Industry-Academia Co-Creation in Hospitality Education: Sensory-Driven Innovation to Enhance Anchor Product Sales in Gastronomy

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Abstract: The alignment between hospitality education and real-world industry needs remains a critical challenge in tourism studies. In response, experiential learning models that foster direct collaboration between academic institutions and private enterprises are gaining prominence as effective strategies to develop practice-oriented competencies among students. This paper presents a co-creation project between a Portuguese higher education institution (School of Hospitality and Tourism, Polytechnic of Porto) and Gresso, a Portuguese premium gastronomy brand, designed to stimulate sales of the company's ten "anchor products" by developing complementary sweet offerings through sensory-driven innovation. Hospitality students were tasked with creating original dessert concepts that could enhance the appeal and commercial performance of these core items. Four proposals were developed and refined through iterative feedback: a creamy custard with orange–lemon compote, a baked red berry cheesecake, a pistachio *brigadeiro* enrobed in dark chocolate with a red berry coulis. These were then submitted to a blind tasting evaluated by Gresso's frontline sales representatives, who rated each product based on taste, originality, and perceived market potential. The pistachio *brigadeiro* emerged as the overwhelming favourite and was subsequently selected by the company for potential integration into its product portfolio. This outcome not only validated the students' creative and technical skills but also demonstrated the tangible business value of embedding industry challenges into academic curricula. The project exemplifies a "family trip" approach applied to gastronomy—where industry defines the problem, academia proposes solutions, and industry validates the results—thereby reinforcing a cyclical model of knowledge exchange. Findings underscore the importance of sensory literacy, customer-centric design, and authentic learning contexts in hospitality education. Moreover, they highlight how such partnerships can serve as incubators for product innovation while preparing students for the dynamic demands of tourism and foodservice sectors. For the ICTR community, this case offers practical insights into bridging theory and practice, fostering resilience through education, and leveraging co-creation as a tool for sustainable industry–academia engagement.

Keywords: Hospitality Education; Industry–academia Collaboration; Sensory Analysis; Co-creation; Experiential Learning; "Family Trip" Model.

1. Introduction

The persistent misalignment between hospitality education and the evolving demands of the global tourism and foodservice industries remains one of the most pressing challenges in contemporary higher education. Despite decades of curricular reform, many graduates still struggle to translate theoretical knowledge into actionable, context-sensitive competencies required in fast-paced, customer-centric environments (Ruhanen, 2005; Giousmpasoglou and Pantelidis, 2025). This gap not only undermines graduate employability but also calls into question the relevance of academic programs that prioritise abstract theorisation over experiential skill. In response, scholars and practitioners alike have increasingly advocated for pedagogical models that embed real-world industry challenges directly into the learning process, models that treat education not as a transmission of fixed knowledge, but as a dynamic, co-constructed practice rooted in authentic experience. Experiential learning, particularly when coupled with structured industry, has emerged as a powerful cure to this disconnect. By situating students within live business contexts, such approaches foster sensory literacy, creative problem-solving, and customer-centric design, skills that are difficult to cultivate through traditional lecture-based instruction alone (Steriopoulos, Goh and Harkison, 2022). Yet, while the principle of industry engagement is widely endorsed, concrete examples of scalable, mutually beneficial co-creation projects, especially those yielding tangible business outcomes, remain underrepresented in the literature.

In response to this persistent theory-practice gap, this paper presents a detailed case study of a strategic partnership between the School of Hospitality and Tourism at the Polytechnic of Porto (Portugal) and Gresso, a premium Portuguese gastronomy brand. The aim of this paper is twofold: first, to examine the efficacy of a

structured co-creation model, which we term the 'family trip' approach, in bridging academic learning and industry innovation; and second, to elucidate the key mechanisms that enable its success. Through an analysis of this sensory-driven innovation project, we specifically investigate: (1) how sensory literacy operates as a core competency for driving commercially viable culinary innovation within student-led projects; (2) how authentic, industry-defined challenges shape student engagement and the development of practice-oriented skills; and (3) how structured industry-academia partnerships can function as reciprocal incubators for tangible business outcomes and enhanced graduate employability. By doing so, this study contributes to the literature on experiential learning and collaborative pedagogy in tourism and hospitality by moving beyond principal endorsement to provide an empirical, process-oriented account of a successful co-creation cycle. We argue that the 'family trip' model—where industry defines the problem, academia generates solutions, and industry validates the results—offers a replicable framework for fostering resilience, relevance, and responsiveness in hospitality education and the wider tourism sector.

2. Theoretical Framework

2.1 Experiential Learning Frameworks

Experiential learning (EL) is defined by Lin et al. (2017) as a process where knowledge is generated through the transformation of experience, requiring students to understand and actively transform what they encounter. The historical and philosophical foundations of experiential learning (EL) are rooted in the ancient precept that "to learn is to do". The most prominent contemporary framework is from Kolb (1984) Experiential Learning Theory (ELT), which describes a four-stage recursive cycle: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE). According to Kolb (1984), learning is the process whereby knowledge is created through the transformation of experience, requiring the resolution of creative tensions between action and reflection, and experience and abstraction. Furthermore, EL posits that learning is a holistic process of adaptation involving the total person—thinking, feeling, perceiving, and behaving. In the context of higher education and the development of generic skills, Chan and Yeung (2019) argue that while academic deep learners may focus on grades, holistic development requires an "engagement" approach, where students actively participate in experiential activities rather than avoiding them. According to Ruhanen (2005), this approach is vital for bridging the persistent divide between academic theory and practical skills in Tourism, Hospitality, and Events (THE) education. As noted by Lyu, Li and Wang (2016), common instructional tactics within this framework include role-playing, field trips, professional practice, and internships. Research by Croft and Wang (2023) suggests that EL frameworks contribute significantly to student learning by elevating interest in the discipline and enhancing the ability to determine solutions for practical problems. Furthermore, Ruhanen (2005) highlights that such approaches lead to better knowledge retention because students are actively involved in a hands-on process rather than being passive recipients of information. However, De la Mora Velasco, Huang and Renduchintala (2024) argue that current assessments of EL effectiveness often prioritise short-term student reactions over objective, long-term learning gains. Steriopoulos, Goh and Harkison (2022) also observe that the pandemic-induced shift to online delivery challenged the implementation of these frameworks, necessitating a pivot toward virtual platforms and digital adaptations. Finally, recent literature has expanded the scope of experiential learning to include "Learning through Play" as a developmentally appropriate strategy beyond preschool years.

Recent expansions of EL also encompass playful, iterative pedagogies like problem-based learning, which emphasise experimentation and learning from failure (Parker, Thomsen and Berry, 2022), a mindset directly applicable to culinary prototyping. Therefore, the present case study employs Kolb's (1984) cycle as the foundational pedagogical process, structuring the student journey from receiving the brief (CE) to developing and refining their dessert prototypes (AE).

2.2 Co-Creation and Collaborative Learning in Higher Education

Higher education is shifting from a transmission model toward dynamic, shared-responsibility learning. Central to this evolution is co-creation: a transactional process between social knowledge and personal learner experience (Kitchen et al., 2025). This approach, grounded in social constructivism, emphasises collective meaning-making through interaction (De la Mora Velasco, Huang and Renduchintala, 2024). Co-creation is facilitated through "playful pedagogies"—collaborative approaches where meaningful peer interaction develops cognitive, social and emotional skills (Parker, Thomsen and Berry, 2022). Authentic agency is critical: when

students make genuine choices and negotiate learning content, motivation and ownership increase. While digital technologies can enhance co-creative settings (Huang, De la Mora Velasco and Haney, 2022), the present project privileged direct, sensory-based interaction through physical product creation and tasting. Steriopoulos, Goh and Harkison (2022) emphasise that co-creating authentic assessments—with rubrics negotiated among students, industry experts and teachers—clarifies outcomes and boosts engagement. Liang (2021) adds that this fosters empowerment and social responsibility as students tackle real-world issues autonomously. Holistic competency development—teamwork, leadership, communication—is particularly suited to collaborative environments. Chan (2022) distinguishes between an academic "Approach to Learn" and competency-based "Approach to Develop," noting that collaboration transitions students from grade-focused "avoiders" to "engagers" who embrace competency practice. This is supported by "learning relationships": connections that propel movement through a "learning spiral." However, barriers persist. Chan (2022) identifies "lack of institutional and curriculum support," with some universities not prioritising holistic competency training. Educators face "change fatigue" and insufficient professional development for facilitating rather than directing inquiry. Assessment remains problematic: traditional grading fails to capture social and emotional growth, leading some students to view collaboration as "time-consuming." To address these gaps, scholars propose metacognitive models like the "Chain of Mirrors" —providing "Appraisal and Feedback" from peers and mentors. This recursive process of "reading and flexing"—alternating between receiving and acting on feedback—creates responsive, adaptable learning environments. Ultimately, successful co-creation depends on a "hospitable, welcoming space" characterised by mutual respect, where learners direct their developmental path (Chan, 2022). The project examined here embodies this principle through triadic collaboration among students, faculty and Gresso's managers, who collectively negotiated the problem space and solution criteria, demonstrating how theoretical co-creation principles translate into practice.

2.3 Sensory Literacy and Culinary Innovation in Gastronomy Education

In gastronomy education, innovation is increasingly driven by sensory literacy, the ability to understand, design, and manipulate the multisensory experience of food within contextual and commercial frameworks. Sensory literacy extends beyond flavour profiling to include the interaction of intrinsic food properties (e.g., texture, aroma) and extrinsic factors (e.g., plating, ambiance, brand narrative) (Vázquez-Araújo, 2024). This competency is foundational for culinary innovation, which today spans from molecular gastronomy to sustainability-driven design (Galarraga and Martínez de Albeniz, 2024). However, sensory literacy alone is insufficient without authentic contexts for application. Industry–academia partnerships provide the necessary scaffold for situating sensory innovation within real business challenges, such as revitalizing anchor products—core, high-margin items central to a brand's identity and revenue (Keller, 1993). These partnerships transform abstract sensory training into applied, market-relevant learning, fostering industry-ready graduates equipped to navigate volatile, experience-driven markets (Giousmpasoglou and Pantelidis, 2025; Kitchen et al., 2025). Such collaborations also address wicked problems—complex, multi-stakeholder challenges like sustainability, waste reduction, and product line revitalization—through co-creative pedagogy (Steriopoulos, Goh and Harkison, 2022). By embedding sensory innovation within industry-defined briefs, educators can bridge the persistent theory–practice gap while delivering tangible business value.

2.4 Industry–Academia Partnerships as Catalysts for Innovation and Employability

Strategic partnerships between higher education and industry are essential for cultivating "industry-ready" graduates, individuals equipped for dynamic labour markets. These collaborations often focus on real business problems, such as innovating around "anchor products": core offerings vital to brand identity and financial performance (Keller, 1993). Such high-stakes challenges provide students with authentic learning experiences.

Industry-readiness reflects a graduate's capacity to contribute meaningfully from day one. It is fostered through sustained engagement including guest lectures, mentoring, and industry advisory groups that inform curriculum design (Kitchen et al., 2025). These partnerships align academic content with workplace demands while reintegrating hospitality education's applied foundations. Giousmpasoglou and Pantelidis (2025) argue they are necessary to reclaim vocational roots and counter "academic snobbery"—the privileging of theory over practice.

Moreover, such partnerships enable incorporation of "wicked problems"—complex challenges like sustainability and technological disruption—into pedagogy. Co-creating authentic learning scenarios with industry allows students to apply critical thinking to real-world issues. Steriopoulos, Goh and Harkison (2022) contend this co-

creation is vital for skill development and for fostering resilience in a post-pandemic sector marked by uncertainty.

Despite benefits, structural barriers persist. Giousmpasoglou and Pantelidis (2025) caution that "managerialism" in business schools—emphasising quantifiable outputs like research publications—can marginalise vocational learning. Kitchen et al. (2025) advocate for an extended authentic learning framework positioning industry connections and practice-oriented competencies as core pedagogical standards. Hospitality education must value vocational relevance as highly as academic prestige, ensuring theory and practice evolve in tandem.

2.5 A Synthesised Framework for Sensory-Driven Co-Creation

The preceding review outlines the discrete yet interrelated theoretical pillars underpinning this study. To provide a coherent analytical lens for the present case, we synthesize them into an integrated framework (see Figure 1). This framework posits that strategic Industry-Academia Partnerships (2.4) create the essential scaffold and authentic context. Within this partnership, the pedagogical engine is Experiential Learning (2.1), specifically operationalized through Kolb's cycle, where concrete experience (the project challenge) leads to reflective observation, abstract conceptualization, and active experimentation (prototyping and refinement). This experiential process is fundamentally structured as a Co-Creation (2.2) endeavour—a transactional, socially-constructed process where students, faculty, and industry practitioners collectively generate knowledge and solutions. The specific content and objective of this co-creative process, in our gastronomic context, is the development of Sensory Literacy (2.3)—the ability to understand, manipulate, and innovate based on the interaction of food's intrinsic properties and extrinsic contextual factors. The commercial focal point of this innovation is the enhancement of anchor products—defined here as flagship, high-margin items central to a brand's identity and revenue (Keller, 1993), which in this case are Gresso's ten core dairy products. Thus, our study examines how a sensory-driven co-creation project, rooted in experiential learning and enabled by a formal partnership, functions to generate innovative complementary offerings for commercial anchor products. This synthesized framework guides our methodological design and subsequent analysis.

3. Methodology

This research adopts a mixed-methods instrumental case study design (Creswell and Plano Clark, 2025) to investigate the co-creation process and its outcomes. The case—the partnership between the Polytechnic of Porto and Gresso—is instrumental in providing insight into the broader phenomenon of industry-academia collaboration. A mixed-methods approach was necessary to capture both the complex, subjective processes of innovation and learning (qualitative data) and the objective, collective validation of the final product (quantitative data). This design aligns with the synthesized theoretical framework (Section 2.5), allowing us to examine *how* experiential co-creation unfolds and *what* tangible results it yields.

The methodology was structured in four sequential, experiential stages, mirroring Kolb's learning cycle. To inform the initial 'Concrete Experience' phase, a preliminary consumption frequency study of Gresso's ten anchor products was conducted with a relevant consumer sample (detailed in Findings). This data served as background market intelligence, provided to students to ground their creative work in real consumer usage patterns and highlight commercial opportunities (e.g., the potential to pair desserts with high-consumption items like sliced cheese).

This methodological choice is particularly robust for investigating innovation processes in real-world contexts, where the practical experience and know-how of students are concretely evaluated in the face of real-world problems, in this case, a commercial product line designated as anchor products by Gresso. The scientific rigour of the research design is ensured by the experiential learning structure and the co-creation model, which functions as a product "incubator". The methodology went through 4 phases: Stage one - Problem Identification and Contextualization: Gresso's commercial department identifies and defines the critical parameters, focusing on and having as its main objective the need to enhance the commercialisation of ten specific "anchor products" through the creation of solutions and options for real gastronomic application; Stage two - Sensory Innovation and Creativity: Students from the 1st year of the Bachelor's Degree in Catering and Restaurant Management and the 1st year of the Higher National Diploma (CTeSP, in its Portuguese acronym) in Hotel Operations, acting as innovation agents, develop original dessert concepts based on sensory literacy and the briefing from the previous stage, but also having sustainability and reducing the carbon footprint as crucial pillars for this phase; Stage three

- Iterative Feedback Cycle: The research design incorporates moments of refinement of the proposals, guided by the teachers of the involved academic subject, Kitchen and Restaurant Practices, and partners of the classes, allowing technical adjustment based on feasibility criteria; Stage Four - Real-World Validation: The final design phase utilises the "blind tasting" method, where the market, represented by Gresso's national sales agents, acts as the ultimate validator of the proposed solution's effectiveness. This design not only seeks to validate the final product but also to explore how these partnerships function as tools for sustainable engagement and resilience for the educational and business community. By adopting this methodological structure, the research transcends the description of a conventional academic project, establishing itself as a model for the co-production of services and products within the gastronomy and tourism ecosystem. This approach equips students with skills that go beyond the technical mastery of 'know-how', integrating an investigative mindset and reinforcing the strategic relevance of the relationship between academia and the industrial sector.

As a complement to the study carried out, the consumption of Gresso's 10 flagship products was analysed during the development phase of the dishes.

3.1 Research Design and Data Triangulation

Data collection was designed to document the co-creation process holistically and ensure robustness through methodological triangulation (Denzin, 1978). We collected three distinct streams of evidence:

1. Process Documentation (Qualitative): This included the project brief, student concept sheets, ingredient rationales, sensory profiles, iterative recipe versions, and field notes from faculty/partner feedback sessions. This data chronicles the 'how' of innovation and reflective learning.
2. Outcome Validation (Quantitative): The blind tasting evaluation with Gresso's sales representatives (n=27) generated standardized rating data (flavour, originality, market potential, purchase intent). This data provides the 'what'—a measurable, collective assessment of the commercial viability of the outputs.
3. (Acknowledged Gap) Participant Experience Data: While the design implicitly captured student output, it did not include formal, retrospective data collection on the students' subjective learning experiences (e.g., surveys, focus groups, reflective journals). This constitutes a limitation in fully capturing the experiential learning dimension from the learner's perspective, a point we address in the discussion on limitations and future research.

This tripartite approach—combining process, outcome, and the *acknowledged absence* of a third stream—allows for a comprehensive, critical analysis of the case. The convergence of process evidence and positive outcome validation strengthens the claims about the model's effectiveness.

Data collection was planned to document the project as a co-creation and validation process in a real-world context, combining process evidence (the how) and outcome evidence (the what and with what acceptance), as recommended in case studies seeking robustness through triangulation. The study was conducted as follows: first, all information regarding the company's objective, anchor products, premium positioning requirements, and success criteria were gathered, followed by alignment meetings between lecturers and the company. Subsequently, the items/products produced by the students were collected, including concept sheets, ingredient rationales, sensory intent (flavour/aroma/texture profile and pairing logic with anchor products), recipe versions and preparation notes, as well as records of teacher feedback and partner inputs at checkpoint moments. This collection allows for a description of the progression of the proposals and how knowledge is adjusted through feedback loops, a mechanism compatible with learning and adaptation perspectives in complex systems. This phase resulted in four refined proposals: (i) cream/custard with orange-lemon jelly, (ii) red fruit cheesecake, (iii) pistachio *brigadeiro* wrapped in dark chocolate, and (iv) red fruit coulis.

In a third phase, industry validation was verified. The company conducted a blind tasting with frontline sales representatives, selected for being privileged mediators between product, consumer perception, and sales potential. Data were collected using standardised evaluation grids, where each proposal was classified according to three criteria: flavour, originality, and market potential.

Data collection included also a study about the consumption preferences of Gresso's 10 flagship products.

4. Findings

To capture the how of innovation and reflective learning, comprehensive process documentation was collected throughout the project. This included: the initial project brief detailing Gresso's strategic challenge; student-generated materials at multiple stages—concept drafts, ingredient sourcing rationales with sustainability considerations, sensory intent statements, and iterative recipe versions with modifications; structured feedback records from faculty technical evaluations, peer tastings, and industry partner input; and reflective field notes documenting informal interactions, student questions, and rationales behind key creative pivots.

To ground the innovation challenge in market reality, a consumption frequency analysis of Gresso's ten anchor products was conducted. This revealed a clear hierarchy: high-consumption staples like sliced cheese and salted butter represented guaranteed volume but limited growth through mere complementarity, while low-consumption specialties such as mozzarella-type cheese and unsalted butter presented opportunities for desserts to act as drivers, increasing appeal and usage occasions. Students thus faced a dual challenge: create compelling desserts while considering strategic portfolio roles.

Twenty-seven Gresso sales professionals evaluated the three proposals through blind tasting. The Creamy Custard with Orange-Lemon Compote received mixed to positive evaluations, with flavour as its main highlight (86% positive: 52% "Good", 34% "Very Good"). However, colour emerged as a weakness, with only 26% positive ratings and 22% finding it "Unpleasant." Overall appearance reached 74% positive, texture 70% positive, and aroma 52% positive. Purchase intent was the lowest among the three products: only 33% expressed positive intention (26% "Probably Yes", 7% "Certainly"), while 44% indicated negative intention and 22% remained undecided.

The Baked Red Berry Cheesecake demonstrated very strong acceptance across all attributes. Colour received 82% positive (63% "Good", 19% "Very Good"), appearance 74% positive, and taste 63% positive with no negative ratings. Texture and aroma both achieved 82% positive, with texture scoring 41% "Good" and 41% "Very Good," and aroma 30% "Good" and 52% "Very Good." Purchase intent was substantially higher: 52% positive (26% "Probably Yes", 26% "Certainly"), with an additional 34% undecided, raising potential reach to 86%. Only 11% would not buy.

The Pistachio Brigadeiro in Dark Chocolate with Red Fruit Coulis showed exceptional visual appeal. Colour received 90% positive (34% "Good", 56% "Very Good"), and overall appearance 86% positive (26% "Good", 60% "Very Good"). Flavour achieved 66% positive (33% "Good", 33% "Very Good"), though 22% considered it "Average" and 7% "Unpleasant." Texture reached 66% positive (44% "Good", 22% "Very Good"), and aroma 63% positive (41% "Good", 22% "Very Good"), with 33% "Reasonable." Purchase intent matched the cheesecake at 52% positive, with 33% undecided yielding 85% potential reach. Fifteen percent would not buy.

While both cheesecake and *brigadeiro* demonstrated equal purchase intent (52%), the Pistachio Brigadeiro emerged as the strongest overall performer. Its exceptional visual appeal (90% positive for colour, 86% for appearance) addressed critical first impressions in retail contexts. Gresso's commercial team selected it for three strategic reasons: differentiation through Brazilian-inspired novelty in the premium market, versatility as stand-alone item or plated component, and production scalability through component-based assembly. The product was formally selected for potential portfolio integration, validating the co-creation model's capacity to generate commercially viable innovation.

5. Discussion

This study examined the efficacy of a structured co-creation model, validating the "family trip" approach while providing insights into why and how it functions. The initial project brief established clear parameters: develop dessert concepts enhancing Gresso's ten anchor products with premium positioning and commercial viability. Analysis of student-generated materials revealed over 15 concepts exploring varied approaches—textural contrast and flavour complementarity—while prioritizing local Portuguese ingredients. The Pistachio Brigadeiro's selection was not serendipitous but resulted from alignment with sensory literacy and market logic. First, it mastered novelty within familiarity (Vázquez-Araújo, 2024): elevating a traditional sweet through premium ingredients (pistachio, dark chocolate) while retaining approachability. Second, it delivered multisensory contrast: crunchy interior against smooth chocolate enrobing, complemented by acidic red fruit coulis—creating an engaging sensory arc that enhanced, rather than overwhelmed, anchor products. Strategically, its high visual appeal (90% positive) addressed critical "first impression" in retail contexts, while format versatility answered

the need for a flexible, high-margin complement. Our case elucidates three critical mechanisms distinguishing this model from simpler engagements: First, authentic problem ownership: Gresso provided a clear, high-stakes brief tied to real revenue targets, establishing immediate relevance and motivation. Second, validation authority with frontline practitioners: sales representatives—who gauge consumer reaction daily—embedded market realism into assessment. Third, iterative, reflective prototyping guided by faculty (technical pedagogy) and industry partners (commercial feasibility), creating a "protected yet real" space for experimentation embodying Kolb's cycle. Unlike linear "consultancy" models delivering final reports, value resided in the co-creative process itself—a continuous negotiation of knowledge (Kitchen et al., 2025).

The project answers the call to move beyond abstract endorsements of industry collaboration (Ruhanen, 2005). Bridging the theory-practice gap requires a structured, reciprocal framework, not ad-hoc engagement. The persistent divide stems from context: theory taught in isolation, practice experienced without reflection. The "family trip" model fuses these by making the industry problem the classroom curriculum and classroom output subject to commercial validation. This closes the loop, ensuring academic learning is stress-tested against practical utility while industry innovation benefits from fresh, research-informed perspectives.

6. Conclusion and Implications

This study provides empirical evidence that sensory-driven, co-creative projects can simultaneously achieve business innovation and experiential learning. The "family trip" model offers a replicable blueprint for industry-academia synergy. Educators should design curricula around live industry briefs with tangible outcomes, transitioning from teacher to facilitator within a co-creative triad. Assessment must value process, iteration and professional feedback alongside final output. For industry, engagement is not merely CSR but low-risk R&D and talent scouting. Companies access creative ideation from digitally native students. Managers must invest time in co-defining challenges and participating in iterative feedback—the return is both innovative concepts and early talent identification. For researchers, this study contributes a process model connecting experiential learning and social constructivism to operational practices. It suggests sensory literacy as a core, teachable competency for innovation. Limitations point to future research: (i) lack of systematic data on students' lived experience—future iterations should include reflective assignments and longitudinal surveys; (ii) single partnership context—generalisability requires testing in other hospitality sub-sectors; (iii) validation panel limited to sales representatives—future research should include consumer tasting panels; (iv) snapshot in time—longitudinal follow-up on the *brigadeiro*'s commercial performance would evidence long-term impact.

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Ethics Declaration

Personal and organisational identities have been anonymised. No additional ethical issues arose during this research.

AI Declaration

ChatGPT 5.1 was used as a writing aid for wording support, grammar improvement, and occasional rephrasing.

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