

Post-Covid Marketing Communication Enhancement in Islamic Banking: Strengthening Digital Financial Literacy and Customer Loyalty

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Abstract

The COVID-19 pandemic significantly reshaped financial institutions' engagement with customers by accelerating the need for digital transformation and highlighting the importance of digital financial literacy in marketing communication. In this case study, Bank Islam Trust Ltd., a subsidiary of Bank Islam Malaysia Berhad (BTL), also faced significant challenges in marketing communication during and after the pandemic due to its reliance on manual systems, physical meetings, and limited digital outreach. These limitations led to delays in information delivery, reduced customer engagement, and disrupted marketing and business operations. Thus, this action research aimed to (1) identify the key communication issues, (2) implement a sustainable solution, and (3) evaluate its effectiveness in improving marketing outcomes. During the diagnostic phase, the study incorporates Internal Environmental (IE), SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, PESTEL (Political, Economic, Social, Technological, Environmental, and Legal) analysis, and Fishbone analysis to reveal inefficiencies in systems, processes, and staff readiness. Consequently, a two-cycle action research study was conducted using a qualitative approach involving pre- and post-intervention interviews with BTL staff, in which thematic analysis via NVIVO demonstrated areas for improvement in digital readiness, communication flow, and customer response. To address these gaps, a semi-automated Chatbot system was introduced on BTL's website, offering 24/7 service, streamlined queries, and automated data collection. Employees also received training and co-developed content templates to ensure consistency. The Chatbot was tested through a four-month live trial and improved iteratively based on feedback. As a result, the post-intervention analysis revealed three (3) key outcomes: the formalisation of a dedicated marketing unit, the transformation of communication tools, and measurable performance improvements. The Chatbot improved response time, reduced manual

workload, and enabled real-time interaction. The outcomes also revealed that overall business performance, where the number of Labuan company incorporations declined to 64 in 2021, rebounded to 120 in 2022, surpassing pre-pandemic levels and confirming the effectiveness of structured digital strategies in driving engagement, efficiency, and resilience. Theoretically, this study validates the applicability of the AIDA and Hierarchy of Effects models in structuring digital communication flows aligned with ethical Islamic values. Furthermore, the study demonstrates how digital financial literacy (DFL), embedded within a values-driven and partially humanised branding approach, is an educational tool and a driver of customer loyalty. Practically, it offers a replicable model for Islamic financial institutions navigating post-pandemic digitalisation, showing how real-time communication, internal restructuring, and inclusive access can strengthen engagement. Looking ahead, future studies should explore the growing importance of branding strategies that combine personality clarity, digital intelligence, and emotional resonance in making Islamic banking more accessible and trusted by both Muslim and non-Muslim customers in multicultural environments globally.

Keywords: Islamic Banking, Marketing Communication, Digital Financial Literacy, Customer Loyalty, Post-Covid Strategy

Introduction

The **COVID-19 pandemic** has profoundly and systematically impacted the global financial services sector, that widely also recognised as a **systemic shock, exogenous shock, black swan event, tail risk, and macroeconomic disruption**, which has caused significant upheaval across economic and financial systems (Taskinsoy, 2020; Borri & Di Giorgio, 2021; Wang et al., 2021; Arner et al., 2022; Usman et al., 2024). The pandemic reshaped operational priorities and customer engagement strategies for many financial institutions, including **Bank Islam Trust Ltd. (BTL), a subsidiary of Bank Islam Malaysia Berhad**. This immediate imposition of lockdowns and social distancing measures weakened face-to-face customer interaction, exposing critical vulnerabilities in traditional marketing communication channels (Clark et al., 2020; Haapio et al., 2021), which all of this disruption was particularly challenging for BTL, whose possessed international customer that primarily relies on in-person advisory and support services. Furthermore, the pandemic diminished BTL's ability to sustain meaningful and lasting customer relationships, which is also faced by other financial institutions (Yanto et al., 2022; Made et al., 2023).

Therefore, in response, BTL was compelled to accelerate its digital transformation, which shift included upgrading digital platforms, retraining staff for virtual service delivery, and implementing contactless, personalised communication strategies to sustain engagement similar to other banking industries (Haapio et al., 2021; Naveed & Ali, 2024). In addition, these efforts aligned with broader trends in the financial sector, as institutions sought to meet rising consumer demand for seamless online interactions (Alayli, 2023; Kornitasari et al., 2023; Clark et al., 2020). However, the rapid digital transition also revealed broader structural challenges, particularly the low levels of digital financial literacy among underserved customer segments like BTL. These groups, already at risk of financial exclusion, faced increased difficulty navigating online financial tools and services. Thus, financial literacy also emerged as a crucial buffer and key factor for individual resilience during economic shocks in order to foster the long-term financial well-being of stakeholders (Chhatwani, 2022; Erdem & Rojahn, 2022; Juita, 2022; Ackon et al., 2024).

Consequently, due to BTL's experience during the pandemic, the urgency of enhancing digital engagement strategies while addressing financial literacy gaps was even more obligatory. The company's traditional customer relationship model was not equipped to handle remote servicing at scale, revealing weaknesses in communication infrastructure and staff preparedness, which are similar to rural branches in the financial sector (Haapio et al., 2021; Yanto et al., 2022). Therefore, BTL undertook several initiatives, including revising its marketing communication strategies, enhancing internal digital capacities, and tailoring messaging to meet evolving client expectations. These developments have prompted critical research inquiries. First, there is a need to identify the core issues hindering effective marketing communication at BTL during and after the pandemic (**Research Objective 1**). This includes understanding technological, organisational, and customer-related barriers. Second, implementing the most appropriate and sustainable marketing communication tools is essential to support long-term adaptability and resilience (**Research Objective 2**). Third, evaluating the efficiency and effectiveness of these solutions in improving communication quality and customer satisfaction is crucial for sustained competitiveness (**Research Objective 3**). Hence, the COVID-19 crisis had become catalysed towards critical transformation in BTL's service delivery and marketing communication strategy. It forced a re-evaluation of traditional client engagement models and accelerated the adoption of digital tools (Chhatwani & Mishra, 2021; Erdem & Rojahn, 2022; Made et al., 2023). Simultaneously, it highlighted the importance of financial literacy and digital inclusivity in building institutional resilience. BTL's journey provides a valuable case study for other financial institutions navigating post-pandemic realities.

This study also addresses a clear theoretical gap, as most existing research on marketing communication during COVID-19 remains general and lacks focus on banking institutions like BTL while also contributing specific insights into communication systems and tools in the financial sector. To assess its readiness and strategic positioning, the study conducted an **Internal Environmental Analysis (IE)** of BTL across key areas such as Management, Marketing, Finance, Operations, and Management Information Systems (MIS) to identify internal strengths and weaknesses. A **SWOT analysis** was carried out to evaluate BTL from multiple perspectives and determine critical opportunities and threats. According to Büyüközkan and Ilıcak (2019), SWOT analysis enables organisations to assess their current situation. It supports long-term success by leveraging strengths, seizing growth opportunities, and addressing internal and external risks. When aligned with macro-environmental insights from a **PESTEL analysis** (Schuetz et al., 2018), these findings revealed that BTL's over-reliance on manual communication methods and limited digital infrastructure significantly hindered its responsiveness during the pandemic.

This led to mounting pressure to modernise its communication channels to remain relevant (Agregta, 2020; Mirzaei & Zand, 2021). This is because all these limitations affected customer retention and weakened the overall brand perception when digital presence was critical (Chaffey, 2019; Laudon & Traver, 2019; Arora & Kaur, 2020;). A **Fishbone analysis** further confirmed this, highlighting that the core issues stemmed from outdated systems, limited staff training, unclear process ownership, and insufficient integration between marketing and operations, illustrating a clear, practical gap that was also supported by previous studies (Dailey, 2016; Kotler & Keller, 2016). Recognising the urgent need to modernise BTL's marketing communication during the COVID-19 pandemic, this study introduces

implementing a chatbot system as a strategic enhancement to bridge communication gaps between the bank and its customers. Chatbots offer a responsive, cost-effective solution by automating customer interactions, providing 24/7 support, and collecting data for personalised future outreach (Desender & Velez-Ospina, 2020; Crosman, 2020). This integration further enhances their value, enabling efficient communication management across multiple channels without additional staffing (Vargo & Lusch, 2016; Fuchs, 2017; Laudon & Traver, 2019; Huang & Rust, 2021).

The implementation of a chatbot system comes with two (2) structured intervention cycles, each comprising pre- and post-intervention phases. Cycle 1 identified key communication issues: limited responsiveness, low product awareness, and weak digital interaction. This initial deployment of the Chatbot showed measurable improvements in communication speed, clarity, and marketing activities, which were later mentioned in another research (Adam et al., 2020; Sitanggang et al., 2023; Sundjaja et al., 2024). Meanwhile, Cycle 2 focused on the enhanced integration of ELIZA, the chatbot system, with features like automated scripts and targeted product messaging. These upgrades significantly improved operational efficiency reduced the manual workload of customer service agents and broadened outreach, which was also supported in other studies (Keyser et al., 2019; Cordero et al., 2022). By using the thematic analysis of NVivo software, the data captured user feedback across both cycles and continues to offer a comprehensive view of Chatbot's strengths and areas for refinement. This analysis was further supported by structured marketing frameworks, including the AIDA model (Rehman et al., 2015) and the Hierarchy of Effects theory developed by Lavidge and Steiner in 1961 (Coon et al., 2017) in which both of them emphasise a staged approach to influencing consumer behaviour.

This research holds significant value in both theoretical and practical contexts, particularly as the banking sector continues to adapt to the long-term effects of the COVID-19 pandemic. From a theoretical perspective, it addresses a notable gap in action research related to marketing communication, especially within financial institutions like BTL, where limited studies have explored structured, post-pandemic solutions. Practically, the study aims to support BTL in identifying and implementing a suitable digital communication tool, which, in this case action, was a Chatbot system that could strengthen customer engagement, streamline marketing efforts, and enhance operational efficiency. Today's increasingly digital environment heavily influences customer loyalty through the quality and responsiveness of digital interactions, making it critical for banks to modernise communication channels and maintain meaningful relationships. Furthermore, the success of digital tools depends not only on technological adoption but also on the digital financial literacy of both staff and customers. Empowering users with the skills and confidence to navigate digital platforms is essential for effective engagement. This research study also offers a practical and timely framework for improving marketing communication and strengthening customer loyalty in a rapidly changing digital environment. By adopting these strategies, the banking sector can build stronger connections, foster lasting trust, and deliver more personalised, accessible banking experiences.

Literature Review

Marketing Communication in the Banking Sector: A Pandemic Timeline

In recent years, marketing communication (MarCom) strategies in the banking sector have evolved rapidly as institutions that are able to adapt to any shifting customer expectations and digital transformation. MarCom encompasses all channels through value, such as communication to customers, including advertising, digital platforms, direct contact, and branding that plays a pivotal role in maintaining trust and long-term relationships, particularly in highly regulated sectors like banking (Dovhan, 2020; Yang et al., 2020; Almaslukh et al., 2022). Effective communication enhances customer engagement and financial education and reinforces brand credibility and customer loyalty (Chaouali & Hedhli, 2019; Rehman et al., 2024). However, implementing cohesive MarCom strategies remains challenging for smaller institutions and underserved segments, such as regional branches or trust companies like Bank Islam Trust Ltd. (BTL), which often lack the structured marketing resources available at headquarters (Mahbub, 2021; Čiković, 2022).

Studies highlight that fragmented communication in such settings undermines brand cohesion and weakens customer engagement, especially in rural or digitally excluded areas (Dahlstrøm et al., 2014). Budget constraints, digital skill gaps, and poor infrastructure further hinder these institutions from executing effective digital marketing (Wolok & Kango, 2021; Todua & Gogitidze, 2022; Fathin & Indrawati, 2024). Thus, smaller banks must adopt inclusive via digitally driven MarCom strategies to overcome these disparities. Several research has confirmed that digital literacy and tool adoption are key to expanding financial access and strengthening customer relationships (Aloulou et al., 2023; Moşteanu, 2020). By leveraging targeted digital campaigns and fintech innovations, these institutions can enhance engagement, close communication gaps, and contribute to broader financial inclusion goals (The, 2023; Rehman et al., 2024). Furthermore, a coherent digital marketing strategy rooted in MarCom principles empowers even small institutions to compete in a digital-first environment, build customer trust, and sustain long-term loyalty (Hanssens & Pauwels, 2016; Dahlstrøm et al., 2014).

Before COVID-19, marketing communication (MarCom) in the banking sector relied heavily on traditional in-person consultations, printed brochures, and physical branch advertisements to build trust and engage customers (Sari & Wardhani, 2023). These strategies were typically branch-centric, with limited integration of digital platforms (Alharthi et al., 2021). However, the global spread of SARS-CoV-2 in late 2019 exposed significant gaps in digital readiness, especially in banks dependent on face-to-face interaction (Barua & Barua, 2020; Almaslukh et al., 2022). For example, some banks in Malaysia required physical branch visits for overseas clients, underscoring the limitations of the pre-pandemic model (Čiković, 2022). This triggered urgent calls for more resilient digital customer service systems (Çolak & Öztekin, 2021; Hoskins & Abadi, 2022). As the pandemic intensified, lockdowns and distancing mandates accelerated the shift from physical to digital channels in banking. Institutions adopted mobile apps, chatbots, and social media to preserve customer relationships (Yang et al., 2020; Vashti, 2020) while offering remote onboarding and automated updates to reduce uncertainty (Voloc, 2021). However, smaller and regional branches such as Bank Islam Trust Ltd. (BTL) struggled to deliver seamless services to international customers due to a lack of digital alternatives (Aziz et al., 2022). Technical constraints and resource gaps, especially outside HQs, further hampered remote communication (Dovhan, 2020; Hasan et al., 2021).

Consequently, customers favoured banks that delivered transparent, timely updates via digital channels for services like moratorium announcements and financial relief (Lahuerta-Pujol et al., 2022; Dada, 2023).

Post-pandemic banking, MarCom entered a transformative phase driven by digitalisation, omnichannel strategies, and rising customer expectations (Mahbub, 2021). Institutions now rely on integrated tools like chatbots, apps, and emails to enable real-time, inclusive communication (Fotova Čiković, 2022). However, this digital shift revealed a generational divide: while Gen Y and Z adopted mobile banking quickly, older generations faced adoption barriers due to lower digital fluency (Burak & Farina, 2021; Yadova, 2021). To bridge this gap, banks invested in user-friendly platforms, guided onboarding and expanded digital education (Kamesh, 2021). These efforts increased adoption and loyalty across demographics, especially as tech-savvy youths supported older family members (Vilhena & Navas, 2023; Oktavia et al., 2023). Today, MarCom is a branding tool and a medium for digital inclusion and financial literacy in banking (Ferilli et al., 2024). The pandemic revealed systemic weaknesses in communication infrastructure, prompting a shift to agile, customer-centric approaches (Fotova Čiković, 2022; Mahbub, 2022). Research now links improved digital literacy, particularly among older users, in order to enhance engagement and loyalty in digital banking (Ferilli et al., 2024). As such, banks must prioritise inclusive strategies that build trust, empower users, and ensure long-term resilience (Kumar & Huang, 2024; Huangfu, 2024).

Theoretical Underpinning

In examining marketing communication (MarCom) strategies within the banking sector during and after the COVID-19 pandemic, the application of foundational models such as the Hierarchy of Effects Theory and the AIDA model is essential. These frameworks provide structured pathways for crafting effective messaging that meets the demands of increasingly digital interactions and evolving customer expectations. The Hierarchy of Effects Theory, introduced by Lavidge and Steiner in 1961, delineates a six-stage process comprising awareness, knowledge, liking, preference, conviction, and purchase. This structure is organised into cognitive, affective, and conative phases, representing consumer behaviour's thinking, feeling, and doing aspects (Alshaketheep et al., 2020; Nayeem et al., 2023). In the banking sector, where trust and emotional reassurance are vital, this model has guided the strategic shift in messaging towards emotionally engaging and informative content during crisis periods such as the COVID-19 pandemic (Alshaketheep et al., 2020; Cruz et al., 2024). Studies have indicated that leveraging this model captures consumer attention and fosters long-term loyalty by progressively cultivating positive attitudes and strong preferences toward financial brands (Cruz et al., 2024; Fernandez et al., 2024). Furthermore, applying the Hierarchy of Effects Theory in digital contexts enables the personalisation of customer journeys and effectively guides users from initial awareness to eventual conversion through targeted online interactions (Verma & Yadav, 2021).

In addition, the AIDA model, which represents Attention, Interest, Desire, and Action, provides a linear framework that is particularly well-suited for prompting customer responses in the rapidly evolving digital landscape. This model emphasises capturing attention, generating interest, cultivating desire, and triggering action (Fernandez et al., 2024; Verma & Yadav, 2021). Its effectiveness is evident in banking communications that utilise visual storytelling, personalised benefits, and well-crafted calls to action, engaging a digitally literate

audience (Alshaketheep et al., 2020; Nayeem et al., 2023). During the height of the pandemic, banks effectively applied the AIDA model to reframe their service offerings, including digital onboarding, moratorium updates, and financial relief measures, into compelling, trust-building messages disseminated through mobile applications, websites, and email (Fernandez et al., 2024; Verma & Yadav, 2021). The integration of both models offers a dual-layered approach. The Hierarchy of Effects enables long-term brand development and emotional engagement, while the AIDA model supports immediate behavioural triggers through structured messaging. In the post-pandemic digital context, a synergistic application of both frameworks equips marketers to align emotional resonance with actionable communication. This approach ultimately drives engagement and conversion and is especially effective in the financial services sector, where building trust and fostering customer understanding is essential for maintaining robust relationships in increasingly digital environments (Nayeem et al., 2023; Cruz et al., 2024).

Chatbot System

Chatbots have evolved from basic rule-based systems to intelligent agents capable of human-like conversation. The origin of chatbot technology traces back to ELIZA, developed in 1966 to simulate a psychotherapist's dialogue using simple pattern matching. Although primitive, ELIZA demonstrated that structured and predictable interactions could engage users in constrained contexts, which remains important in domains such as healthcare, banking, and public-facing services where transparency and reliability are crucial (Nordheim, Følstad, & Bjørkli, 2019; Li, Lee, Emokpae, & Yang, 2021). In the 1990s, the development of ALICE (Artificial Linguistic Internet Computer Entity) introduced a more modular and flexible chatbot design. Using Artificial Intelligence Markup Language (AIML), ALICE supported recursive pattern matching and longer dialogue threads. This made it suitable for broader conversational applications, although it often produced repetitive responses when not thoroughly scripted, limiting its adaptability compared to randomised, randomised models like ELIZA (Zhang, Oh, Lange, Yu, & Fukuoka, 2020).

Rule-based systems such as ELIZA are still preferred in financial and regulated sectors due to their predictable outputs, which help maintain user trust and compliance. In banking, these systems manage routine, high-volume queries efficiently, including transaction tracking, product information, and service navigation. They enhance user satisfaction while meeting regulatory demands (Fares, Butt, & Lee, 2022; Mulyono & Sfenrianto, 2022; Sitanggang, Syafariani, Sari, Wartika, & Hasti, 2023). Furthermore, their low infrastructure requirements and limited exposure to privacy risks make them highly effective during digital transformation (Azevedo et al., 2023). Although frameworks like ALICE enable greater conversational flexibility, especially in less regulated contexts, many institutions continue to prioritise ELIZA-style models. These systems offer greater control, consistency, and reduced operational risk, which are vital for customer-facing roles in finance. Both architectures remain valuable, with ALICE enhancing scalability in engagement-driven contexts and ELIZA supporting structure and dependability in compliance-sensitive environments (Rossettini, Cook, Palese, Pillastrini, & Turolla, 2023).

The Role of Digital Financial Literacy in Driving Customer Loyalty

The COVID-19 pandemic significantly accelerated the digital transformation of the Islamic banking sector, driving institutions to adopt digital platforms to maintain service continuity and customer engagement (Zanariasti & Ikasari, 2020; Mulyono & Sfenrianto, 2022; Sugihyanto & Arsjah, 2023; Kola et al., 2024). This transformation has necessitated an increased focus on Digital Financial Literacy (DFL), which has emerged as a crucial moderating factor determining customers' ability to navigate, interpret, and respond to these digital financial services (Ray et al., 2022; Hasan et al., 2022; Gosal & Nainggolan, 2023; Kusumawardhani et al., 2023). Customers with higher DFL are better equipped to understand the features, risks, and benefits of digital tools like e-wallets and online transactions, fostering greater confidence and participation within digital banking ecosystems (Tiffani, 2023; Qulub & Putri, 2024).

DFL promotes user understanding of chatbot dialogues, allows for informed evaluations of promotional offers, and instils confidence in responding to digital prompts. Without sufficient DFL, customers risk stagnating at initial interest levels and being unable to advance to decisive action, thereby constraining the efficacy of otherwise strategic digital marketing campaigns (Hilmi, 2024). Chatbot systems exemplify the communication tools adopted post-COVID, which rely heavily on customer digital competence (Mulyono & Sfenrianto, 2022; Tashtamirov, 2023). Deployed to enhance response times and service quality, these chatbots facilitate interactive dialogues, deliver real-time assistance, and guide users through product inquiries or digital transactions (Hilmi, 2024; Hoang & Phan, 2024). However, the realisation of chatbot benefits is contingent upon users possessing adequate DFL to trust and engage effectively with these systems. Digitally literate customers can better discern chatbot messages as credible, complete desired actions, and navigate through the AIDA stages, ultimately reinforcing customer satisfaction and loyalty to the banking institution (Rasyid et al., 2024; Kusumawardhani et al., 2023). Furthermore, when customers can confidently utilise digital banking platforms, they are more likely to perceive the institution as accessible, innovative, and responsive. This perception further enhances commitment to the bank, ensuring digital communication strategies attract attention, incite informed actions, and cultivate lasting customer loyalty (Sugihyanto & Arsjah, 2023; Tiffani, 2023).

Methodology**Research Design and Philosophy**

This study adopts an action research methodology to address post-COVID-19 marketing communication challenges in Islamic banking, particularly action research, which is well-suited for this context as it facilitates iterative problem-solving and integrating direct interventions in real-world settings (Heinonen & Strandvik, 2022). This methodological approach aligns with the philosophy of pragmatism, which centres on actionable knowledge and results-driven solutions. Pragmatism's emphasis on stakeholder engagement supports the iterative nature of action research, providing a robust framework for understanding and addressing the complexities of marketing communication (Heinonen & Strandvik, 2022). It posits that knowledge is valid when it proves helpful in practice, which positions it as a practical perspective in Islamic banking, where tangible outcomes are crucial (Addury & Pangestu, 2023). A qualitative research method was utilised within a defined time horizon spanning May 2021 to June 2022 to capture insights before and after the intervention. The

researcher maintained a moderate level of involvement throughout the study to ensure methodological rigour while allowing for the controlled manipulation of variables.

Participants, Sampling, and Data Collection

The target population included key personnel from BTL's management, marketing, and operations teams. Specifically, participants included the Head of Operations, Head of Legal and Secretarial, and Secretarial Executives, all directly or indirectly involved in customer communication. Confidentiality was maintained throughout the study. Qualitative data was collected through structured interviews, following a three-phase Interview Protocol Refinement (IPR) framework (Castillo, 2016). Pre-intervention and post-intervention interviews were conducted to gather insights into the effectiveness of BTL's communication systems during and after the COVID-19 pandemic. Additional data collection involved fieldwork, employee feedback, and a live trial of a Chatbot system. This intervention provided empirical data on the feasibility and effectiveness of digital communication tools.

Data Analysis and Validation

A combination of expert validation, pilot testing, and methodological triangulation was employed to ensure the reliability and credibility of this action research. Expert feedback was gathered from marketing and business operations professionals to critically review the research tools and content developed by the researcher. This step was crucial given the self-evaluative nature of the study and ensured that the instruments used were aligned with practical standards and the study's objectives (Pope, 2000). Before the main data collection, pilot testing was conducted to refine the interview protocol, enhance clarity, and ensure relevance to the research questions (Liamputtong, 2009). Furthermore, methodological triangulation, as suggested by Froggatt (2001), was applied to strengthen the validity of findings by cross-verifying data through multiple sources, including interviews with BTL employees, observational insights, and internal company documents. This approach enabled the researcher to confirm the consistency of responses and mitigate the potential biases inherent in single-source data collection.

The qualitative data analysis followed a multi-method strategy to ensure depth and breadth of interpretation. Thematic analysis via NVivo software allowed the researcher to code systematically, categorise, and identify meaningful patterns in the interview data (Liamputtong, 2009). This method was instrumental in revealing gaps in BTL's marketing communication practices and employee perspectives on potential system improvements. In parallel, content analysis was used to evaluate data from the company's website and internal documents, particularly assessing the utilisation of communication tools such as the Chatbot system (Darmody & Byrne, 2006). The comparative analysis further supported the evaluation by identifying differences between the pre- and post-intervention stages, offering insights into the practical impact of the enhancements introduced (Watkins, 2017).

Intervention Implementation and Outcomes

An internal diagnostic assessment was first conducted to evaluate BTL's strategic readiness and operational capacity. This included an Internal Environmental (IE) Analysis across Management, Marketing, Finance, Operations, and MIS to identify strengths and weaknesses. A subsequent SWOT analysis highlighted opportunities and threats, supporting Büyüközkan and Ilıcak's (2019) view that such tools enable strategic alignment. These insights were

reinforced by a PESTEL analysis (Schuetz, Mair, & Schrefl, 2018), which identified overreliance on manual communication and limited digital infrastructure as key barriers. A Fishbone analysis further confirmed challenges from outdated systems, inadequate training, unclear process ownership, and weak integration between marketing and operations. These findings laid the foundation for a two-cycle action research intervention to enhance BTL's marketing communication pre- and post-COVID-19.

In Cycle 1, pre-intervention interviews with three (3) key staff, the Head of Operations, Legal and Secretarial, and a Secretarial Executive, were analysed thematically using NVIVO. Key issues included low customer engagement, delays due to multitasking, limited product awareness, and ineffective email use. Based on these insights, a semi-automated Chatbot system was developed and integrated into BTL's website. This hybrid system used AI to handle FAQs and routed complex queries to staff via structured email. The Chatbot operates 24/7, collecting basic customer data and storing it securely for follow-up. Its design and templates were developed collaboratively with staff. A six-hour internal training session by a BTL-appointed vendor covered system use, escalation protocols, and content management. Post-intervention interviews led to suggestions for improved response consistency and expanded automation features.

Cycle 2 built on these lessons with eight (8) participants from a broader departmental base. Further interviews generated three (3) key recommendations: integrating auto-response scripts for FAQs, standardising templates for core services like Labuan Company and Foundation offerings, and expanding staff training. These inputs shaped system upgrades, including third-party customer data verification, two-way communication, and automated routing via department-specific email systems. A refined ELIZA-based AI model and human oversight enhanced both automation and personalised service. A second training session, also conducted by the vendor, focused on new features, updated scripts, and integration processes. Standardised Chatbot templates were rolled out to ensure message consistency and compliance across all customer touchpoints. Across both cycles, NVIVO-based thematic analysis guided iterative system improvements. Documentation of system features, workflows, and training ensured long-term knowledge retention and scalability. The two-cycle intervention ultimately provided a structured, evidence-based framework for transforming BTL's digital marketing communication through continuous staff engagement, learning, and system evolution.

Results

The action research intervention produced three (3) core outcomes: organisational restructuring, communication process upgrades, and measurable performance improvement. As shown in Figures 1 and 2, BTL transitioned from a structure lacking a formal marketing unit to one that includes a dedicated "Marketing Teams/Arms" division, reflecting a strategic shift toward enhanced customer engagement and digital readiness. Concurrently, Figures 3 and 4 depict the evolution from manual communication (e.g., WhatsApp, Zoom, static web pages) to an integrated system with a semi-automated Chatbot and email marketing, enabling two-way interaction and reducing delays.

Cycle 1 thematic analysis (Figure 5) identified key challenges such as slow response times, limited product visibility, and ineffective use of email. Post-intervention feedback (Figure 6)

showed improved communication flow, increased responsiveness, and greater clarity. The Chatbot, deployed in a live trial (Figure 7), functioned as a hybrid model. This system handled routine queries with AI and escalated complex cases to staff, thus streamlining workflows and enhancing customer experience. Next, Cycle 2 refinements (Figure 8) included auto-script integration, product-specific templates, and staff training. NVIVO-based analysis (Figure 9) confirmed improved efficiency, reduced email load, and expanded customer reach.

Later, Figure 10 presents the final Chatbot system, which automates customer onboarding, verifies data, and routes inquiries to the appropriate staff. This model supports real-time and follow-up engagement, enhancing service precision and loyalty. The cumulative outcome is shown in Figure 11, where the number of Labuan company incorporations declined from 79 in 2020 to 64 in 2021 due to COVID-19 disruptions. Post-intervention, this figure rebounded to 120 in 2022, reflecting significant gains in product subscriptions, customer engagement, and operational resilience, confirming the effectiveness of structured digital communication strategies in driving behavioural and financial outcomes.

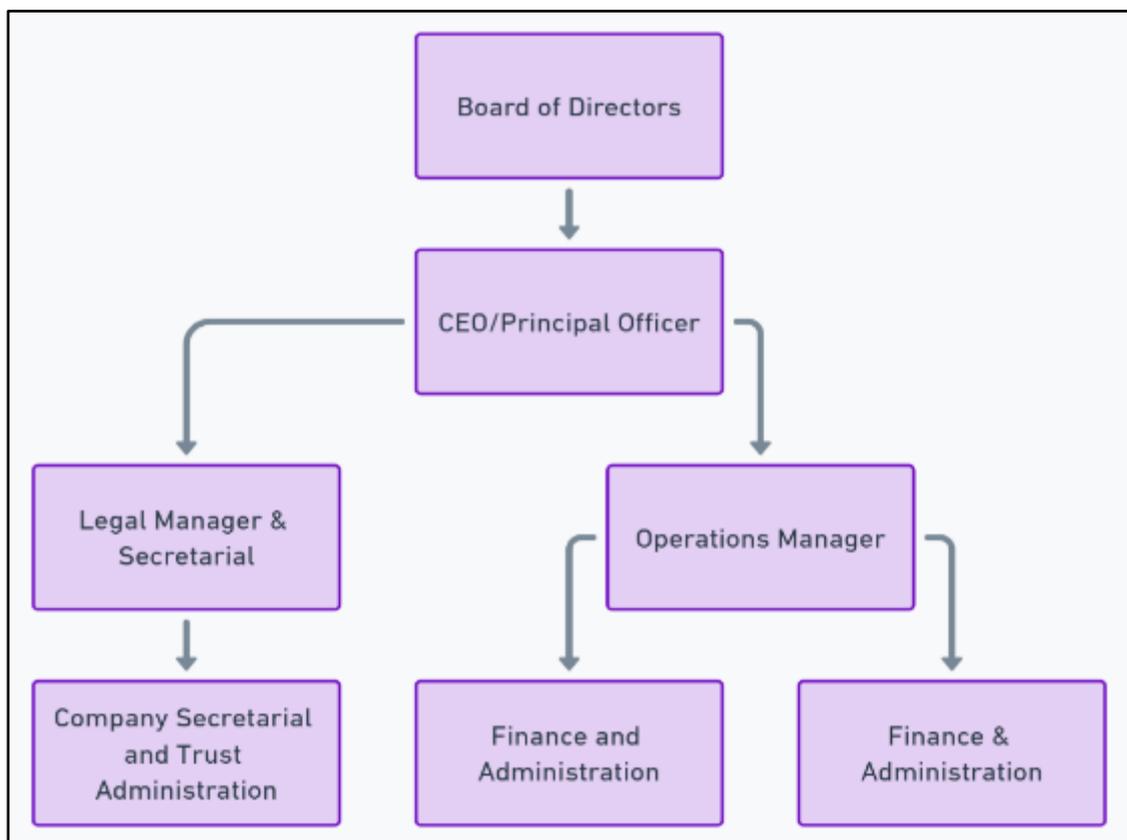


Figure 1. BTL's organisational structure before the intervention

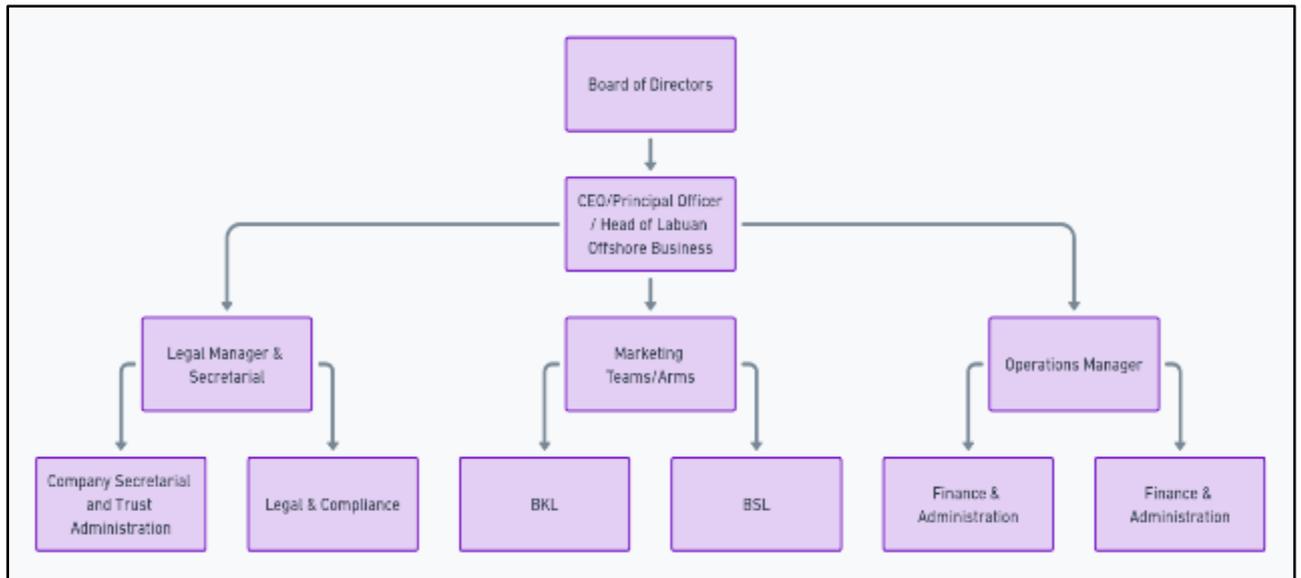


Figure 2. BTL’s organisational structure after the intervention

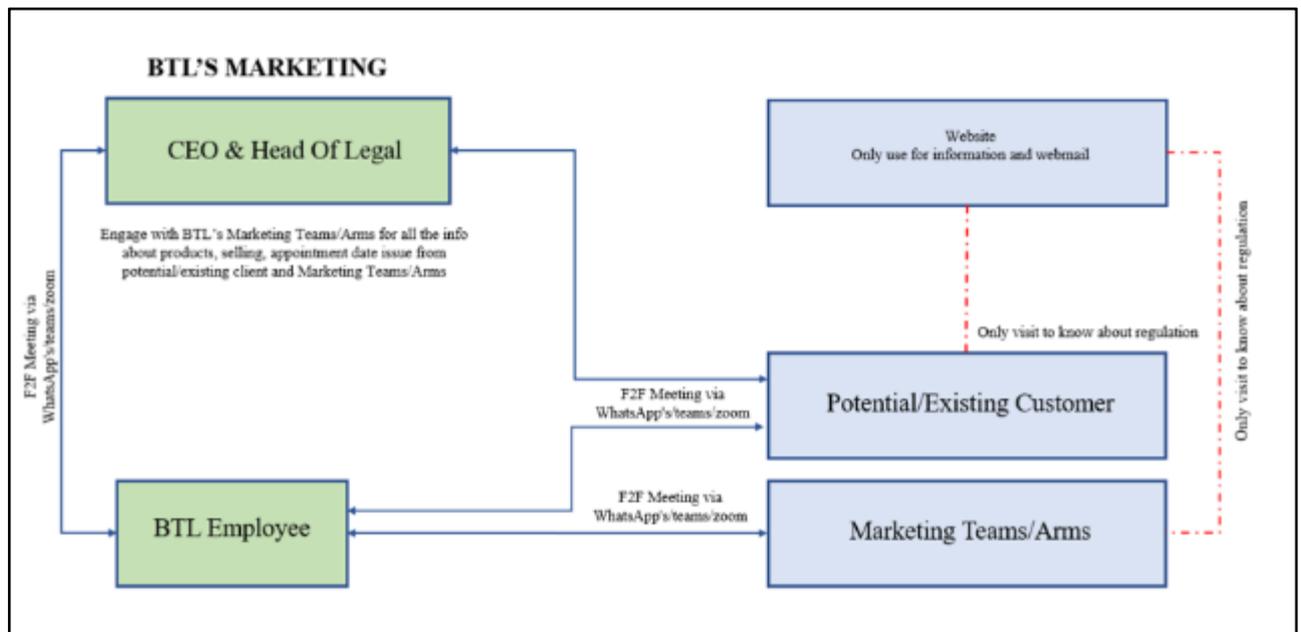


Figure 3. Pre-intervention marketing communication flow

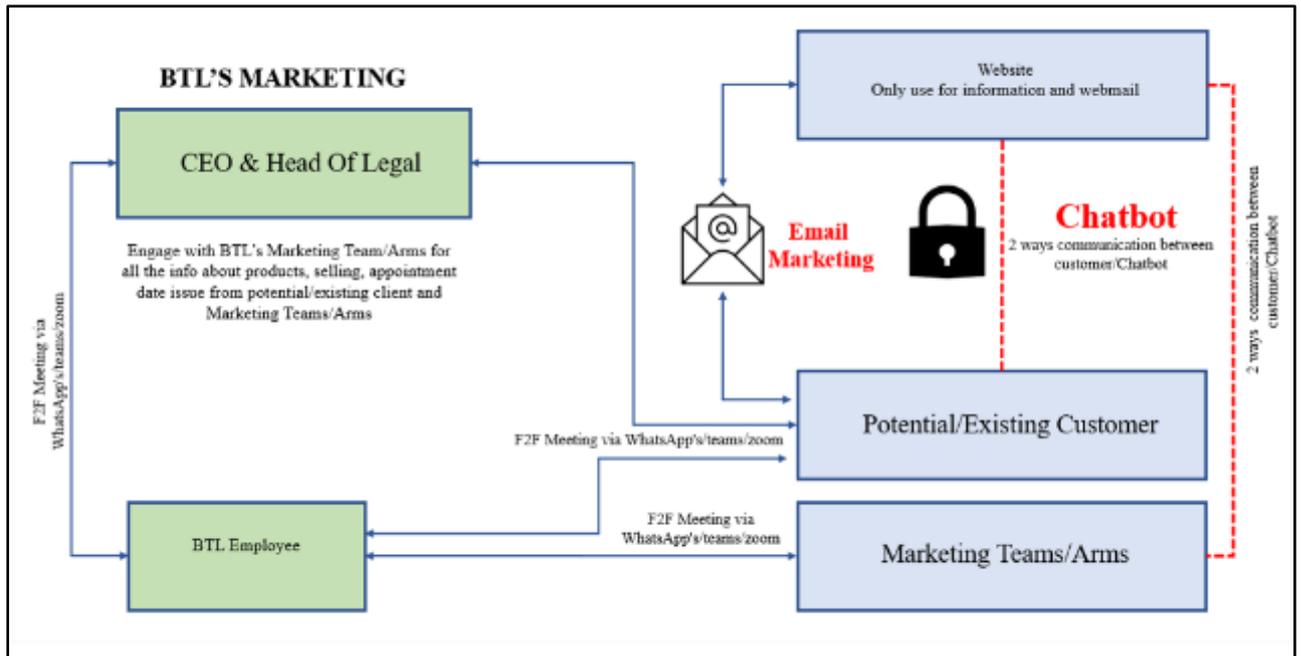


Figure 4. Post-intervention marketing communication flow

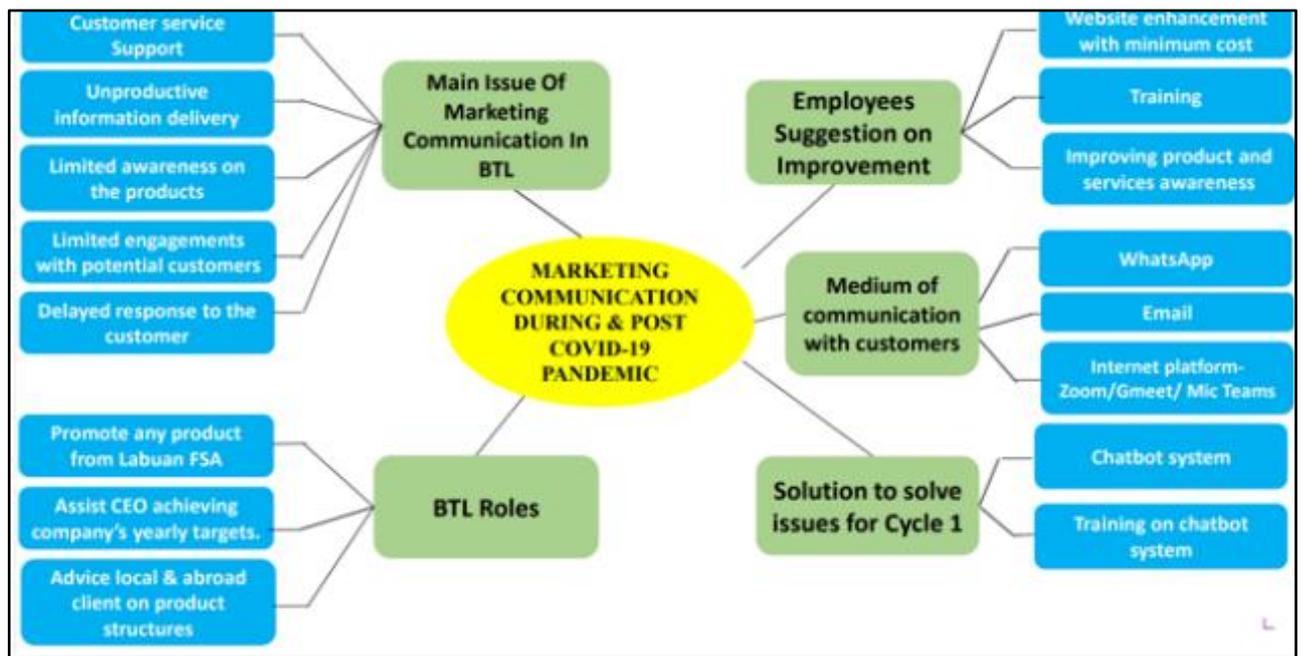


Figure 5. Cycle 1 pre-intervention themes were generated using NVIVO, highlighting communication issues and staff suggestions.

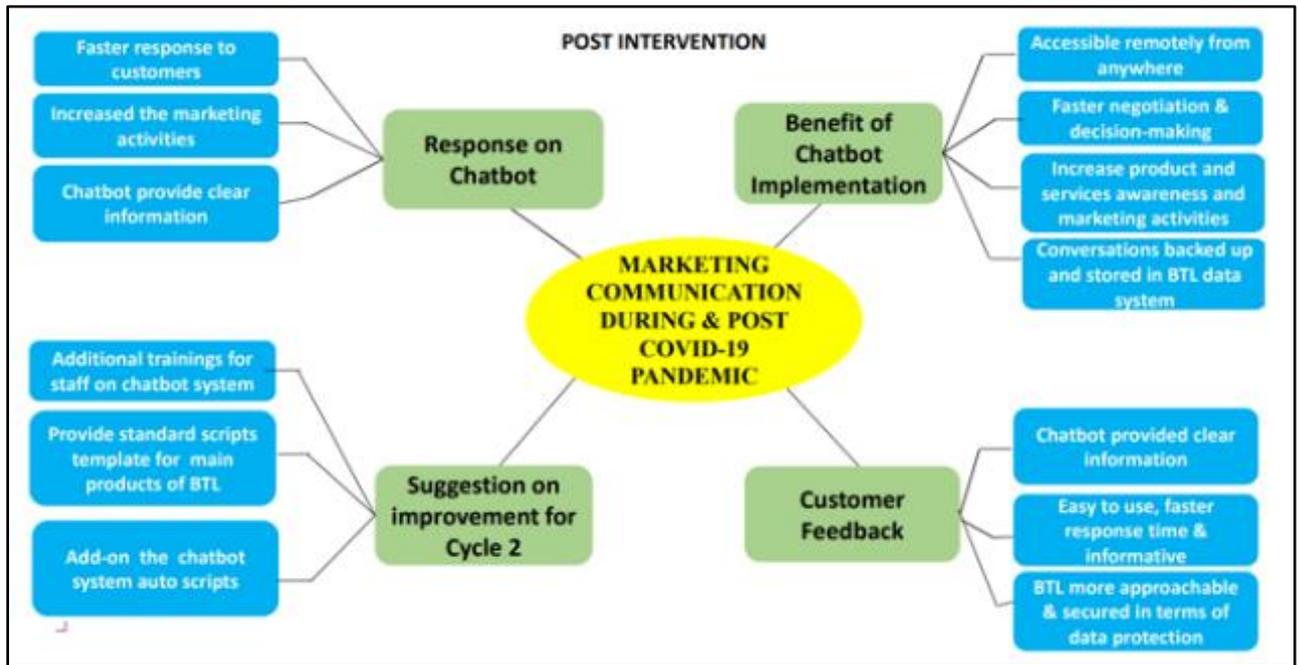


Figure 6. Cycle 1 post-intervention thematic findings from NVIVO analysis, showing Chatbot feedback and improvement areas.

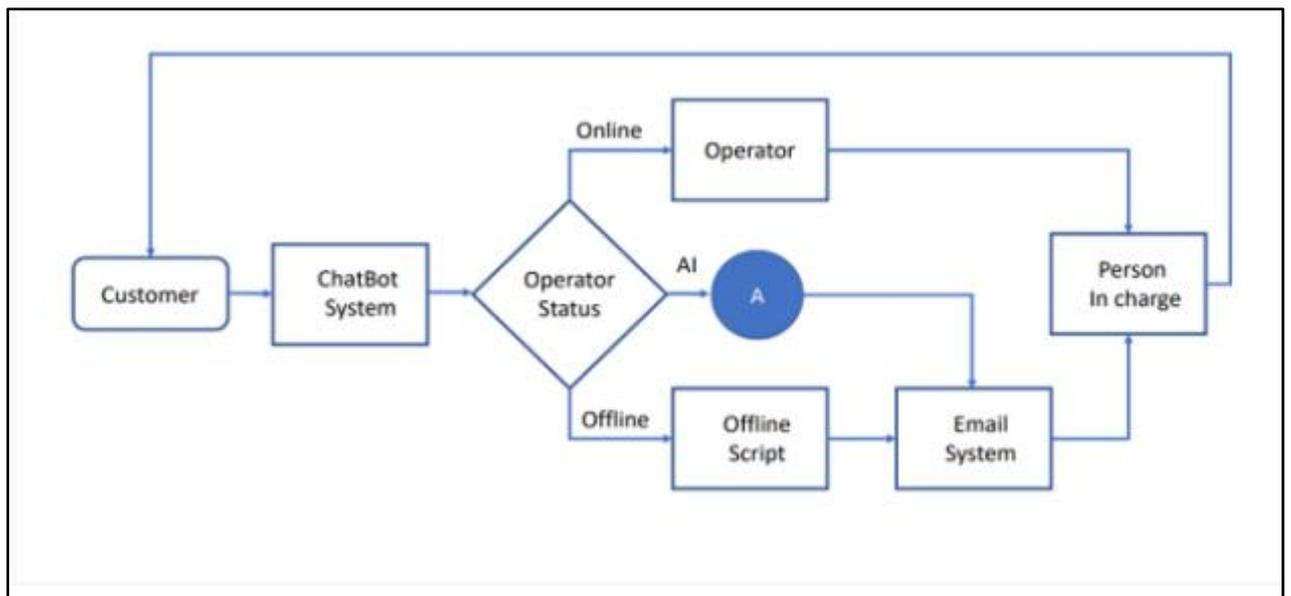


Figure 7. Chatbot communication flow diagram showing AI-based interaction and staff escalation structure.

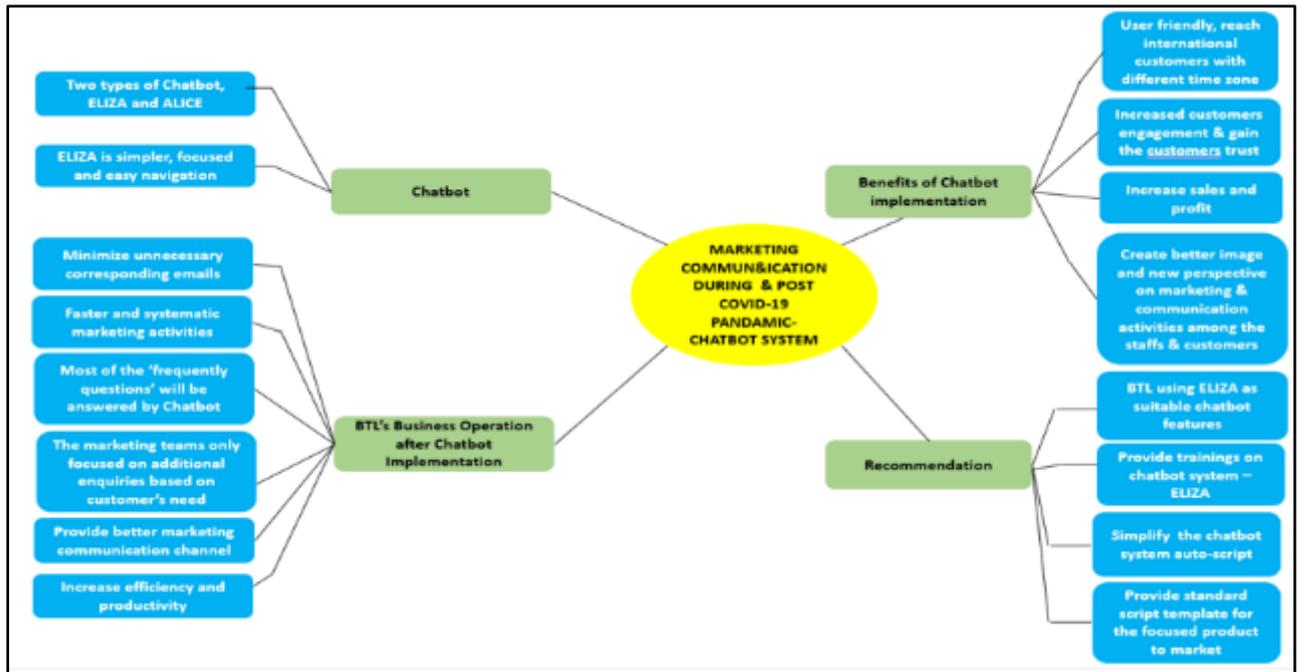


Figure 8. Cycle 2 pre-intervention thematic analysis from NVIVO showing staff recommendations for Chatbot system improvements.

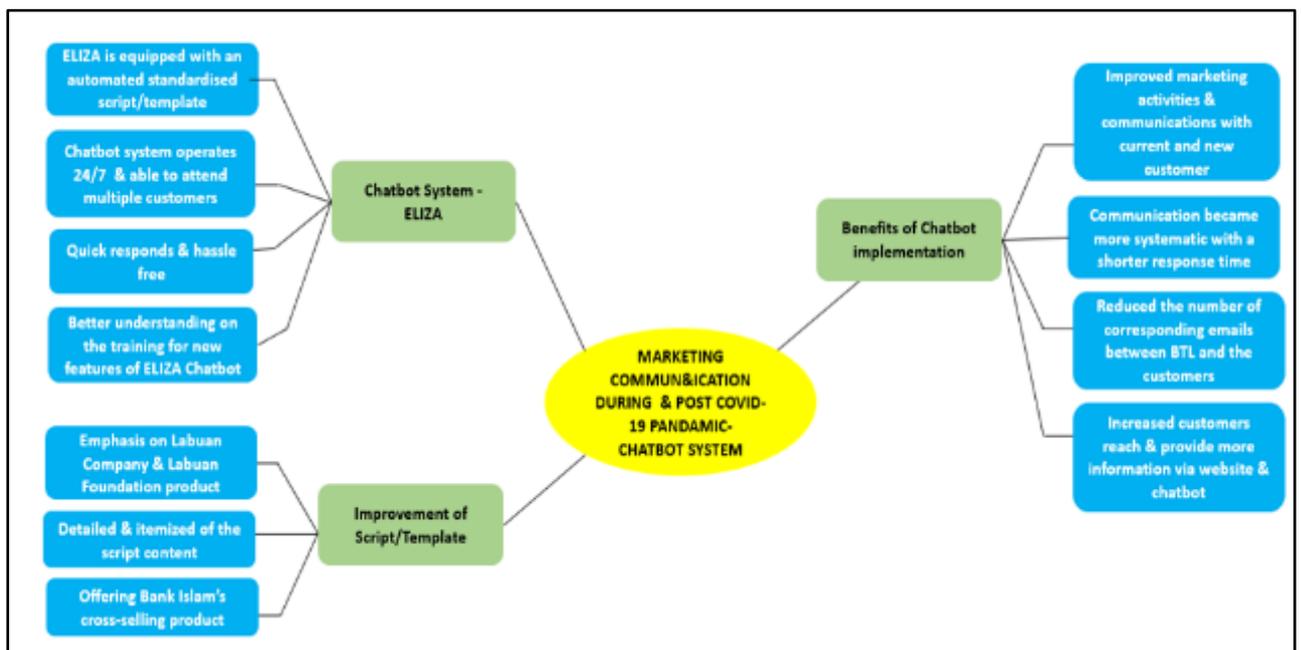


Figure 9. Cycle 2 post-intervention thematic analysis from NVIVO highlighting perceived benefits and impact of the upgraded Chatbot.

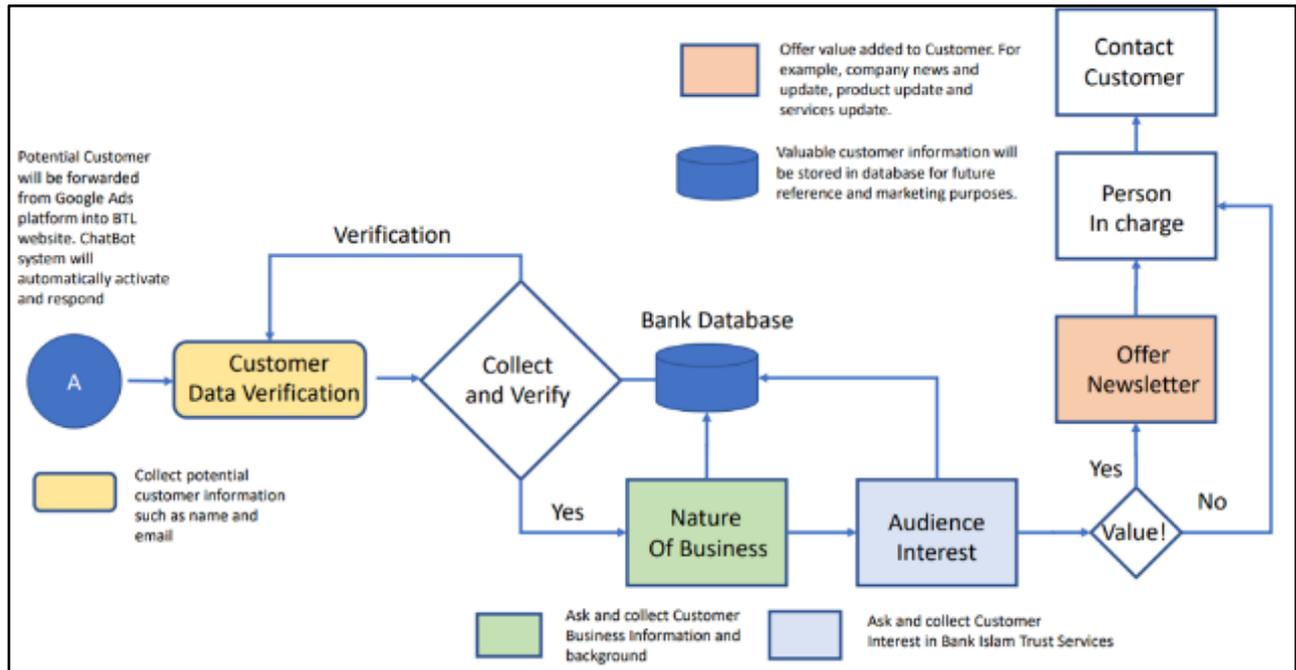


Figure 10: Final Chatbot implementation flow, illustrating customer data collection, value-based segmentation, and automated follow-up communication.

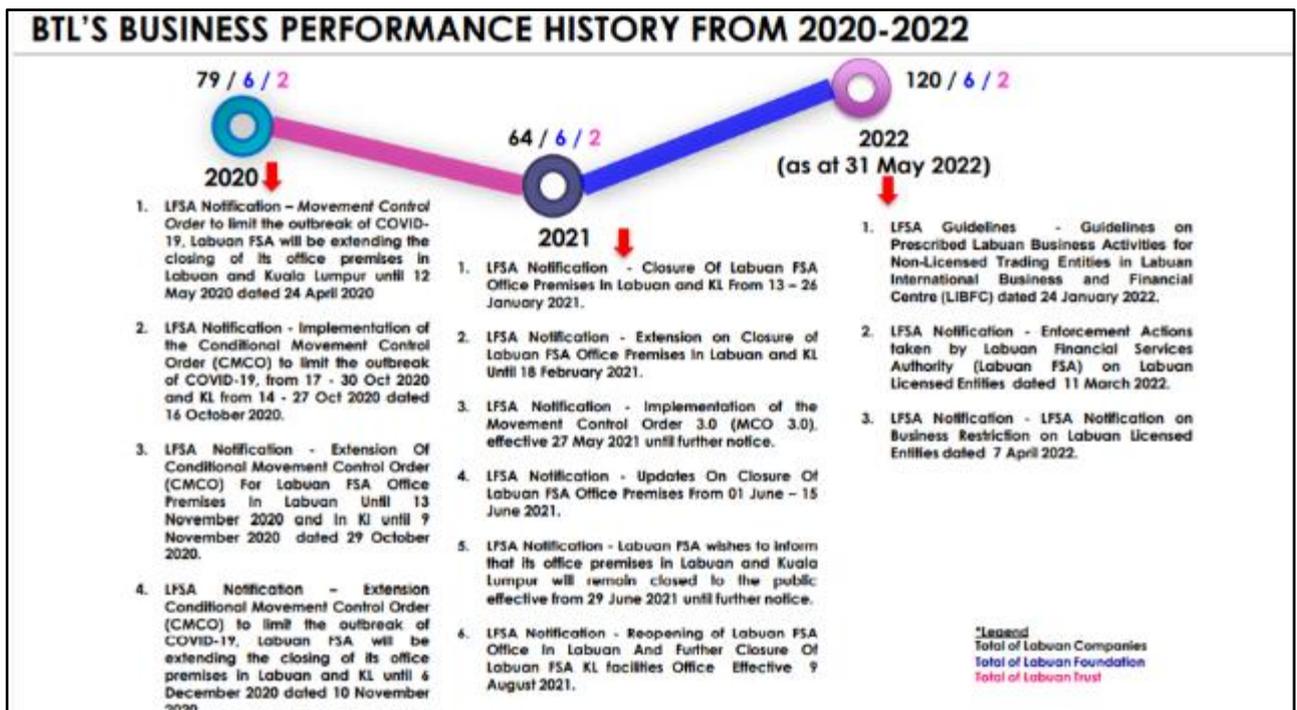


Figure 11. BTL's product subscription trends before, during, and after COVID-19 reflect the impact of digital marketing communication enhancements.

Discussion

Organisational Change

The transformation of BTL's organisational structure, as illustrated in Figures 1 and 2, represents a foundational shift toward enabling sustainable digital marketing strategies in Islamic banking. BTL lacked a dedicated marketing unit during Pre-intervention, with

communication responsibilities dispersed across departments. This fragmented setup restricted the bank's ability to coordinate strategic outreach, a limitation widely observed in Islamic banks pre-pandemic (Adawiyah et al., 2022; Ćiković, 2022). The post-intervention restructuring introduced a dedicated Marketing Teams/Arms division, signalling formal institutional support for digital transformation (Addury & Pangestu, 2023; Aziz et al., 2022). As a core strategic function, marketing allowed for the development of focused communication channels and the fostering of internal accountability and customer trust. This shift aligns with the idea that internal realignment enhances organisational agility during digital transitions (Ng et al., 2020; Roy et al., 2020). Others also highlight that decentralised or under-resourced marketing functions often limit customer outreach, particularly in underbanked Islamic communities (Benegas & Zanfardini, 2023).

From a behavioural marketing perspective, this structural realignment corresponds closely with the Hierarchy of Effects Theory by Lavidge and Steiner (1961), which identifies six (6) progressive stages in customer engagement: awareness, knowledge, liking, preference, conviction, and purchase. These stages, structured across cognitive, affective, and conative domains, reflect how customers think, feel, and act (Coon et al., 2017; Elrod & Fortenberry, 2020). By formalising a marketing division, BTL now has the internal capacity to guide customers more deliberately through each stage, especially in the context of high-trust services like Islamic banking, where decision-making is rational and emotional. Importantly, the post-COVID banking environment demands linear communication and adaptable, emotion-aware messaging (Chen et al., 2020; Liu et al., 2021). These frameworks emphasise that financial decisions are shaped as much by trust and empathy as by information, a critical insight for Islamic financial institutions seeking to retain loyalty and expand outreach (Ibáñez-Sánchez et al., 2022).

The restructuring at BTL thus enables better marketing communication planning, integrating cognitive and emotional engagement strategies across customer journeys. With this foundation, the bank is better positioned to deploy digital financial literacy (DFL) initiatives. Institutional clarity and role alignment are prerequisites for inclusive digital financial education (Aini & Ferdinand, 2021). This organisational clarity facilitates DFL programmes that are informative, emotionally resonant, and behaviourally effective (Ng et al., 2020; Thi et al., 2021). These changes also represent a proactive response to trust erosion during the pandemic. By institutionalising its marketing function, BTL strengthens its ability to maintain consistent, transparent communication that becomes a key trust-building component (Almaslukh, Alhabshi, & Abdullah, 2022), especially financial understanding and long-term loyalty (Ackon et al., 2024). Therefore, this structural evolution supports marketing efficiency and lays the behavioural and emotional groundwork for sustainable customer relationships in a post-pandemic, digitally-driven landscape.

Marketing Communication Process Upgrade

The transition from manual communication tools to a semi-automated system significantly enhanced BTL's marketing efficiency and digital financial literacy outreach. Before this intervention, the institution relied heavily on platforms such as WhatsApp, Zoom, and static web pages (Figure 3). These tools lacked scalability and personalisation, especially during COVID-19 disruptions, which constrained the bank's ability to deliver timely and customer-centric communication (Rahayu et al., 2022). To overcome these challenges, BTL

implemented an AI-powered Chatbot post-intervention (Figure 4). This solution streamlined outbound marketing and efficiently handled inbound inquiries, significantly improving response times and increasing customer engagement (Azaria & Noviani, 2024).

Additionally, the Chatbot promoted digital familiarity among users, thereby enhancing a core component of digital financial literacy (Naufalin & Tohir, 2022). Real-time communication increased BTL's credibility and approachability, particularly for remote users who previously faced limited access. By centralising interaction data, the system enabled BTL to identify behavioural patterns, personalise its services, and transition from reactive responses to proactive engagement strategies.

Thematic analysis from Cycle 1 revealed critical shifts between pre-and post-intervention communication dynamics. As illustrated in Figure 5, key concerns included delayed replies, unclear messaging, and overuse of inefficient email systems. These issues mirrored broader sectoral challenges and weakened internal staff coordination. In contrast, Figure 6 captures the impact after the intervention, highlighting notable improvements in communication flow, staff involvement, and turnaround times. These enhancements directly supported better alignment between front-office efforts and back-end responsiveness. Figure 7 provides a breakdown of the Chatbot's operational logic. It demonstrates how the system blended automated handling of routine queries with escalation mechanisms for more complex issues requiring human support. This hybrid communication approach improved service continuity and allowed customers with varying digital literacy levels to engage with the bank's services confidently. The design of the Chatbot followed the AIDA marketing communication model (Attention, Interest, Desire, and Action), which structured the interaction flow effectively (Wong et al., 2023; Tristante & Hurriyati, 2023). Attention was secured through prominent interface design. Interest was maintained via adaptive and personalised responses. Desire was built by emphasising value-driven benefits. Finally, action was encouraged through seamless integration with service portals and staff assistance. This thoughtful design ensured that customer interactions were efficient and psychologically engaging, strengthening long-term loyalty. As financial institutions adapt to digital transitions, the importance of digital financial literacy becomes more pronounced. Users must access digital platforms and understand how to navigate them meaningfully. Consequently, systems like BTL's Chatbot represent more than just technical upgrades. They embody inclusive digital strategies that empower users to make informed financial decisions in a data-driven economy (Azaria & Noviani, 2024).

The AIDA Model informed Cycle 1's implementation structure, showcasing how Chatbot visibility captures attention, real-time answers maintain interest, articulated product benefits build desire, and routing paths to staff facilitate action (Fadhli, 2023). Despite critiques that AIDA may oversimplify, its clarity gave BTL a reliable structure for driving user engagement (Kusumawardhani et al., 2023; Cruz et al., 2024). Cycle 1 also emphasised the role of adaptive training and staff feedback loops. Employees were active contributors to the system's success, reinforcing the value of co-creation in Islamic finance, where service ethics and customer trust are paramount (Rehman et al., 2015; Fadhli, 2023; Sugihyanto & Arsjah, 2023; Tiffani, 2023). These insights laid the foundation for more advanced refinements in Cycle 2.

The results in Figures 8 and 9 reflect Cycle 2's pre- and post-intervention thematic analysis. The pre-intervention responses (Figure 8) highlighted the need for script refinement, clearer templates for BTL's offerings related to Labuan products and services, and additional staff training. These inputs underscore the iterative nature of digital transformation, as noted by Cruz et al. (Sugihyanto & Arsjah, 2023; Tiffani, 2023; Cruz et al., 2024), who argue for the importance of effective communication strategies that relate to the AIDA model in promoting user engagement. Meanwhile, post-intervention feedback (Figure 9) indicates operational maturity in the Chatbot system. Staff reported reduced email overload, improved query routing, and increased customer satisfaction, aligning with findings that personalised and predictable service flows are key to improving user retention in financial institutions (Alshaketheep et al., 2020; Fadhli, 2023). Figure 10 illustrates the final implementation logic, including data verification, newsletter updates, and interest-based follow-up. These features reflect an evolution from basic responsiveness to proactive, segmented communication, as emphasised by Fadhli (Fadhli, 2023), who highlighted the significance of targeted support in fostering trust and loyalty.

By automating the collection and categorisation of customer interests, BTL enabled data-driven decisions in its marketing strategy. This level of responsiveness strengthens customer confidence, particularly in contexts where face-to-face interaction is culturally preferred but logistically constrained (Rehman et al., 2015; Fadhli, 2023). The structured feedback and routing pathways also improve service transparency, a foundational value in Islamic finance. These enhancements show BTL's growth from reactionary digital adoption to strategic digital engagement, addressing technical gaps while empowering users, thereby supporting digital literacy and relational loyalty among its clientele.

Final Outcome, Contribution and Future Reflection

The transformation journey of BTL in marketing communication, particularly through the pre-, during, and post-COVID-19 phases, showcases a profound impact on its business performance metrics. As illustrated in Figure 11, BTL achieved to record 79 Labuan company incorporations in 2020, setting a strong pre-pandemic benchmark. However, the number dropped to 64 in 2021 due to significant operational challenges, including office closures and an overreliance on manual and fragmented communication methods, reflecting vulnerabilities within the organisational framework that necessitated immediate strategic changes for operational resilience and scalability (Chauhan et al., 2022). The recovery trajectory in 2022, marked by introducing a Chatbot system and other digital marketing tools, led to an impressive performance surge to 120 Labuan company incorporations, indicating not just recovery but a notable leap beyond pre-pandemic benchmarks.

This notable growth underscores the intertwined effects of enhanced digital financial literacy (DFL), improved customer responsiveness, and better communication strategies, which are crucial in generating positive business outcomes in the Islamic banking sector (Andespa et al., 2024). Furthermore, the study provides a theoretical validation of models like AIDA and the Hierarchy of Effects in structuring digital interaction flows specific to Islamic finance, securing critical stages from awareness to engagement and conversion (Rehman et al., 2024).

In addition, this study contributes theoretically by validating the application of models like AIDA and the Hierarchy of Effects in structuring digital interaction flows within Islamic

banking. These frameworks ensured that each stage, from awareness to engagement and conversion, was behaviorally grounded and aligned with Islamic values (Kok, 2020; Alharbi et al., 2021; Setiani & Yudiana, 2022). More importantly, the study extends the existing literature by demonstrating that digital financial literacy (DFL) functions as a learning tool and a driver of loyalty when embedded within a branded and ethical service experience. This highlights how Islamic branding can support long-term engagement through purposeful, values-aligned digital service delivery. The study further emphasises the underexplored role of branding strategies, especially the value of partially humanised digital personalities in Islamic banking, which can be effectively conveyed through chatbots and automated tools when intentionally designed (Chauhan et al., 2022). From a practical perspective, the project presents a replicable pathway for other Islamic banks navigating post-pandemic digitalisation. From internal realignment to the iterative design of customer-facing tools, BTL's transformation offers a model grounded in real-time problem-solving. Findings suggest that digital upgrades must be combined with strategic communication, staff empowerment, and inclusive access, which is also supported by the latest study (Andespa et al., 2024).

By embedding DFL into the daily service flow, BTL transformed its Chatbot from a passive channel into an active educator, helping customers become more informed and confident in their financial decisions (Rehman et al., 2024). Looking forward, this action research suggests that the future of Islamic banking innovation lies in technological advancements and branding strategies that are as intelligent and adaptive as the platforms themselves. The results offer more than success metrics: they provide a blueprint for harmonising ethical branding, intelligent automation, and human-centred values, which were also mentioned in a previous study (Kok, 2020; Alharbi et al., 2021; Setiani & Yudiana, 2022). Future research should build on this foundation to explore branding strategies that represent personality, simplify complex financial knowledge, and connect meaningfully with Muslim and non-Muslim audiences in emotionally resonant and inclusive ways. In this evolving digital landscape, the challenge will be to design systems that do more than function efficiently. They must also communicate trust, embody shared values, and humanise financial experiences.

Conclusion

This study set out to improve Islamic banking communication by identifying existing gaps, implementing a sustainable digital tool, and evaluating its impact on Bank Islam Trust Ltd., from fragmented, manual processes to an integrated, AI-supported digital system in which resulted in substantial improvements in customer engagement, product subscription, and operational clarity. However, the technological upgrade was not just a systems enhancement; it also enabled a strategic repositioning of how the bank communicates its identity and values. Customers did not simply use new tools but engaged with a more coherent, responsive, and ethical service narrative. Therefore, the next wave of innovation in Islamic banking will not be defined solely by technological sophistication but by how effectively technology communicates, educates, and builds relationships. Future research should aim to develop frameworks that integrate branding, digital financial literacy (DFL), and loyalty-building strategies into unified models of customer experience in Islamic banking. This work can guide banks in designing not just functional systems but holistic, human-centred platforms that honour the values of Islamic banking while embracing the diverse, multicultural realities of their customer base. Through a two-cycle action research approach, key internal challenges

were diagnosed. A semi-automated Chatbot system was introduced and iteratively improved to address communication inefficiencies, product visibility, and customer responsiveness.

Furthermore, the enhancement of digital financial literacy empowered customers to make informed decisions while strengthening their loyalty to the institution, making this transformation of Islamic banks able to remain relevant and competitive in a post-pandemic world. As Islamic banking expands globally, future innovation must go beyond technology deployment. It must focus on how that technology conveys branding strategies that can fully embody the unique personality of Islamic banking, that not only supports Muslim customers but also non-Muslim loyalty, especially in multicultural and digitally evolving environments that can sustain success in Islamic banking in the future.

References

- Ackon, S. A., Kalevor, W. M., Bentum, T., & Assan, P. D. (2024). Financial literacy, financial attitude and financial well-being of University of Cape Coast staff during COVID-19 pandemic. *International Journal for Multidisciplinary Research*, 6(3).
- Adam, M., Wessel, M., & Benlian, A. (2020). AI-based chatbots in customer service and their effects on user compliance. *Electronic Markets*, 31(2), 427–445.
- Adawiyah, S., Patrianti, T., Dhamayanti, M., Pratiwi, N., Seituni, S., & Ginting, R. (2022). Integrated marketing communications Sharia banking economy.
- Addury, M., & Pangestu, D. (2023). Interactive marketing and relationship quality in Islamic banking: A Parepare case study. *Asian Journal of Islamic Management (AJIM)*, 83–95.
- Agresta, S. (2020). The impact of COVID-19 on banking communication strategies: A case study analysis. *Journal of Financial Regulation and Compliance*, 28(4), 491–507.
- Aini, N., & Ferdinand, A. (2021). Self-congruence theory: Factors affecting brand loyalty in fast-moving consumer goods industry. *Jurnal Inovasi Ekonomi*, 7(01), 1–12.
- Alayli, S. (2023). The impact of mobile banking on banking performance throughout the COVID-19 pandemic. *International Journal of Science and Research Archive*, 10(1), 749–757.
- Alharbi, R., Yahya, S., & Kassim, S. (2021). Impact of religiosity and branding on SMEs performance: Does financial literacy play a role? *Journal of Islamic Marketing*, 13(12), 2717–2741.
- Alharthi, M., Hanif, I., Rehman, H., & Alamoudi, H. (2021). Satisfaction of Pakistan's Islamic banking system during the COVID-19 pandemic: Logistic model-based identification of the determinants to improve customer. *Journal of Islamic Marketing*, 13(11), 2290–2307.
- Almaslukh, B., Alhabshi, S. M., & Abdullah, N. A. H. (2022). Digital communication in Islamic banking: Customer trust and satisfaction. *International Journal of Islamic and Middle Eastern Finance and Management*, 15(2), 368–388.
- Almaslukh, F., Khalid, H., & Sahi, A. (2022). The impact of internal marketing practices on employees' job satisfaction during the COVID-19 pandemic: The case of the Saudi Arabian banking sector. *Sustainability*, 14(15), 9301.
- Aloulou, M., Grati, R., Al-Qudah, A., & Al-Okaily, M. (2023). Does fintech adoption increase the diffusion rate of digital financial inclusion? A study of the banking industry sector. *Journal of Financial Reporting and Accounting*, 22(2), 289–307.

- Alshaketheep, K., Salah, A., Alomari, K., Khaled, A., & Jay, A. (2020). Digital marketing during COVID-19: Consumer's perspective. *WSEAS Transactions on Business and Economics*, 17, 831–841.
- Andespa, R., Yeni, Y., Fernando, Y., & Sari, D. (2024). Sustainable development of Islamic banks by creating Islamic branding: Challenges, importance, and strategies of Islamic branding. *International Journal of Sustainable Development and Planning*, 19(2), 637–650.
- Arner, D., Avgouleas, E., & Gibson, E. (2022). COVID-19, macroeconomic and sustainability shocks, moral hazard and resolution of systemic banking crises: Designing appropriate systems of public support. *European Business Organization Law Review*, 23, 937–976.
- Arora, A., & Kaur, A. (2020). Impact of digital marketing on banking sector in India: A study. *International Journal of Research in Finance and Marketing*, 10(5), 1–14.
- Azevedo, N., Aquino, G., Nascimento, L., Camelo, L., Figueira, T., Oliveira, J., ... & Figueiredo, C. (2023). A novel methodology for developing troubleshooting chatbots applied to ATM technical maintenance support. *Applied Sciences*, 13(11), 6777.
- Aziz, A. A., Salleh, A., & Kasim, N. (2022). Adopting digital technology for Islamic trust companies in Malaysia: Lessons from COVID-19. *Journal of Islamic Accounting and Business Research*, 13(4), 627–645.
- Barua, B., & Barua, S. (2020). COVID-19 implications for banks: Evidence from an emerging economy. *SN Business & Economics*, 1(1).
- Benegas, J., & Zanfardini, M. (2023). Customer engagement and loyalty: The moderating role of involvement. *European Journal of Management and Business Economics*.
- Borri, N., & Di Giorgio, G. (2021). Systemic risk and the COVID challenge in the European banking sector. *Journal of Banking and Finance*, 106, 106073.
- Burak, A., & Farina, L. (2021). Generational perspectives on mobile banking adoption during the pandemic. *International Journal of Bank Marketing*, 39(6), 1029–1051.
- Büyükközkcan, G., & Ilıcak, H. (2019). A new combination of decision-making methods for determining business models in the banking sector. *International Journal of Production Research*, 57(10), 3025–3047.
- Chaffey, D. (2019). *Digital marketing: Strategy, implementation and practice* (7th ed.). Pearson Education Ltd.
- Chaouali, W., & Hedhli, K. (2019). Toward a contagion-based model of mobile banking adoption. *The International Journal of Bank Marketing*, 37(1), 69–96.
- Chauhan, S., Akhtar, A., & Gupta, A. (2022). Customer experience in digital banking: A review and future research directions. *International Journal of Quality and Service Sciences*, 14(2), 311–348.
- Chen, X., Sun, X., Yan, D., & Wen, D. (2020). Perceived sustainability and customer engagement in the online shopping environment: The rational and emotional perspectives. *Sustainability*, 12(7), 2674.
- Chhatwani, M. (2022). Mortgage delinquency during COVID-19: Do financial literacy and personality traits matter? *The International Journal of Bank Marketing*, 40(3), 484–510.
- Chhatwani, M., & Mishra, S. (2021). Does financial literacy reduce financial fragility during COVID-19? The moderation effect of psychological, economic and social factors. *The International Journal of Bank Marketing*, 39(7), 1114–1133.
- Čiković, A. (2022). Challenges of digital marketing in small financial institutions. *Economics & Management*, 19(1), 77–89.
- Clark, R., Lusardi, A., & Mitchell, O. (2020). Financial fragility during the COVID-19 pandemic. *National Bureau of Economic Research*.

- Çolak, G., & Öztekin, Ö. (2021). The impact of the COVID-19 pandemic on bank lending around the world. *Journal of Banking & Finance*, 133, 106207.
- Coon, D., Mitterer, J. O., & Martini, T. (2017). *Introduction to psychology: Gateways to mind and behavior* (15th ed.). Cengage Learning.
- Cordero, J., Barba-Guamán, L., & Guamán, F. (2022). Use of chatbots for customer service in MSMEs. *Applied Computing and Informatics*.
- Crosman, P. (2020, June 12). Why banks need to embrace chatbots. *American Banker*.
- Cruz, C., Bosa, I., Kolling, C., Medeiros, J., & Ribeiro, J. (2024). Perceptions of different communication strategies on proenvironmental waste disposal behavior: A case study with university students in Brazil. *International Journal of Sustainability in Higher Education*, 26(3), 485–504.
- Cruz, C., Bosa, I., Kolling, C., Medeiros, J., & Ribeiro, J. (2024). Perceptions of different communication strategies on proenvironmental waste disposal behavior: A case study with university students in Brazil. *International Journal of Sustainability in Higher Education*, 26(3), 485–504.
- Dada, S. (2023). Customer satisfaction and crisis communication during COVID-19: A case of Malaysian banking services. *Asian Journal of Business Research*, 13(1), 82–95.
- Dahlstrøm, R., Nygaard, A., Kimasheva, M., & Ulvnes, A. (2014). How to recover trust in the banking industry? A game theory approach to empirical analyses of bank and corporate customer relationships. *The International Journal of Bank Marketing*, 32(4), 268–278.
- Dailey, L. (2016). Exploring the role of mobile technologies in the financial services and banking industry: A comparative review. *Journal of Financial Services Marketing*, 21(4), 305–313.
- Darmody, M., & Byrne, D. (2006). An introduction to computerised analysis of qualitative data. *Irish Educational Studies*, 25(1), 121–133.
- Desender, K., & Velez-Ospina, J. A. (2020). The impact of chatbots on customer experience: A service-oriented perspective. *International Journal of Information Management*, 52, 102157.
- Dovhan, I. (2020). Marketing communication and its importance in the financial sector. *Journal of Marketing and Management*, 11(2), 45–57.
- Elrod, J., & Fortenberry, J. (2020). Response hierarchy models and their application in health and medicine: Understanding the hierarchy of effects. *BMC Health Services Research*, 20(S1).
- Erdem, D., & Rojahn, J. (2022). The influence of financial literacy on financial resilience – New evidence from Europe during the COVID-19 crisis. *Managerial Finance*, 48(9/10), 1453–1471.
- Fadhli, M. (2023). Strategi pemasaran perpustakaan menggunakan model AIDA. *Unilib Jurnal Perpustakaan*, 14(2).
- Fares, O., Butt, I., & Lee, S. (2022). Utilisation of artificial intelligence in the banking sector: A systematic literature review. *Journal of Financial Services Marketing*, 28(4), 835–852.
- Fathin, R., & Indrawati, I. (2024). Optimising Instagram management for SMEs: A case study of Indonesian batik SMEs. *International Journal of Current Science Research and Review*, 07(08).
- Ferilli, F., Rossi, M., & Miccoli, S. (2024). Digital financial literacy and customer trust in post-pandemic banking. *Journal of Financial Services Marketing*, 29(1), 48–63.

- Fernandez, R., Uy, C., & Manalo, R. (2024). Exploring the efficacy of digital meme marketing campaigns in generating leads within the Generation Z demographic. *Journal of Computational Innovation and Analytics*, 3(1), 37–59.
- Fotova Čiković, K. (2022). Communication transformation in digital banking: The generational gap. *Journal of Digital Economy*, 5(2), 101–119.
- Froggatt, K. (2001). The analysis of qualitative data: Processes and pitfalls. *Palliative Medicine*, 15(5), 433–438.
- Fuchs, C. (2017). *Social media: A critical introduction* (2nd ed.). Sage Publications.
- Gosal, G., & Nainggolan, R. (2023). The influence of digital financial literacy on Indonesian SMEs' financial behavior and financial well-being. *International Journal of Professional Business Review*, 8(12), e04164.
- Haapio, H., Mero, J., Karjalainen, H., & Shaikh, A. (2021). Implications of the COVID-19 pandemic on market orientation in retail banking. *Journal of Financial Services Marketing*, 26(4), 205–214.
- Hanssens, D., & Pauwels, K. (2016). Demonstrating the value of marketing. *Journal of Marketing*, 80(6), 173–190.
- Hasan, M., Baharum, A., & Latiff, N. (2021). Challenges of digitising customer service in Malaysian regional banks during the pandemic. *Asian Finance Journal*, 13(4), 342–359.
- Hasan, R., Ashfaq, M., Parveen, T., & Gunardi, A. (2022). Financial inclusion – does digital financial literacy matter for women entrepreneurs? *International Journal of Social Economics*, 50(8), 1085–1104.
- Heinonen, K., & Strandvik, T. (2022). Viewpoint: Applying pragmatism to stimulate service research and practice – A European perspective. *Journal of Services Marketing*, 36(4), 467–475.
- Hilmi, M. (2024). Assessing the effect of chatbots on managing brand reputation among commercial banks in Malaysia. *INTCJ*, 1(1), 14–25.
- Hoang, V., & Phan, L. (2024). Digital banking adoption and financial inclusion in Vietnam: A multi-dimensional analysis of user perceptions and socioeconomic factors. *Journal of Economics Finance and Management Studies*, 7(10).
- Hoskins, S., & Abadi, S. (2022). Rethinking banking digitalisation in Southeast Asia post-pandemic. *Asian Banking and Finance Review*, 8(1), 44–59.
- Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 124–146.
- Huangfu, Y. (2024). Building digital trust in financial services: Post-COVID recovery strategies. *International Journal of Financial Innovation*, 6(1), 22–38.
- Ibáñez-Sánchez, S., Orús, C., & Flavián, C. (2022). Augmented reality filters on social media: Analysing the drivers of playability based on uses and gratifications theory. *Psychology and Marketing*, 39(3), 559–578.
- Juita, V. (2022). Financial literacy and financial coping strategy during COVID-19 pandemic in West Sumatra. *Ekonomis Journal of Economics and Business*, 6(1), 304.
- Kamesh, R. (2021). Designing inclusive mobile banking for older adults: Insights from user testing. *Journal of UX Research*, 4(2), 59–73.
- Keyser, A., Köcher, S., Alkire, L., Verbeeck, C., & Kandampully, J. (2019). Frontline service technology infusion: Conceptual archetypes and future research directions. *Journal of Service Management*, 30(1), 156–183.

- Kok, S. (2020). The branding of religious financial institutions in the UK: Conversations with market actors within the Islamic financial sector. *Journal of Islamic Marketing*, 12(4), 900–917.
- Kola, B., Zhezha, V., & Noti, E. (2024). Digital banking across the Balkans: Navigating adoption, innovation, and regional challenges. *Interdisciplinary Journal of Research and Development*, 11(3), 40.
- Kornitasari, Y., Mastur, A., & Saheruddin, H. (2023). Analysis of bank saving growth below IDR2 billion in Indonesia. *Economics Development Analysis Journal*, 12(3), 336–354.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Kumar, S., & Huang, Z. (2024). Sustainable marketing communication strategies in digital banking. *International Journal of Bank Strategy*, 18(2), 112–127.
- Kurowski, Ł. (2021). Household's overindebtedness during the COVID-19 crisis: The role of debt and financial literacy. *Risks*, 9(4), 62.
- Kusumawardhani, R., Ningrum, N., & Rinofah, R. (2023). Investigating digital financial literacy and its impact on SMEs' performance: Evidence from Indonesia. *International Journal of Professional Business Review*, 8(12), e04097.
- Lahuerta-Pujol, R., Nadal-Bernat, M., & Aranguren, G. (2022). Crisis communication strategies in financial institutions during COVID-19. *Public Relations Review*, 48(3), 102158.
- Laudon, K. C., & Traver, C. G. (2019). *E-commerce: Business, technology, society* (15th ed.). Pearson.
- Li, L., Lee, K., Emokpae, E., & Yang, S. (2021). What makes you continuously use chatbot services? Evidence from Chinese online travel agencies. *Electronic Markets*, 31(3), 575–599.
- Liamputtong, P. (2009). Qualitative data analysis: Conceptual and practical considerations. *Health Promotion Journal of Australia*, 20(2), 133–139.
- Liu, Y., Liu, X., Wang, M., & Wen, D. (2021). How to catch customers' attention? A study on the effectiveness of brand social media strategies in digital customer engagement. *Frontiers in Psychology*, 12.
- Made, I., Wiksuana, G., Candraningrat, I., Gde, I., & Baskara, K. (2023). Financial literacy and financial inclusion increasing financial resilience: A literature review. *Research Journal of Finance and Accounting*.
- Mahbub, R. (2021). Barriers to effective marketing in small regional banks. *Asian Journal of Economics and Finance*, 3(2), 110–120.
- Mahbub, R. (2022). Post-COVID digital strategies in Southeast Asian banking. *Journal of Asian Finance, Economics and Business*, 9(1), 135–144.
- Mirzaei, M., & Zand, A. (2021). The role of technology in banking communication: A review of the literature. *Journal of Banking and Financial Technology*, 5(1), 1–15.
- Moşteanu, N. (2020). Finance digitalisation and its impact on labour market. *Technium Social Sciences Journal*, 8, 598–605.
- Mulyono, J., & Sfenrianto, S. (2022). Evaluation of customer satisfaction on Indonesian banking chatbot services during the COVID-19 pandemic. *Commit (Communication and Information Technology) Journal*, 16(1), 69–85.
- Naveed, M., & Ali, S. (2024). Does risk tolerance mediate the relationship between financial literacy and financial well-being during COVID-19: Empirical evidence from an emerging economy. *SAGE Open*, 14(4).

- Nayeem, T., Pawsey, N., Murshed, F., Baumgartner, L., Boys, C., & Rayner, T. (2023). Modern sustainable fish screens: A study on developing effective communication with water users. *Sustainability*, 15(9), 7694.
- Ng, S., Sweeney, J., & Plewa, C. (2020). Customer engagement: A systematic review and future research priorities. *Australasian Marketing Journal*, 28(4), 235–252.
- Nordheim, C., Følstad, A., & Bjørkli, C. (2019). An initial model of trust in chatbots for customer service: Findings from a questionnaire study. *Interacting with Computers*, 31(3), 317–335.
- Oktavia, D., Firmansyah, R., & Yulia, E. (2023). Intergenerational learning in digital financial literacy during the COVID-19 recovery. *Journal of Educational Technology Research*, 21(3), 189–204.
- Pope, C. (2000). Qualitative research in health care: Analysing qualitative data. *BMJ*, 320(7227), 114–116.
- Qulub, A., & Putri, R. (2024). Antecedents of Muslim students' decisions to use Islamic digital banks. *Jurnal Penelitian Ekonomi dan Bisnis*, 9(1), 60–74.
- Rasyid, A., Willim, A., & Khaeryyah, S. (2024). The millennial money mindset: Redefining financial competency. *Journal of Economic Business and Accounting (Costing)*, 7(4), 7333–7338.
- Ray, S., Morgan, P., & Thakur, V. (2022). Digital financial inclusion and literacy from a G20 perspective.
- Rehman, M., Shareef, M. A., Ishaque, A., & Mahmood, Z. (2015). A conceptual framework of the impact of advertising on consumer behavior: Evidence from Pakistan. *International Journal of Marketing Studies*, 7(3), 122–132.
- Rehman, S., Hussain, S., & Rasheed, A. (2024). Unleashing financial inclusion: The mediating role of digital marketing in the impact of fintech and behavioral intention. *Journal of Modelling in Management*, 19(5), 1670–1685.
- Rehman, S., Shahzadi, K., & Nisar, S. (2024). Effect of brand elements on organisational success: A moderating approach to the brand experience of Muslim and non-Muslim customers of Islamic financial products in Pakistan. *Contemporary Issues in Social Sciences and Management Practices*, 3(1), 1–13.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Rossettini, G., Cook, C., Palese, A., Pillastrini, P., & Turolla, A. (2023). Pros and cons of using artificial intelligence chatbots for musculoskeletal rehabilitation management. *Journal of Orthopaedic and Sports Physical Therapy*, 53(12), 728–734.
- Roy, S., Shekhar, V., Quazi, A., & Quaddus, M. (2020). Consumer engagement behaviors: Do service convenience and organisational characteristics matter? *Journal of Service Theory and Practice*, 30(2), 195–232.
- Sari, P. R., & Wardhani, N. A. (2023). A shift in banking communication strategy: From branch-focused to digital engagement. *International Journal of Business and Management Review*, 11(2), 1–12.
- Schuetz, D., Mair, J., & Schrefl, M. (2018). Digital transformation in banking: Jointly evaluating strategies, business models, and customer engagement. *Journal of Business Research*, 95, 697–707.
- Setiani, N., & Yudiana, F. (2022). Effect of hijrah intention, Islamic bank service quality, and Islamic branding on loyalty in the use of Sharia digital banking with satisfaction as an intervening variable (Case study BTN Syariah KCP Pekalongan). *Imara Jurnal Riset Ekonomi Islam*, 6(2), 111.

- Sitanggang, A., Syafariani, R., Sari, F., Wartika, W., & Hasti, N. (2023). Relation of chatbot usage towards customer satisfaction level in Indonesia. *International Journal of Advances in Data and Information Systems*, 4(1), 86–96.
- Sugihyanto, T., & Arsjah, R. (2023). The effect of digital banking, digital transformation on the efficiency of commercial banks in Indonesia. *International Journal of Islamic Education Research and Multiculturalism (IJIERM)*, 5(2), 387–408.
- Sundjaja, A., Utomo, P., & Colline, F. (2024). The determinant factors of continuance use of customer service chatbot in Indonesia e-commerce: Extended expectation confirmation theory. *Journal of Science and Technology Policy Management*, 16(1), 182–203.
- Tashtamirov, M. (2023). Financial innovation and digital technology in the banking system: An institutional perspective. *SHS Web of Conferences*, 172, 02004.
- Thi, V., Paramita, W., & Quan, T. (2021). Does customer experience always benefit company? Examining customers' epistemic motivation and interaction with service contexts. *Australasian Marketing Journal*, 30(1), 35–50.
- Tiffani, I. (2023). Pengaruh literasi keuangan dan literasi digital terhadap preferensi bank digital. *MBIA*, 22(1), 152–167.
- Todua, N., & Gogitidze, M. (2022). Digital marketing challenges in small banks. *Georgian Journal of Business*, 10(1), 21–34.
- Usman, M., Umar, Z., Choi, S.-Y., & Teplova, T. (2024). Quantifying endogenous and exogenous shocks to financial sector systemic risk: A comparison of GFC and COVID-19. *The Quarterly Review of Economics and Finance*.
- Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(1), 5–23.
- Vashti, L. (2020). Mobile banking and customer trust during COVID-19. *Journal of Financial Services Innovation*, 12(4), 55–68.
- Verma, S., & Yadav, N. (2021). Past, present, and future of electronic word of mouth (eWOM). *Journal of Interactive Marketing*, 53, 111–128.
- Vilhena, J., & Navas, L. (2023). Inclusive banking: Building cross-generational loyalty through digital transformation. *Journal of Marketing Trends*, 18(1), 98–113.
- Voloc, A. (2021). Crisis communication in digital banking: Challenges and opportunities. *Banking and Technology Review*, 14(2), 45–58.
- Wang, T., Zhao, S., Wang, W., & Yang, H. (2021). How does exogenous shock change the structure of interbank network? Evidence from China under COVID-19. *Political Economy - Development: Political Institutions eJournal*.
- Watkins, D. (2017). Rapid and rigorous qualitative data analysis. *International Journal of Qualitative Methods*, 16(1).
- Wolok, T., & Kango, E. (2021). Infrastructure gaps and marketing struggles in rural banking. *Journal of Financial Services Research*, 9(3), 210–223.
- Yadova, R. (2021). The role of generational identity in digital banking adoption. *Global Journal of Finance and Banking Issues*, 15(3), 33–48.
- Yang, S., Li, M., & Liu, Y. (2020). Communication strategies in digital banking: Building trust in online environments. *Journal of Financial Services Marketing*, 25(4), 150–160.
- Yanto, H., Kiswanto, K., Baroroh, N., Hajawiyah, A., & Rahim, N. (2022). The roles of entrepreneurial skills, financial literacy, and digital literacy in maintaining MSMEs during the COVID-19 pandemic. *Asian Economic and Financial Review*, 12(7), 504–517.

Zanariasti, P., & Ikasari, N. (2020). Analysis of financial literacy amongst Indonesian first-semester students: A study in Universitas Indonesia, Institut Pertanian Bogor, and Institut Teknologi Bandung.

Zhang, J., Oh, Y., Lange, P., Yu, Z., & Fukuoka, Y. (2020). Artificial intelligence chatbot behavior change model for designing artificial intelligence chatbots to promote physical activity and a healthy diet: Viewpoint. *Journal of Medical Internet Research*, 22(9), e22845.