; compare recall, calculation and integrated case questions using prespecified known-groups hypotheses; examine whether paper-level ETC profiles differ by professional level; and, where sufficient data become available, investigate relationships among ETC profiles, candidate scores and subsequent professional performance. Only after such evidence should cut scores, weighting schemes or predictive claims be considered.

6. CONCLUSION

Professional banking examinations should establish more than whether candidates know banking concepts. They should generate evidence that candidates can use knowledge under conditions resembling professional responsibility. The Eight-Test Cube provides an operational framework for examining that requirement through Job Relevance, Problem Solving, Profitability & Income, Practice Improvement, Strategic & Creative Thinking, Risk/Judgement & Ethics, Integration & Executive Decision, and Financial Knowledge. Its three organising axes—professional authenticity, decision complexity and consequence/control—clarify the meaning of the Cube and position the eight tests as integrated quality-assurance lenses rather than geometric dimensions.

The framework is deliberately presented with a validation protocol rather than fabricated validation results. Its next evidential step is expert content validation followed by independent reliability testing. If those stages support the framework, the ETC can provide professional bodies, examination setters and training providers with a transparent method for moving assessment from knowledge reproduction toward analysis, judgement, controlled action and sustainable value creation.

Authors positionality and reflexivity

The framework is practice-originated. The author's experience in banking, professional training and examination assessment provided the initial observations that motivated the ETC and informed its domain language. To reduce the risk of confirmation bias, the manuscript separates conceptual development from empirical validation, prespecifies quantitative decision rules for content validity and reliability, requires multidisciplinary expert input, proposes independent raters who did not write the sampled questions, and calls for preservation of ratings, revisions and analysis decisions in an auditable research archive.

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