Industry-Integrated Curriculum Design for Employability in Marketing Education: The BRIDGE Process Framework

Ying Wu, University of Dundee, United Kingdom
Kirsty Beaumont, University of Dundee, United Kingdom
Ruth O'Riordan, University of Dundee, United Kingdom

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Abstract

Graduate employability is a strategic priority in business and marketing education, yet a persistent gap remains between conventional curricula and the audience-facing work of contemporary practice, and the field lacks an empirically derived framework specifying how that gap might be addressed through curriculum design rather than extra-curricular provision. This study examines how industry-integrated curriculum design creates structured opportunities for students to enact and evidence employability competencies. It adopts a longitudinal, embedded, qualitatively driven mixed-method case study of one undergraduate and one postgraduate marketing module in a UK business school across four cohort iterations. The corpus comprises student evaluation comments, in-lecture feedback and co-design responses, curriculum documents, reflective teaching records and institutional assessment records, analysed through abductive thematic analysis, cross-case comparison, temporal sequence analysis and a descriptive quantitative strand integrated by joint display. The postgraduate module affords a natural contrast between cohorts taught with and without a live client, holding assessment format constant. Industry integration was associated with higher reported relevance and created opportunities to enact digital marketing strategy, analytical reasoning, collaborative problem solving and professional communication, conditional on client-task fit, workload calibration and scaffolding. Postgraduate marks were descriptively higher under the live-client condition, though intact-cohort confounds preclude causal inference, while documented undergraduate curriculum improvements were not accompanied by higher marks. The study develops the BRIDGE framework as a process model of inputs, learning mechanisms, a proximal outcome and an adaptive mechanism, specified through three propositions and four boundary conditions, and advances curriculum evaluation as a dual-tempo adaptive mechanism.

Keywords: employability, work-integrated learning, authentic assessment, marketing education, curriculum design

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Introduction

Graduate employability sits at the centre of strategic planning in UK business schools, driven by employer expectations that graduates combine disciplinary knowledge with applied competencies (Bennett, 2019; Clarke, 2018; Tight, 2023). Succi and Canovi (2020) report a widening perception gap: employers rate applied skills more highly than students recognise they need. This matters acutely in marketing, whose constructs are validated through application to real markets (Grewal et al., 2025). A curriculum teaching those constructs only through simulated cases risks producing graduates who can describe strategic decisions but have never made one for a real audience with reputational consequences.

The gap is structural rather than incidental (Jackson, 2016; Whittaker, 2016): it reflects how curricula are assessed, through summative, staff-graded, low-stakes simulation, rather than deficiency of content (Coates et al., 2016). Embedding authentic tasks into formal assessment rather than adding employability extra-curricularly (Yorke & Knight, 2006) remains inconsistently applied (Jackson et al., 2023), and client-based projects rarely scale beyond instructor enthusiasm (Shanahan et al., 2021).

Three gaps motivate this paper. First, employability frameworks are largely conceptual or diagnostic, describing what employability consists of without specifying a testable design procedure (Eimer & Bohndick, 2023). Second, evidence spanning undergraduate and postgraduate curricula within one institutional case is scarce, so it is unclear whether integration mechanisms operate consistently across levels. Third, comparison with conventional simulated assessment is rarely made explicit. The study therefore asks:

- **RQ1:** How does industry-integrated curriculum design create structured opportunities for students to enact and evidence employability competencies?
- **RQ2:** How do the mechanisms and boundary conditions of industry-integrated curriculum design differ from those of conventional simulated assessment?

The aim pursued through these questions is to elaborate abductively a transferable process framework, extending related prior work on industry-collaborative and gamified assessment (Wu & Stewart, 2024; Wu et al., 2025) from single mechanisms to an integrated model. The contribution is BRIDGE, specified through three propositions and four boundary conditions, whose principal advance is curriculum evaluation as a dual-tempo adaptive mechanism. The study does not measure employability gain, and distinguishes throughout designed opportunity and demonstrated enactment from measured improvement.

Theoretical Background

The grounding was developed through an integrative narrative review establishing sensitising concepts for abductive analysis, not a systematic review; no screening protocol or review trail of the kind required by systematic methodology (Tranfield et al., 2003) was maintained, and the review is not presented as reproducible. The resulting synthesis is summarised in Tables 1 and 2, mapping each strand to its core contribution and to the use made of it here.

Work-Integrated and Authentic Learning

Work-integrated learning denotes approaches purposefully integrating theory with workplace-relevant practice (Billett, 2009), requiring capacity to navigate ambiguity rather than execute defined procedures (Oliver, 2015). Cooper et al. (2010) and Patrick et al. (2008) stress that

quality depends less on a partner's presence than on how deliberately the partnership is designed into curriculum, a claim examined abductively here. Authentic learning theory explains why live-client work should differ from simulation: tasks are situated in real contexts with genuine stakes (Herrington & Oliver, 2000), with ill-defined problems, a polished complete product and an audience beyond the assessor (Ashford-Rowe et al., 2014). Kolb (1984) underpins the iterative logic and Schon (1983) reflective adaptation. Industry feedback must be formalised within assessment (Richardson & Henschke, 2010) and feedback designed rather than appended (Boud & Molloy, 2013). Smith (2012), Rowe and Zegwaard (2017), Jackson (2015) and Ferns et al. (2016) converge on design quality, not client presence, as decisive; Bandaranaike and Willison (2015) and Trede (2012) extend this to affective readiness and professional identity.

Employability Capital

Harvey (2001) and Knight and Yorke (2003) established employability as a curricular rather than outcome property. Bridgstock (2009) identifies career management skills as overlooked; Tomlinson (2017) proposes five interacting capitals, and Kalfa and Taksa (2015) show cultural capital shapes how employability is recognised in business education. Hinchliffe and Jolly (2011) and Holmes (2013) debate whether employability is possession, position or process, which Jackson (2016) partly resolves through pre-professional identity, while Jackson and Wilton (2017) show self-management matters as much as experience. Jackson et al. (2023) address assessing work-integrated learning absent external accreditation. Kinash et al. (2016) show that stakeholders disagree about which employability strategies work, and Helyer and Lee (2014) situate the debate within policy expectations. Eimer and Bohndick (2023) find most models remain diagnostic rather than translated into design procedure, the gap BRIDGE addresses.

Interdisciplinarity and Mode 2 Knowledge

Interdisciplinary learning integrates concepts from two or more disciplines to address one problem (Laasch et al., 2023); transdisciplinary learning involves non-academic stakeholders as co-producers (Janssens et al., 2022). Gibbons et al. (1994) and Nowotny et al. (2001) distinguish disciplinary knowledge from knowledge produced in the context of application, a distinction this paper uses to bound rather than inflate its transdisciplinary claim. University-industry engagement generates more durable value when relational rather than transactional (Ankrah & Al-Tabbaa, 2015; Perkmann et al., 2013). Curriculum co-creation with students (Bovill, 2020; Healey et al., 2014; Zainudden et al., 2022) provides a template extended here to include the industry partner.

Table 1

Literature Synthesis by Thematic Strand (Theoretical Foundations)

Strand	Key sources	Core contribution	Use in this study
Employability as institutional priority	Harvey (2001); Knight and Yorke (2003); Clarke (2018); Tight (2023); Bennett (2019); Succi and Canovi (2020); Grewal et al. (2025)	Reframes employability as capital and context rather than a fixed attribute list; evidences accelerating skills demand in marketing	Establishes urgency and disciplinary specificity of the gap
Situated and experiential learning	Lave and Wenger (1991); Brown et al. (1989); Wenger (1998); Kolb (1984); Schon (1983)	Locates learning in participation and context rather than transmission	Underpins why an external audience changes the learning task
Work-integrated learning quality	Billett (2009); Cooper et al. (2010); Patrick et al. (2008); Smith (2012); Rowe and Zegwaard (2017); Jackson (2015); Ferns et al. (2016); Oliver (2015)	Specifies quality dimensions and partner-capacity requirements; identifies design, not partner presence, as decisive	Directly motivates P1 and the boundary conditions
Authentic assessment and feedback design	Herrington and Oliver (2000); Ashford-Rowe et al. (2014); Villarroel et al. (2018); Sadler (1989); Nicol and Macfarlane-Dick (2006); Boud and Molloy (2013); Carless and Boud (2018); Richardson and Henschke (2010)	Distinguishes authentic from simulated assessment; establishes feedback as designed rather than appended	Specifies the D component and motivates P2

Table 2

Literature Synthesis by Thematic Strand (Application and Method)

Strand	Key sources	Core contribution	Use in this study
Employability capital and identity	Bridgstock (2009); Tomlinson (2017); Jackson (2016); Jackson and Wilton (2017); Holmes (2013); Kinash et al. (2016); Jackson et al. (2023); Eimer and Bohndick (2023)	Conceptualises employability as multidimensional capital and identity; identifies the assessment gap in non-accredited settings	Diagnoses the gap the I component addresses
Interdisciplinarity and Mode 2 knowledge	Gibbons et al. (1994); Nowotny et al. (2001); Laasch et al. (2023); Janssens et al. (2022); Leal Filho et al. (2019)	Distinguishes disciplinary from context-of-application knowledge production and co-production with non-academic actors	Provides the criterion against which the transdisciplinary claim is qualified
University-industry engagement and co-creation	Perkmann et al. (2013); Ankrah and Al-Tabbaa (2015); Healey et al. (2014); Bovill (2020); Zainudden et al. (2022); Shanahan et al. (2021)	Shows relational engagement outperforms transactional; establishes co-creation with students as design practice	Frames the R component and the three-way design relationship
Qualitative theory building	Eisenhardt (1989); Gioia et al. (2013); Corley and Gioia (2011); Stake (1995); Yin (2018); Braun and Clarke (2019); Lincoln and Guba (1985); Tracy (2010); Nowell et al. (2017); Miles et al. (2014)	Specifies procedures for abductive framework development and criteria for evaluating contribution	Provides the methodological warrant for the study

Methodology

Design

The study adopts a longitudinal, embedded, qualitatively driven convergent mixed-method case study (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Stake, 1995; Yin, 2018), informed by constructive alignment (Biggs & Tang, 2011). It is *embedded* (two curricular subcases), *longitudinal* (four cohort iterations with documented change) and *qualitatively driven*: the qualitative strand carries analytic weight and generates the framework, while assessment records contextualise, corroborate or challenge it. The quantitative strand is descriptive; no inferential test is performed and integration proceeds by joint display.

Scope

The study examines how arrangements create opportunities for enactment and how they were adapted; it does not measure employability gain. The postgraduate module provides a natural contrast between cohorts taught without and with a live client, holding format constant, but these are intact groups differing in year, size and composition.

Corpus

Table 3 sets out the corpus, the enrolled population and contributor counts for each source, together with the principal evidential limitation attaching to it. **Cases.** BU31013 (undergraduate) assesses a 2.5-minute SDG-aligned podcast with show notes (30%) and a SOSTAC campaign plan (70%), drawing on sustainability marketing typologies (Kemper & Ballantine, 2019) and SDG framing (Leal Filho et al., 2019). Its live client was Intelligent Growth Solutions (IGS), a Dundee vertical-farming technology company selling into business and public-sector markets, in 2024/25, and Campy Growers, a consumer-facing community growing initiative, in 2025/26. BU52039 (postgraduate) assesses a group brand-extension pitch (30%) and a 3,000-word individual report (70%), applying brand-extension theory (Aaker & Keller, 1990). In 2024/25 students selected their own brand with no external stakeholder; in 2025/26 the client was Lifelong Learning Dundee. Review forms confirm structure, weighting and word counts were unchanged. The modules were selected as theoretically informative: the undergraduate module embedded a live-client brief in both observed iterations, whereas the postgraduate module did so only in 2025/26, and the two differ in level, client context, format and client-facing interaction.

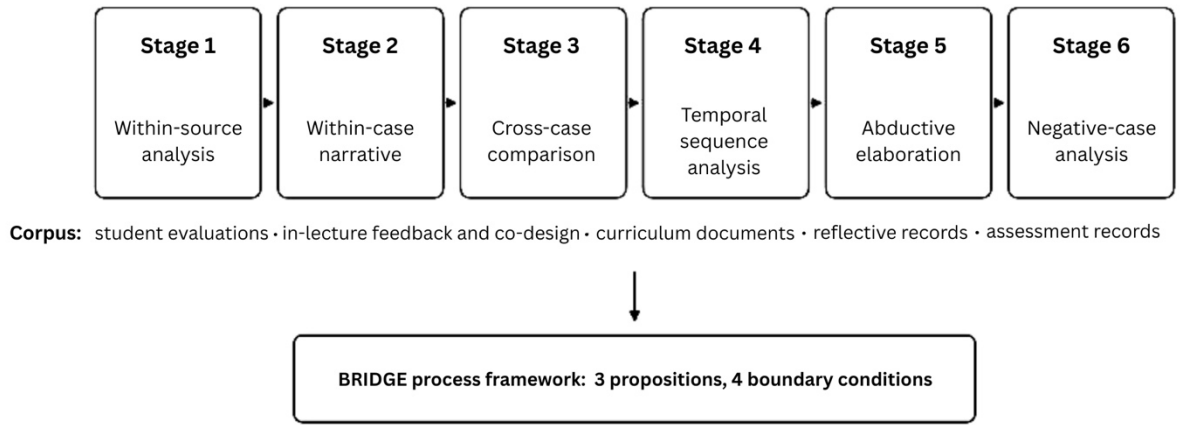
Table 3
Corpus Inventory and Evidential Limitations

Source	Context	Enrolled	Contributors	Principal evidential limitation
Module evaluation, open text	UG 2024/25	56	12 and 10 per prompt	Not purpose-built for employability; self-selecting
Module evaluation, open text	UG 2025/26	59	7 and 7 per prompt	Low response rate; bias unquantifiable
Module evaluation, open text	PG 2025/26	20	4 and 4 per prompt	Very small base; provisional only
Weekly in-lecture feedback	UG, full semester	Attendance varied	13 to 31 per session	Public setting; social desirability likely
In-lecture quiz records	Both modules	Attendance varied	7 to 14 per item	Evidences provision, not gain
Co-design responses	PG 2025/26	20	4	Four respondents; indicative
Curriculum documents	Both modules	n/a	n/a	Design intent, not enactment
Reflective teaching records	Four iterations	Author team	3 authors	Authored by stakeholders in the account
Assessment records	All iterations	191	182 marked	Intact cohorts; no baseline

Analysis

Six stages were used (Creswell & Poth, 2018; Miles et al., 2014; Patton, 2015): within-source analysis, recognising documents and reflective records as researcher-created artefacts rather than informant accounts; within-case narrative per subcase, informed by structured reflective cycles (Gibbs, 1988); cross-case comparison distinguishing recurring from contingent mechanisms; temporal sequence analysis from signal to action; abductive elaboration against the theoretical background; and negative-case analysis specifying boundary conditions. Figure 1 sets out the sequence and its relation to the corpus and to the resulting framework.

Figure 1
Six-Stage Abductive Analytical Procedure



Note. Sources are analysed separately before synthesis; the framework is elaborated at Stage 5 and bounded at Stage 6.

Consistent with reflexive thematic analysis (Braun & Clarke, 2019), coding was interpretive rather than a reliability exercise: the lead author coded iteratively, co-authors acted as critical interpretive partners challenging themes and contribution claims, and divergences were retained where meaningful. No inter-rater reliability claim is made. Because the corpus mixes informant accounts with design artefacts, Table 4 is described as Gioia-inspired (Gioia et al., 2013) rather than as an application of that methodology.

Three quantities are distinguished: enrolment, assessment completion and qualitative contribution. Gradebook records are authoritative for cohort size. Across live-client iterations 128 students were marked on the principal assessment; the qualitative sample is far smaller, and findings should be weighed against contributor counts.

Trustworthiness

Six strategies were used (Lincoln & Guba, 1985; Nowell et al., 2017; Tracy, 2010): source triangulation with attribution; cross-case testing of every component (Table 4); temporal traceability; negative-case analysis; a reflexive audit trail; and peer challenge by an author not responsible for the module concerned. The authors are insider researchers, a limitation mitigated but not removed by reporting critical evidence in full. **Ethics.** Approved by the School of Business Research Ethics Committee, University of Dundee (UoD-SoB-STAFF-2025-16). In-lecture participation was voluntary and anonymous at collection and carried no assessment consequence. No student names, identifiers or platform display names were accessed or reported.

Table 4 reports the source supporting each item, so that student-supported claims are distinguished from claims resting on the authors' reflective records. It also retains evidence that resolves into boundary conditions rather than confirming the framework: a structure in which every item supported the framework would risk suggesting an analysis shaped by its conclusion.

Table 4

Evidence Structure With Cross-Case Status and Evidential Strength

Illustrative evidence	Source	Interpretive theme	Dimension	Cross-case status	Strength
"Learning about Campy Growers... helped me understand how local initiatives can create meaningful impact"	UG evaluation	Authentic framing distinguishes brief from simulation	B: Brief	Both subcases	Moderate
Client reviewed outputs; pitch delivered to external stakeholder	Documents; reflective record	Sustained engagement with external stakeholder	R: Real Client	Both subcases	Strong (documented)
Rubric criteria naming digital strategy, analytical reasoning, communication	Briefs and rubrics	Explicit mapping of criteria to competency domains	I: Integrated Competencies	Both subcases	Strong (documented)
"Have seminar activity feed into the assignments"; exemplar and earlier-content requests	PG co-design; UG weekly feedback	Demand for anticipatory scaffolding aligned to summative task	D: Developmental Feedback	Both subcases	Moderate
Podcast, pitch deck and report produced as standalone artefacts	Briefs and documents	Artefacts designed for external legibility	G: Graduate-Ready Evidence	Both subcases	Design intent only
Client changed; exemplars released earlier; fortnightly quiz cycle adjusted	Reflective record; documents	Recalibration at two tempos	E: Evaluation for Enhancement	Slow loop both; fast loop reported only	Mixed
"Maybe a B2C company would be better next year"; "most time-consuming... report I have done"	UG evaluation	Client-context misalignment; workload disproportion	Boundary condition	UG, echoed in PG	Strong (recurrent)
"Using the client was quite hard as they have constrains/ limited budget"	PG co-design	Client capacity constrains achievable scope	Boundary condition	PG only	Indicative

Findings

Reported Relevance

Students attributed engagement to the live-client format rather than delivery alone: “Learning about Campy Growers and their work in Dundee helped me understand how local initiatives can create meaningful social and environmental impact” (UG 2025/26). A postgraduate described the relationship as reframing theory: “it is good because it's very practical and transferable.” This accords with authentic learning theory (Herrington & Oliver, 2000) and evidence that career-oriented learning shapes perceived employability (Ho et al., 2023; Huang, 2025).

Opportunities to Enact Competencies

The design created structured opportunities to enact four domains: digital marketing strategy, through SOSTAC planning against live audience data; analytical reasoning, through competitor mapping on a real organisation; collaborative problem solving, through a group pitch under real constraints; and professional communication, through client-facing formats. The postgraduate pitch applied brand-extension theory to a live client decision rather than textbook examples. The claim concerns designed opportunity and observable enactment, not measured gain.

Professional Register

Client-facing formats required students to address a lay or client audience rather than an academic marker, a competency rarely assessed directly in essay-based curricula.

Tensions

Undergraduates in 2024/25 found the business-to-business client hard to work with: "it is a bit harder to apply to a B2B organisation... maybe a B2C company would be better next year." Workload criticism was sharp: "the most time-consuming and difficult 2,000 report I have done." A postgraduate noted capacity limits: "using the client was quite hard as they have constrains/ limited budget." These recur across cohorts, indicating a genuine tension between authenticity, which inherits a client's real complexity, and a single module's bounded workload. This is the mechanism Sadler (1989) and Carless and Boud (2018) would predict: without the means to interpret and act on standards in advance, ill-defined tasks convert into effort rather than into learning.

Assessment Records

Marks use the University's 23-point scale; percentage conversion is meaningless here and platform percentage bands are disregarded; Table 5 reports the distributions. One matter requires disclosure before the figures are read. Three distributions contain a recorded mark of zero. These zeros record non-submission rather than an assessed but failing attempt; no academic-offence outcome is involved. Because a non-submission does not represent assessed performance, zeros are reported as recorded for completeness and a sensitivity check excluding the single lowest mark is reported alongside, since their inclusion materially affects dispersion. Claims about the floor of the distribution are not advanced, since the second-lowest mark cannot be recovered from summary statistics.

Table 5

Mark Distributions by Client Condition (23-Point Scale)

Iteration	Client condition	Assessment	n	Mean	SD	Min
BU31013 2024/25	Live (IGS, B2B)	Podcast (30%)	50	17.98	2.08	14
BU31013 2024/25	Live (IGS, B2B)	Campaign plan (70%)	52	16.80	3.63	0
BU31013 2025/26	Live (Campy Growers)	Podcast (30%)	54	17.22	2.77	5
BU31013 2025/26	Live (Campy Growers)	Campaign plan (70%)	56	16.48	3.65	0
BU52039 2024/25	**No live client**	Group presentation (30%)	56	19.58	2.16	11
BU52039 2024/25	**No live client**	Individual report (70%)	54	17.18	3.53	0
BU52039 2025/26	**Live (LLD)**	Group pitch (30%)	16	20.00	1.22	18
BU52039 2025/26	**Live (LLD)**	Individual report (70%)	20	18.85	1.67	15

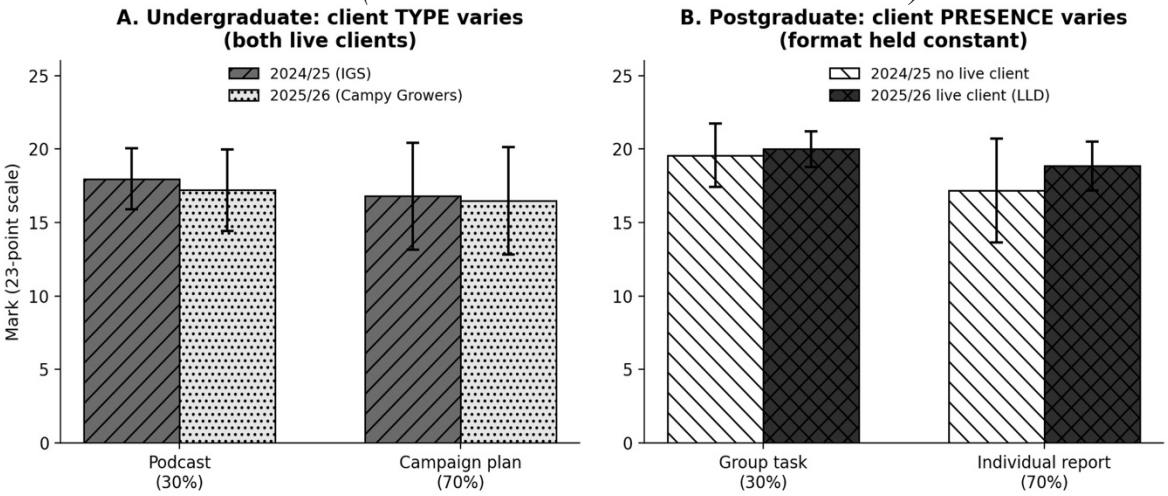
Table 6

Two Natural Contrasts: Analytic Structure and Inference

Contrast	What varies	Held constant	Direction	Descriptive size	Analytic inference	Principal confound
UG 2024/25 to 2025/26	Client *type* (B2B to consumer-facing)	Client presence; format; level; team	Podcast -0.76; plan -0.32	Negligible; within dispersion	Client type alone did not raise attainment though feedback tenor improved: curriculum improvement and performance gain are separable	Scaffolding changed simultaneously
PG 2024/25 to 2025/26	Client *presence* (none to live)	Format; weighting; word counts; level	Report +1.67; group +0.42	d = 0.53 and 0.21; d = 0.56 excluding one non-submission	Difference appears where presence varies, not type; consistent with P1	Cohort size 56 to 20; year; composition

Figure 2

The Two Natural Contrasts (Error Bars Show One Standard Deviation)



Note. Panel A varies client type with presence held constant; Panel B varies client presence with assessment format held constant. Bars are distinguished by fill pattern as well as tone.

The design contains two analytically distinct comparisons, displayed in Figure 2 and set out analytically in Table 6. Two comparisons are distinguished. The undergraduate comparison varies client **type** while holding client presence constant; the postgraduate comparison varies client **presence** while holding assessment format constant, and is the closer approximation to a comparison condition.

The contrasts are more informative together because they point in opposite directions. A reading in which any live client raises attainment is inconsistent with the undergraduate row; a reading in which presence is immaterial is inconsistent with the postgraduate row. The pattern is at least consistent with the possibility that what a live client supplies is a set of constraints, an external audience, a real problem and a recipient of the output, which the assessment then either exploits or fails to exploit; motivation was not measured and no claim about it is made here. On that reading, changing which organisation supplies those constraints should matter less than whether they are present at all, which is what Table 6 shows. Effect sizes are descriptive, not tests. Because the no-client distribution contains a recorded zero arising from non-submission rather than from assessed performance, a sensitivity check excluding the single lowest mark was run: the no-client mean becomes 17.50 (SD = 2.63, n = 53) and d = 0.56. The

direction and approximate magnitude are robust to that exclusion, but any claim of narrowed dispersion is not, since much of the gap between SD = 3.53 and SD = 1.67 rests on a single value that does not represent assessed performance. Claims about dispersion and about the floor of the distribution are therefore withdrawn. The postgraduate confound remains decisive: a difference of this size between intact cohorts differing threefold in size is compatible with cohort variation alone. The finding is convergent, not confirmatory.

Adaptation

Both modules ran a fortnightly formative quiz cycle alongside session-level feedback prompts. Table 7 traces each documented sequence from feedback signal to curriculum action, and states what each sequence does and does not license.

Table 7

Feedback-to-Action Sequences and What Each Licenses

Timing	Signal	Action	Evidential status	What this licenses
End UG 2024/25	B2B client hard to apply concepts to	Client changed to consumer-facing organisation	**Completed**; curriculum documents	Slow loop, independent of author testimony
End UG 2024/25	Structure shared close to deadline	Structure and exemplars released earlier	**Completed**; curriculum documents	Slow loop; evidences scaffolding boundary
Within semester, both	Content requested earlier	Sequencing adjusted in later sessions	**Reported**; reflective record only	Actor, decision, implementation named; not verifiable
Within semester, UG	Worked example requested	Exemplar provided; formalised next iteration	**Reported** then **completed**	Spans both tempos; strongest fast-loop evidence
Within semester, both	More formative quizzing requested	Fortnightly quiz provision adjusted	**Reported**; records evidence provision only	Provision established, not causal sequence
PG 2025/26	Weighting and client capacity concerns	Recorded for next iteration	**Need surfaced**; action pending	Loop instrumented; no closure observed

The loops are evidenced differently. Between-cohort change is documented and independently verifiable; within-semester change rests on the team's contemporaneous account, which names actor, decision and implementation but originates with authors who have a stake in it and lacks a dated log. That asymmetry bounds the dual-tempo claim: the fast loop is demonstrably instrumented and generates actionable signal, while its closure is attested rather than documented.

The BRIDGE Process Framework

A framework whose components sit at different conceptual levels invites the objection that it is an acronym rather than a model. That objection is answered by treating the heterogeneity as structure.

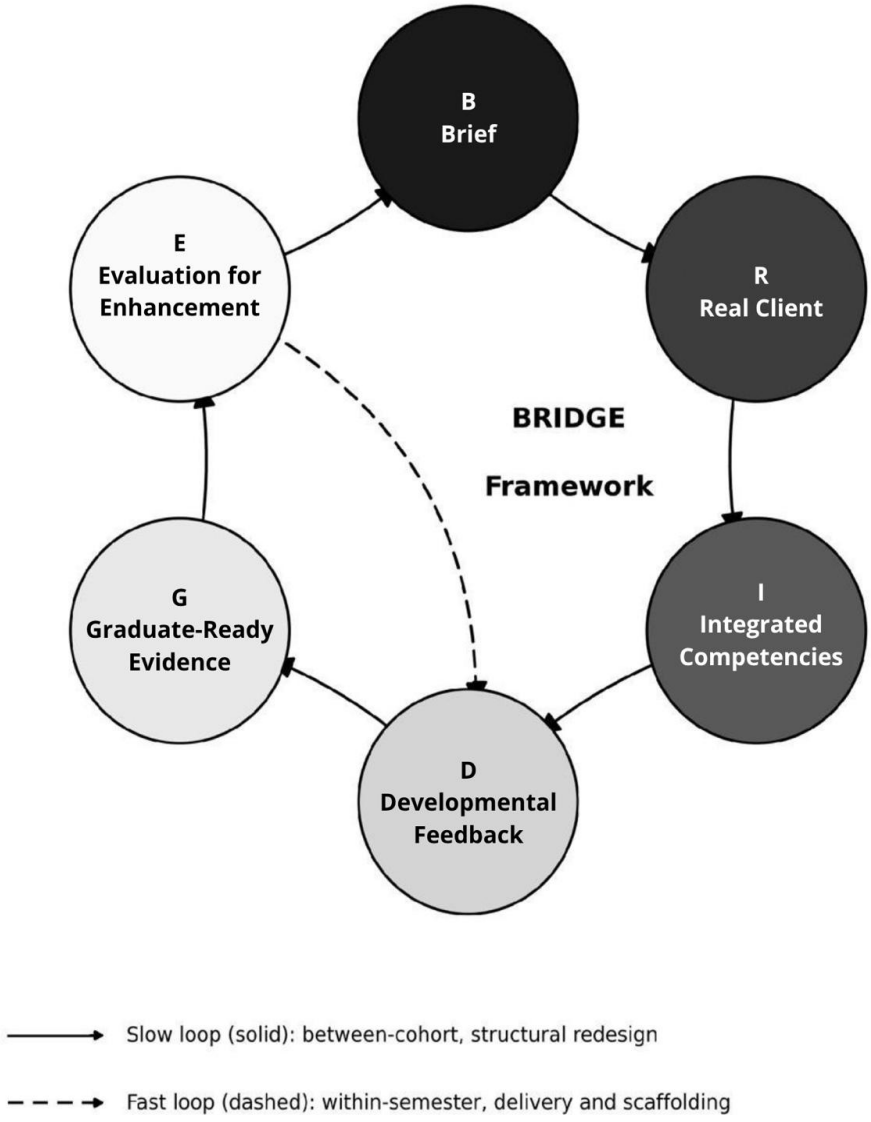
Table 8

BRIDGE Components by Conceptual Role, With Falsification Conditions

Role	Components	Function in the process	Evidenced in	Would be falsified by
Inputs	B: Brief; R: Real Client	Establish authentic problem and external audience with genuine stakes	Both subcases (documented)	Authentic briefs yielding no difference in relevance or enactment
Learning mechanisms	I: Integrated Competencies; D: Developmental Feedback	Make competency demands explicit; render authentic uncertainty productive rather than overwhelming	Both subcases (documented and reported)	Criteria and scaffolding not altering how workload is experienced
Proximal outcome	G: Graduate-Ready Evidence	Yield artefacts legible to external professional audiences	Design intent only; downstream use unmeasured	Artefacts unusable beyond assessment
Adaptive mechanism	E: Evaluation for Enhancement	Recalibrate delivery within semester (fast loop) and structural design between cohorts (slow loop)	Slow loop documented; fast loop reported	Curricula adapting equally well without a fast channel

The ordering is temporal and mechanistic: brief and client create conditions for enactment, made explicit by integrated criteria and survivable by developmental feedback, producing legible artefacts, which with evaluation feed recalibration of delivery within semester and of the brief between cohorts (Figure 3).

Figure 3
The BRIDGE Process Framework as a Dual-Tempo Cycle



Note. Fast loop (dashed): Evaluation to Developmental Feedback within semester. Slow loop: to Brief between cohorts.

Propositions

Industry integration does not strengthen employability learning simply because a client is present; value arises where authentic stakes combine with explicit competency integration, scaffolding, legible evidence and recurring evaluation.

- **P1. Authenticity must be structured to be educative.** A live brief establishes relevance but not learning; educative value depends on whether criteria require integration of disciplinary and professional competencies. Table 6 is consistent: difference appears where presence varies, not where type varies.
- **P2. Developmental feedback conditions whether authentic uncertainty is experienced as productive challenge or disproportionate overload.** Evidenced by co-occurrence of strong endorsement of formative provision with sharp workload criticism where provision arrived late.

- **P3. Employability-oriented curricula require adaptive evaluation at two tempos.** A fast within-semester loop recalibrates delivery for the cohort enrolled; a slow between-cohort loop revises structural choices such as client selection. Running only the slow loop improves conditions for future students at present ones' expense.

Boundary Conditions

(1) **Client-task fit:** where a client's market position does not map onto taught concepts, authenticity costs accessibility.
(2) **Client capacity:** where budget or operational limits constrain implementable recommendations, the task feels artificially bounded.
(3) **Workload proportionality:** where effort is not reflected in weighting, dissatisfaction follows irrespective of pedagogical merit.
(4) **Scaffolding lead time:** where structure arrives close to submission, the fast loop cannot operate for the cohort needing it.

Discussion

Table 9
Structural Comparison With Ideal-Typical Simulated Design, and the Mechanism at Stake

Dimension	Ideal-typical simulated design	Industry-integrated design	Mechanism at stake
Assessment stakes	Simulated case, no external audience	Real client brief with reputational relevance	External audience redefines adequacy
Feedback timing	End-point summative only	Iterative formative checkpoints	Determines if uncertainty is productive
Skill focus	Disciplinary knowledge tested abstractly	Knowledge plus applied competency, explicitly mapped	Criteria make demands assessable
Evidence of employability	Grade and transcript	Professionally oriented artefacts	Evidence becomes portable
Stakeholder involvement	Academic staff only	Staff and industry partner jointly	External framing resists simplification
Principal risk	Lower relevance; weaker transfer	Workload and accessibility unevenly distributed	Complexity cannot be calibrated

That comparison is set out in Table 9, which names the mechanism at stake in each dimension. It isolates a design type, not a description of practice; many conventional modules include formative feedback and professional outputs. The final row is deliberate: industry integration carries a risk profile a staff-authored case does not, because complexity cannot otherwise be calibrated.

Interdisciplinary Integration

Within one brief students integrated sustainability and SDG framing, digital analytics, strategic brand management and professional communication, four domains conventionally taught separately, meeting the criterion of cross-domain integration. The transdisciplinary claim is weaker: the design contains elements of transdisciplinary engagement where clients contributed to problem framing and responded to outputs, but clients did not frame learning outcomes, interpret evidence or shape the framework. Claiming otherwise would inflate engagement into co-production.

The joint display in Table 10 integrates the qualitative and quantitative strands, marking convergence, divergence and silence.

Locating The Dual-Tempo Mechanism Theoretically

The claim that curriculum evaluation operates at two tempos is not merely descriptive, and it can be located within an established account of organisational learning. Argyris and Schon (1978) distinguish single-loop learning, in which error is detected and corrected within existing governing variables, from double-loop learning, in which the governing variables themselves are interrogated. The two loops observed here map onto that distinction, though imperfectly and the imperfection matters. The within-semester loop corrects delivery, sequencing and scaffolding while holding the design parameters of the module fixed, which is single-loop in form: the brief, the client and the assessment architecture are not in question. The between-cohort loop was the only one in which a governing variable was actually revised, when the client itself was changed after the business-to-business brief proved difficult to reconcile with the taught curriculum. That is closer to double-loop learning, because what was revised was not the execution of the design but a premise of it.

The mapping is imperfect because Argyris and Schon distinguish the loops by what is interrogated, whereas the present distinction is compounded by tempo: in a credit-bearing module, questioning a governing variable is normally impossible mid-delivery, so the depth of a change and its timing are confounded by institutional constraint rather than by choice. This is itself a finding worth stating. Curriculum design is a setting in which double-loop learning is structurally deferred, since the parameters most worth interrogating, client selection, assessment weighting and task scope, are precisely those that regulation and student expectation prevent altering for the cohort that surfaced the problem. The practical consequence follows directly: teaching teams should not treat responsiveness within a semester as evidence that a design is sound, because the fast loop is constitutionally incapable of testing the design premises. Conversely, a team that runs only the slow loop has no mechanism for detecting error at all until the cohort has left. The argument for instrumenting both is therefore stronger than convenience: they detect different classes of error, and neither substitutes for the other.

Table 10

Joint Display: Convergence, Divergence and Silence Across Strands

Mechanism	Qualitative evidence	Quantitative evidence	Integrated interpretation
B and R	Engagement attributed to live-client format; B2B client harder to apply concepts to	PG mean higher with live client; UG unchanged when type changed	**Convergent but conditional.** Presence and fit separable
I	Comments on practical application; rubric criteria naming domains	No rubric-level data available	**Silent.** Competency-level performance unobservable here
D	Requests for exemplars, earlier content, more quizzing; workload criticism	PG mean higher; d = 0.53 (0.56 excluding one non-submission)	**Weakly convergent.** Cohort size equally plausible
G	Artefacts designed for external audiences; professional register demands	Not addressed	**Silent.** No evidence beyond assessment
E	Documented client change; fortnightly quiz cycle; reported within-semester adjustment	UG marks did not rise after documented changes	**Divergent.** Experience improved; attainment did not

The display exposes silence and divergence, not only agreement. Two mechanisms are quantitatively unevidenced and marked as such rather than inferred. The final row records a

genuine disagreement, retained rather than reconciled: changes students experienced as improvements were not accompanied by higher marks. This constrains what the adaptive mechanism can claim, and supports reading BRIDGE as a specification of design mechanisms and student experience rather than an attainment intervention.

Rival Explanations

Three alternative readings of the pattern deserve statement, since a case study that considers only its preferred interpretation offers weak grounds for belief. The first is selection: the postgraduate cohorts differ nearly threefold in size, and a smaller cohort may be differently composed in prior attainment, language background or programme mix. Nothing in the available records excludes this, and it alone could generate the observed difference. The second is maturation of the teaching team: by 2025/26 the same staff had delivered the design repeatedly, so any improvement may reflect instructor learning rather than the presence of a client. The undergraduate contrast offers weak evidence against this reading, since marks there did not improve despite the same accumulation of experience, but the two modules are not equivalent and the inference is indirect. The third is expectancy: students and markers aware that a live client was involved may have adjusted effort or judgement accordingly, and marking was not blinded to condition. This study cannot adjudicate between these explanations and the mechanism it proposes, and does not claim to. What it can do is specify what would discriminate between them, which is the function of the falsification conditions in Table 8 and of the future research agenda.

Implications for Practice

Four implications follow, each tied to an evidenced mechanism rather than to general advocacy. First, live-client selection is a pedagogical decision, not an administrative one. The undergraduate contrast shows that authenticity was constant while student experience was not, and the boundary condition on client-task fit explains why: a client whose market position sits outside the concepts being taught imposes a translation burden that competes with the intended learning. Teams should audit prospective clients against the taught curriculum before agreeing a brief.

Second, scaffolding lead time is the variable most within a teaching team's control and the one most consistently implicated in dissatisfaction. Exemplars and assessment structure released late in the semester cannot serve the cohort that needs them, whatever their eventual quality. Where resource is limited, earlier release of existing materials is likely to yield more than the creation of new ones.

Third, the fast evaluation loop was implemented through lightweight recurring prompts in these modules and, on this evidence, generated signals that end-of-module instruments do not surface. No cost data were collected, so the burden in other settings is unknown. A recurring in-session prompt produced specific, actionable proposals on weighting, sequencing and formative provision; the postgraduate co-design prompt produced assessment-design proposals from students who had just completed the task. Teams adopting BRIDGE should treat the absence of a within-semester channel as a design gap rather than an acceptable simplification, and should record what was changed and when, which this study could not.

Fourth, client relationships should be scoped against capacity. The postgraduate observation that a client's budget constrained implementable recommendations indicates that partner

capacity shapes what students can meaningfully propose. Where capacity is limited, splitting assessment so that one task serves the client and another addresses broader disciplinary content, as students themselves proposed, preserves authenticity without narrowing the curriculum.

Contribution, Limitations and Conclusion

Contribution

Against Corley and Gioia's (2011) criteria, the paper claims one theoretical advance rather than many: curriculum evaluation specified as a dual-tempo adaptive mechanism, where the literature reviewed largely treats evaluation as a single retrospective activity. Its corollary is that a curriculum running only the slow loop improves conditions for future students at the expense of present ones. The literature reviewed did not identify a framework integrating work-integrated learning, authentic learning, employability capital and interdisciplinary design into one mechanism-level process framework derived abductively; this is a claim about the corpus reviewed, not the field. Practically, BRIDGE specifies mechanism rather than marketing content, is portable to other applied disciplines, and equips adopting teams with evidenced cautions rather than aspiration.

Scope Conditions for Transfer

Because the framework specifies mechanism rather than marketing content, its transferability depends on conditions that should be stated rather than assumed. Three appear necessary on this evidence. The discipline must admit of problems that an external organisation genuinely holds, so that the brief is not a simulation with a nominal client attached; where no such problem exists, the Brief and Real Client components collapse into conventional case work. The assessment architecture must permit criteria to be written against competencies rather than content coverage alone, since without this the Integrated Competencies component has nothing to attach to. And the delivery pattern must include recurring contact of sufficient frequency to carry a fast evaluation loop; a block-taught or wholly asynchronous module may be unable to operate one, in which case the framework reduces to its slow loop and the paper's central claim does not apply. Programmes in which these conditions do not hold are not poor candidates for industry engagement, but they are poor candidates for this framework, and saying so is more useful than claiming general applicability.

Limitations

The design cannot show employability improved, and does not claim to. The qualitative sample is modest relative to enrolment, particularly postgraduate, and self-selection is unquantifiable. The quantitative contrast involves intact cohorts differing in size, year and composition. Fast-loop evidence rests on the team's own account rather than dated logs. Evidence comes from two modules in one institution, and the authors are insider researchers. Future work should institute dated records of within-semester change, test the framework cross-institutionally with teams holding no design stake, and track graduate outcomes longitudinally (Jackson & Wilton, 2017).

Conclusion

Embedding live-client briefs into assessed curriculum was associated with higher reported relevance and created structured opportunities to enact and evidence applied competencies in

professionally legible forms. Those benefits were conditional, bounded by client-task fit, client capacity, workload proportionality and scaffolding lead time. BRIDGE is offered as an ordered process framework whose principal advance is the dual-tempo specification of evaluation, evidenced asymmetrically and reported as such. The study measures neither employability nor employment, and asks to be judged on the terms it sets.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this article, OpenAI's ChatGPT (GPT-5.3) was used solely to improve the language and readability of the manuscript by helping the authors condense and refine their own descriptions of the research findings. It was not used to generate, analyse or interpret data, or to develop the study's findings and conclusions. All AI-assisted text was reviewed, verified and edited by the authors, who take full responsibility for the content of the article.

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Contact email: ywu002@dundee.ac.uk