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INTEGRATING DIGITAL BRANDING AND OPERATIONAL PROCESS DESIGN THROUGH A LEARNING FACTORY PROJECT: A CASE STUDY OF ER'S COOKIES

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Abstract

This paper documents the implementation of a Learning Factory (LEFA) project that integrated digital branding and operational process design through the development of a simulated food business, Er's Cookies, and an external digital-branding observation of a partner company. The project aimed to translate classroom concepts into practical business activities, particularly brand identity development, social-media content planning, customer journey design, production workflow design, and evaluation of digital communication. A descriptive qualitative project-based approach was used. Data were derived from project documentation, direct observation of digital content, process-flow design, and reflection on the implementation stages. The results show that the project produced a coherent brand identity consisting of the brand name, logo, tagline, visual direction, social-media handles, and content concepts for Instagram and TikTok. The operational component produced structured workflows covering ordering, raw-material preparation, production, quality checking, packaging, distribution, and customer feedback. Observation of the partner company provided a practical reference for analyzing brand identity, brand voice, value proposition, digital content, and SEO. The project also revealed important limitations: the simulated business had no real customer dataset, while external company analysis was restricted to publicly visible digital information. The findings support the use of Learning Factory projects as a practical environment for connecting marketing, digital communication, and operations concepts.

Keywords:
Learning Factory; Digital Branding; Social Media Marketing; Operational Process; Customer Journey

1. INTRODUCTION

Digitalization has changed how small businesses introduce products, communicate value, and maintain relationships with customers. Digital channels are no longer limited to promotional announcements; they also function as points of brand discovery, interaction, and purchase. Research on digital marketing in small and medium-sized enterprises shows that firms can gain opportunities from digital channels but may still underuse their potential because of limited knowledge and capabilities (Taiminen & Karjaluoto, 2015). In online environments, branding also needs to be coordinated across channels so that the brand message remains recognizable and supports customer relationships (Rowley, 2004).

Social media strengthens this challenge because customers can interact with brand-related content rather than simply receive one-way promotional messages. Consumer brand engagement in social media includes cognitive, emotional, and behavioral activity during brand interactions (Hollebeek et al., 2014). Empirical evidence further indicates that positive brand communication through social networking sites can strengthen consumer-based brand equity, partly through brand attachment (Arya et al., 2022). These findings make brand identity, content consistency, and audience interaction relevant considerations for a simulated food business such as Er's Cookies.

Digital branding, however, cannot be separated from the operational system that delivers the promised customer experience. A brand message creates expectations, while the operational process determines whether those expectations can be fulfilled consistently. Customer experience develops across multiple touchpoints and channels, making coordination between communication and service processes important (Lemon & Verhoef, 2016). From an operations perspective, activities such as procurement, production, quality control, inventory, scheduling, and distribution need to be organized as an integrated process rather than as isolated tasks (Heizer et al., 2020; Stevenson, 2020).

The Learning Factory concept provides a suitable educational setting for connecting these areas. Learning Factories are designed to bridge theoretical knowledge and practical experience through industrial-like activities and projects (Abele et al., 2017). Project-based Learning Factory implementations have also been used to help students develop the ability to apply theory to practical situations and strengthen communication and cooperation skills (Kreimeier et al., 2015). More recent Learning Factory research continues to emphasize experiential learning as a means of connecting theoretical and practical competencies (Wolf et al., 2025).

The LEFA project documented in this paper was conducted in the fourth semester at Politeknik Takumi and combined the Digital Branding and Operational Process courses. The project had two related components. First, Er's Cookies was developed as a simulated premium-cookie business through brand identity design, social-media planning, content production, and operational workflow design. Second, the student analyzed the digital branding of an external partner company using publicly available digital content. The original report identifies the partner company as PT Minori; to keep the journal manuscript focused on the learning analysis, it is referred to here as Partner Company A.

The purpose of this paper is therefore to describe how digital branding and operational process concepts were applied in a LEFA project, identify the practical outputs produced by the project, and discuss the learning implications and limitations that emerged from the implementation.

2. RESEARCH METHOD

This paper uses a descriptive qualitative project-based approach. The unit of analysis is the LEFA project conducted by one Digital Business student during the fourth semester. The approach is appropriate because the objective is to document and interpret the sequence of activities, outputs, practical decisions, and constraints rather than to test a causal hypothesis. The Learning Factory literature positions this type of practice-oriented environment as a bridge between theoretical knowledge and practical application (Abele et al., 2017).

Data sources consisted of the student's LEFA report, project documentation, the designed operational flowcharts, and observation of publicly available digital content from Partner Company A. For Er's Cookies, the analysis covered the development of the brand name, logo, tagline, visual identity, target audience, social-media platforms, content plan, and ordering workflow. For Partner Company A, the analysis covered brand identity, brand voice, unique selling proposition, brand value, value proposition, SWOT/TOWS, digital and SEO observations, website and social-media content, and the production of a keyword-based branding article.

The analysis procedure followed four stages: (1) identification of project activities and intended outputs; (2) organization of the activities into digital-branding and operational-process categories; (3) comparison of the project outputs with relevant concepts from branding, social-media engagement, customer journey, operations management, and Learning Factory literature; and (4) reflection on supporting factors, constraints, and possible improvements. No primary consumer survey or internal company dataset was available for this project. Consequently, claims concerning market response or business performance are not treated as measured outcomes.

3. RESULTS AND DISCUSSION

3.1 Digital Branding Development of Er's Cookies

The first output was the establishment of a brand identity for Er's Cookies. The brand name was derived from the student's first name, Eria, shortened to "Er's," and combined with "Cookies" to make the product category immediately recognizable. The logo incorporated a soft illustrative face, chef-hat symbolism, a heart element, and the tagline "BITE . PREMIUM." The design was intended to communicate a personal, homemade character while maintaining a premium positioning. This approach is consistent with the role of brand identity as a mechanism for making a brand recognizable and differentiated, while digital communication must reinforce the same position across touchpoints (Keller, 2013; Rowley, 2004).

Instagram and TikTok were selected as the main social-media platforms. The report positioned Instagram as a visual channel for product presentation, Stories, Reels, testimonials, and paid promotion, while TikTok was selected for short-form video, trends, behind-the-scenes content, storytelling, and live-shopping possibilities. The choice of platforms was therefore linked to the visual nature of the product and the intended young audience. This is directionally supported by research showing that social-media engagement can contribute to brand equity when consumers interact cognitively, emotionally, and behaviorally with brand content (Hollebeek et al., 2014).

The project also created a consistent handle, @erscookies.co, across Instagram and TikTok. The content plan included product teasers, behind-the-scenes material, interactive content, aesthetic product photography, short videos, customer testimonials, and food-influencer collaboration ideas. The report records that actual content was posted to both platforms as part of the simulation. This output is important because the project moved beyond designing a logo into constructing a basic digital communication system. Integrated communication requires consistency across messages and channels rather than isolated promotional executions (Kliatchko, 2008).

3.2 Observation of Partner Company A's Digital Branding

The second digital-branding component involved observing Partner Company A's public digital presence. The student analyzed the company's brand identity, visual style, brand voice, unique selling proposition, brand value, value proposition, SWOT/TOWS, website and social-media content, and digital/SEO elements. The report describes a visual identity dominated by blue, green, and rainbow elements, with a professional but accessible communication style. The brand voice was interpreted as informative and friendly, with educational explanations and terminology associated with employment and training for Japan.

The observation also identified strengths and areas for improvement. The report considered the digital presence visually consistent and informative, with educational video content contributing to audience trust. At the same time, the student observed that some visual executions were repetitive and that audience interaction could be developed further. These observations should be interpreted as an external content analysis rather than an audit of the company's internal marketing strategy, because the student did not have access to internal performance data. The limitation is important because social-media content is only one part of an organization's overall marketing system.

The comparison between Er's Cookies and Partner Company A demonstrates a useful learning mechanism. Er's Cookies required the student to build a brand from the beginning, while Partner Company A provided an existing brand that could be observed and decomposed into identity, voice, value proposition, and channel practices. The two perspectives helped connect theoretical concepts with concrete digital executions. In particular, the exercise reinforced that digital branding is not only visual design; it involves coordinated messages, channel selection, content, interaction, and the customer experience created across touchpoints (Lemon & Verhoef, 2016; Arya et al., 2022).

3.3 Operational Process Design for Er's Cookies

The operational component translated the simulated business idea into a sequence of activities. The designed production process covered raw-material procurement, equipment and workspace preparation, dough preparation, quality checking, packaging, distribution, and operational evaluation. The student specified basic ingredients such as flour, chocolate chips, and butter, and emphasized consistency in recipe, taste, texture, and product appearance. The sequence reflects core operations-management logic in which inputs are transformed through controlled processes into outputs that must meet quality requirements (Heizer et al., 2020; Stevenson, 2020).

Table 1. Operational process designed for the Er's Cookies simulation

No.	Process Stage	Description
1	Raw-material procurement	Select required ingredients and check their quality.
2	Equipment preparation	Prepare oven, mixer, trays, workspace, and supporting equipment.
3	Dough preparation	Mix ingredients according to defined proportions.
4	Quality checking	Check taste, texture, and appearance against the intended product standard.
5	Packaging	Pack approved products using the Er's Cookies brand identity.
6	Distribution	Use direct messaging, pre-order, or other simple delivery arrangements.
7	Process evaluation	Review time, materials, and operational constraints for improvement.

The customer journey was designed to connect digital discovery with operational fulfillment. Customers could discover the brand through Instagram or TikTok, contact the seller through Instagram

Direct Message or WhatsApp, confirm product details, make payment, receive the product, and provide a testimonial or review. The report also describes a direct-purchase route through a physical sales point. This design is consistent with the customer-journey perspective, where customer experience develops through a series of interconnected touchpoints rather than a single transaction (Lemon & Verhoef, 2016).

3.4 Project Outputs and Learning Implications

Table 2. Main outputs of the LEFA project

Area	Main Output	Learning Result
Digital branding	Brand name, logo, tagline, visual identity, target audience, social-media handles, content concepts	A basic and consistent digital brand system was produced.
Content management	Instagram and TikTok content planning and publication	The student practiced translating brand identity into platform-specific content.
Partner-company analysis	Brand identity, brand voice, USP, value proposition, SWOT/TOWS, digital and SEO observation	An existing brand was decomposed into practical strategic elements.
Operations	Production flow, quality check, packaging, distribution, evaluation	The simulated business received a structured operating sequence.
Customer journey	Discovery, inquiry, order confirmation, payment, fulfillment, delivery, feedback	Digital communication was connected to service fulfillment.

The project produced more than a set of visual materials. It required the student to make decisions about positioning, communication channels, content, process sequence, and customer interaction. This integration is consistent with the experiential orientation of Learning Factories, where learners work with practical problems and experience the gap between simplified models and real-world conditions (Baena et al., 2017; Abele et al., 2017). The project also exposed the student to the need to coordinate marketing and operations. A premium brand promise, for example, needs to be supported by consistent product quality and reliable fulfillment.

3.5 Supporting Factors, Constraints, and Further Development

Several factors supported implementation. The personal origin of the brand name gave Er's Cookies a clear identity, the student had freedom to adjust the concept, social-media references were readily available, and free tools such as Canva supported content production. The operational design also benefited from an existing reference to a similar family food business, which helped the student create a more realistic workflow.

The main constraints were equally important. Er's Cookies was a simulation, so the project did not generate a real consumer dataset and could not empirically demonstrate market response. The work was also performed individually, creating limitations in time and production capacity. For Partner Company A, the analysis relied on public website and social-media information and therefore could not verify internal objectives, campaign performance, or customer-level data. These limitations mean that the findings should be interpreted as project outputs and learning evidence rather than proof of commercial effectiveness.

Future LEFA implementation can strengthen the project by introducing real audience data, cross-course collaboration, more professional digital analytics, and industry mentoring. The next stage could also convert the operational flow into measurable indicators such as response time, order-processing time, production lead time, defect rate, on-time delivery, and repeat-purchase intention. Such measures would allow future projects to move from process design toward evidence-based process improvement.

4. CONCLUSION

This study documented the integration of digital branding and operational process design within a fourth-semester Learning Factory project. Er's Cookies was successfully developed as a simulated premium-cookie brand with a defined name, logo, tagline, visual identity, social-media handles, content concepts, and ordering process. Instagram and TikTok were positioned as the principal digital channels, while the operational component produced a structured sequence from procurement and production through quality checking, packaging, distribution, and customer feedback.

The analysis of Partner Company A added a second learning perspective by exposing the student to an established digital brand and allowing the identification of brand identity, brand voice, value proposition, content practices, and digital/SEO elements. The project therefore demonstrates the practical value of combining brand-building activities with operations and customer-journey design. At the same time, the absence of real customer data and internal company data limits the extent to which commercial effectiveness can be claimed.

For future LEFA projects, the recommended direction is to retain the practical simulation but add measurable customer and operational data, interdisciplinary collaboration, industry mentoring, and systematic digital analytics. This would make the project not only a learning exercise but also a stronger evidence base for business decision-making.

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REFERENCES

Abele, E., Chryssolouris, G., Sihn, W., Metternich, J., ElMaraghy, H., Seliger, G., Sivard, G., ElMaraghy, W., Hummel, V., Tisch, M., & Seifermann, S. (2017). Learning factories for future oriented research and education in manufacturing. CIRP Annals, 66(2), 803–826. https://doi.org/10.1016/j.cirp.2017.05.005

Arya, V., Paul, J., & Sethi, D. (2022). Like it or not! Brand communication on social networking sites triggers consumer-based brand equity. International Journal of Consumer Studies, 46(4), 1381–1398. https://doi.org/10.1111/ijcs.12763

Baena, F., Guarin, A., Mora, J., Sauza, J., & Retat, S. (2017). Learning factory: The path to Industry 4.0. Procedia Manufacturing, 9, 73–80. https://doi.org/10.1016/j.promfg.2017.04.022

Heizer, J., Render, B., & Munson, C. (2020). Operations management: Sustainability and supply chain management (13th ed.). Pearson.

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. Journal of Interactive Marketing, 28(2), 149–165. https://doi.org/10.1016/j.intmar.2013.12.002

Keller, K. L. (2013). Strategic brand management: Building, measuring, and managing brand equity (4th ed.). Pearson.

Kliatchko, J. (2008). Revisiting the IMC construct: A revised definition and four pillars. International Journal of Advertising, 27(1), 133–160. https://doi.org/10.1080/02650487.2008.11073043

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. Journal of Marketing, 80(6), 69–96. https://doi.org/10.1509/jm.15.0420

Rowley, J. (2004). Online branding. Online Information Review, 28(2), 131–138. https://doi.org/10.1108/14684520410531637

Stevenson, W. J. (2020). Operations management (14th ed.). McGraw-Hill Education.

Taiminen, H., & Karjaluoto, H. (2015). The usage of digital marketing channels in SMEs. Journal of Small Business and Enterprise Development, 22(4), 633–651. https://doi.org/10.1108/JSBED-05-2013-0073

Wolf, M., Herstätter, P., Rantschl, M., Ramsauer, C., & Magana, A. J. (2025). Immersive learning factories for promoting experiential manufacturing education and STEM competency development. Computers & Education: X Reality, 7, 100125. https://doi.org/10.1016/j.cexr.2025.100125