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The Influence of Digital Marketing Strategies on Brand Loyalty: A Cross-Cultural Study Using A/B Testing

Abstract

This study examines the effect of personalization-based digital marketing strategies on brand loyalty within cross-cultural contexts, employing A/B testing and multivariate analysis methods. The research is motivated by the critical role of digital marketing in fostering consumer relationships and the challenges of understanding cultural differences that influence consumer responses to marketing strategies. The primary objective of the study is to analyze how cultural dimensions moderate the effectiveness of personalized marketing content in enhancing brand loyalty. The study was conducted through an experiment involving 200 participants divided into two groups: one group received personalized digital content, while the other received standard content. Multivariate Analysis of Variance (MANOVA) was used to evaluate the effects of culture and marketing strategies on brand loyalty, consumer satisfaction, and product recommendations. The results indicate that personalized content significantly increases brand loyalty (M = 4.5, SD = 0.8) compared to standard content (M = 3.8, SD = 1.0; p < 0.05). Additionally, consumers from collectivist cultures demonstrated a more positive response to personalized content, with higher brand loyalty scores (M = 4.6) compared to those from individualist cultures (M = 4.0). This study underscores the importance of cultural sensitivity in digital marketing strategy planning. Integrating personalization elements with an understanding of cultural contexts has been shown to enhance consumer engagement and foster stronger brand loyalty. These results provide both empirical contributions and practical guidance for companies in designing effective marketing campaigns for diverse global markets.

Keywords: Digital Marketing, Brand Loyalty, Personalization, Cultural Dimensions, A/B Testing.

I. INTRODUCTION

In the rapidly evolving digital era, digital marketing has become an essential tool for companies to build and sustain brand loyalty. Changes in consumption patterns driven by technological advancements compel businesses to integrate digital-based marketing strategies to remain competitive. Strategies such as content personalization, interactivity, and the use of digital platforms not only expand marketing reach but also strengthen the emotional connection between brands and consumers. These factors are increasingly relevant as modern consumers tend to expect experiences tailored to their personal preferences. However, the effectiveness of these strategies is often influenced by cultural contexts, which play a critical role in shaping consumer perceptions and responses to marketing efforts. Companies that fail to account for cultural aspects in their digital marketing strategies risk losing appeal in specific markets, ultimately impacting overall brand loyalty.

(Leonidas & Alexandra, 2024) reveal that digital marketing strategies like personalization and the use of interactive content significantly influence brand loyalty, particularly among consumers with high expectations for personalized experiences. Personalization has been shown to foster

deep emotional engagement, ultimately enhancing consumer loyalty to the brand. On the other hand, other studies indicate that consumer responses to digital marketing strategies are heavily shaped by cultural factors. For instance, (Blut et al., 2022) employ Hofstede's Cultural Dimensions to illustrate that consumers from collectivist cultures are more responsive to marketing content emphasizing communal values compared to consumers from individualist cultures. Meanwhile, (Mangiò et al., 2023) find that emotion-based strategies tend to be more effective in countries with cultural orientations that prioritize emotional warmth. These findings underscore the importance of addressing cultural differences when designing effective digital marketing strategies, particularly in fostering brand loyalty within diverse global markets.

Although research on digital marketing and brand loyalty has advanced significantly, there remains a substantial gap in the literature, particularly in cross-cultural contexts. For example, (Guan et al., 2022) highlight the importance of content personalization in fostering brand loyalty, but their study is limited to individualist cultures, making it challenging to apply in collectivist settings. (Sarkis et al., 2024) Emotion-based marketing strategies are highly effective in enhancing brand loyalty; however, their approach is descriptive and lacks measurable quantitative evaluations. (Boustani & Chammaa, 2023) employ Hofstede's Cultural Dimensions model to explain cultural differences in digital marketing, but their research focuses solely on visual design preferences without assessing their impact on brand loyalty. Meanwhile, (Forghani et al., 2022) reveal that cultural differences significantly influence consumer responses to digital marketing strategies, but their study centers on general behavioral analyses rather than exploring the effectiveness of specific digital marketing strategies. These limitations indicate that many critical aspects remain unexplored, particularly those focusing on measuring the effectiveness of digital marketing strategies in enhancing brand loyalty across various cultures.

Furthermore, several studies underscore the need for more systematic quantitative approaches to bridge these gaps. (Singh et al., 2023) emphasize the importance of A/B testing methods in evaluating digital marketing strategies, yet their application within cross-cultural contexts remains unexplored. Cross-cultural research often relies on descriptive or qualitative approaches, offering limited empirical depth. The scarcity of studies employing quantitative methods, such as A/B testing, to assess the effectiveness of digital marketing on brand loyalty across cultures presents a significant challenge in this field. Therefore, this research aims to identify the most effective digital marketing strategies for enhancing brand loyalty in diverse cultural settings. By utilizing A/B testing methods, this study not only addresses gaps in the literature but also provides strategic guidance for multinational companies in adapting digital marketing strategies to diverse cultural contexts.

This research seeks to fill existing gaps by identifying the most effective digital marketing strategies for increasing brand loyalty across cultures. To achieve this objective, the study will employ A/B testing, enabling measurable analysis of the impact of various marketing strategies on cross-cultural consumers. Through this approach, the research aims to uncover the extent to which cultural differences moderate the effectiveness of digital marketing strategies, such as personalization and interactive content. Additionally, the study will provide empirical insights into the adaptation of marketing strategies for markets with differing cultural characteristics. It is hoped that the findings will offer practical, targeted guidance for multinational corporations in designing digital marketing strategies that align with local market needs. Overall, this research aspires to make a significant contribution to enhancing brand loyalty through culturally informed digital marketing strategies.

II.   LITERATURE REVIEW.

A. *Fundamental Theories*

1.   Definitions of Digital Marketing and Brand Loyalty

Digital marketing has become one of the primary strategies in modern marketing, replacing many forms of traditional marketing. According to (Masrianto et al., 2022), digital marketing is defined as the utilization of digital technologies such as social media, email, websites, and search engines to promote products and services to consumers. This strategy enables companies to efficiently reach a broader audience at a lower cost compared to conventional methods. Additionally, features such as data analytics in digital marketing provide profound insights into consumer preferences, allowing businesses to design more targeted and effective campaigns. (Dimitrios et al., 2023) emphasize that the key advantage of digital marketing lies in its ability to facilitate two-way communication, where consumers are not merely passive recipients of information but can also provide immediate feedback. This makes digital marketing a vital tool for fostering closer relationships between brands and consumers.

On the other hand, brand loyalty has long been a central focus in marketing, as it directly relates to business sustainability. According to (Cardoso et al., 2022), brand loyalty is the commitment of consumers to continue purchasing or supporting a particular product despite the availability of competitive alternatives. Such loyalty is not only driven by customer satisfaction but also by trust and a strong emotional connection with the brand. A more recent study by (Xuan et al., 2023) indicates that brand loyalty can be enhanced through consistent and relevant consumer experiences, including those delivered via digital channels. With increasing competition in the global market, building brand loyalty has become a strategic priority for companies, particularly through the personalized and interactive approaches offered by digital marketing.

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The relationship between digital marketing and brand loyalty has garnered growing attention in marketing literature. (Ibrahim, 2022) demonstrates that the use of social media as part of digital marketing strategies significantly impacts brand loyalty. Through more intense and personalized interactions, consumers feel more engaged with the brand, thereby strengthening their loyalty. Additionally, (Kaur et al., 2022) argue that strategies such as content personalization and digital reward programs enhance consumers' perceived value of the brand. This aligns with the findings of (Tran & Chang, 2024), who stress that positive digital experiences increase the likelihood of consumers remaining loyal to a brand, even when faced with cheaper or more convenient alternatives.

However, implementing digital marketing to enhance brand loyalty poses several significant challenges. (Brandão et al., 2023) note that poorly planned digital strategies can lead to consumer dissatisfaction and even negatively affect brand image. For instance, excessive communication or irrelevant content may reduce consumer trust in the brand. Furthermore, (Homburg & Wielgos, 2022) highlight that the success of digital marketing strategies largely depends on the extent to which companies understand the varying preferences of their consumers. Another challenge involves the need for companies to tailor their marketing approaches to align with the diverse needs of their audiences. This indicates that effective digital marketing implementation requires careful adjustments to internal and external factors influencing consumer loyalty.

2. Positive Responses in Groups to Personalized Digital Content

Personalized digital content has become an increasingly popular approach in digital marketing, primarily due to its ability to capture audience attention more effectively. Content personalization involves the use of data and technology to deliver information or experiences tailored to the needs, preferences, or behaviors of individuals. According to (Sahi et al., 2022), personalization offers a competitive advantage by helping brands establish stronger emotional connections with consumers. Previous studies indicate that personally relevant content is more likely to elicit positive responses compared to generic content. Furthermore, (Gündüzyeli, 2024) highlights that technologies such as data analytics and artificial intelligence have enabled companies to design increasingly accurate and measurable personalization campaigns. The growing adoption of this approach reflects a significant shift in digital communication strategies, where relevance is considered a key element in capturing consumer attention.

Several studies suggest that personalized content has a profound impact on consumer perceptions of a brand. Research by (Lambillotte et al., 2022) found that consumers are more likely to respond positively to brands offering personalized experiences tailored to their needs. Personalized content, such as product recommendations based on purchase history, enhances consumer

engagement and strengthens their perceived value of the brand, fostering deeper attachment. Moreover, (Mende et al., 2023) reveal that personalization is perceived as a more empathetic form of communication because it demonstrates a brand's deep understanding of its audience. Nevertheless, there is a need to strike a balance between effective personalization and the potential risks of privacy intrusion that may arise from excessive use of consumer data.

The positive impact of personalized digital content is also evident in various social media marketing contexts. A study by (Laor, 2022) reveals that personalized interactions with users through platforms like Instagram or Facebook can significantly boost engagement levels. In the study, the use of direct messages tailored to individual preferences was shown to enhance customer satisfaction with the service. Additionally, content targeting specific groups based on demographics or specific interests allows companies to reach their audience more effectively. This finding is supported by evidence that emotional responses to personalized content are often stronger than to generic content. Social media also provides a flexible channel for testing various forms of personalization to optimize the effectiveness of digital marketing campaigns.

Despite the immense potential of personalized digital content, challenges persist in ensuring its successful implementation. Research by (Riegger et al., 2022) indicates that the success of personalization depends not only on technology but also on a deep understanding of consumer preferences. Misuse or overly invasive use of data can lead to distrust and negative reactions from consumers. Additionally, the reliability of algorithms in creating personally relevant content often becomes a determining factor in delivering positive experiences. With growing consumer awareness of data privacy, companies must prioritize transparency and ethical considerations when employing personalization technologies. Emerging research in this field underscores the importance of combining advanced technologies with approaches rooted in genuine consumer needs.

B. Previous Research

1. Studies on the Effectiveness of Digital Marketing in Enhancing Brand Loyalty

Digital marketing has evolved into a critical strategic element in fostering brand loyalty, particularly in an increasingly competitive business environment. Through digital technologies such as social media, email, and search engines, companies have significant opportunities to strengthen relationships with consumers. (Keke, 2022) observes that digital marketing provides advantages in terms of broad audience reach, two-way interaction, and the ability to track consumer behavior in real time. (Yum & Kim, 2024) add that components such as content personalization and the flexibility of digital platforms enhance consumer engagement, which is a crucial factor in establishing brand loyalty. Another study by (Rashidi-Sabet & Bolton, 2024)

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demonstrates that consistency in digital experiences can strengthen consumer trust in brands, making digital marketing a relevant tool for fostering closer relationships with audiences.

Previous research indicates that using social media as part of a digital marketing strategy significantly impacts brand loyalty. (Santos et al., 2022) reveal that interactions through social media can boost consumer engagement with a brand, particularly when the presented content is relevant and personalized. (Sykora et al., 2022) emphasize that positive digital experiences on social media, such as prompt responses to comments or inquiries, help strengthen consumers' emotional connection with brands. Additionally, (Xu & Hu, 2022) note that digital-based reward programs, such as exclusive discounts or loyalty points offered through social media, can enhance consumer trust. In various contexts, social media serves as an effective channel for creating meaningful interactions between brands and consumers.

Beyond social media, content personalization has also been identified as a key component in enhancing brand loyalty through digital marketing. (Ampadu et al., 2022) find that consumers are more likely to respond positively to personalized product recommendations based on their purchase history or preferences. Individually relevant content can create unique experiences that distinguish a brand from its competitors. (Yum & Kim, 2024) show that personalization in digital marketing can improve consumer satisfaction, which indirectly reinforces loyalty. This finding aligns with (Zhang & Liu-Thompkins, 2024), who note that personalized email marketing and other digital campaigns contribute to increased long-term consumer engagement with brands. In digital marketing, personalization not only ensures relevance but also deepens the relationship between consumers and brands.

To provide a more structured overview, Table 1 presents a comparison of previous research findings on digital marketing and brand loyalty. Across the literature, the effectiveness of digital marketing in building brand loyalty heavily relies on elements such as personalization, interaction, and consistency in consumer experiences. These elements not only help create emotional connections with consumers but also reinforce their trust in brands. Prior studies highlight that digital approaches enable companies to deliver more relevant and tailored messages to their audience. Moreover, well-designed digital marketing strategies can leverage consumer data to create more personal and meaningful experiences. Collectively, these studies underscore that various digital platforms, from social media to email marketing, offer significant opportunities for companies to enhance long-term relationships with their audiences while building stronger brand loyalty.

Table 1. Comparison of Previous Research Findings on Digital Marketing and Brand Loyalty

Study	Focus	Key Findings
(Keke, 2022)	Advantages of digital marketing	Digital marketing provides advantages such as broad audience reach, two-way interactions, and real-time consumer behavior tracking.
(Yum & Kim, 2024)	Perceived value and customer satisfaction	Elements like content personalization enhance consumer engagement and strengthen brand loyalty.
(Rashidi-Sabet & Bolton, 2024)	Commitment and trust in social media interactions	Interactions via social media increase consumer trust and engagement with the brand.
(Santos et al., 2022)	Consumer engagement in social media	Meaningful interactions on social media help strengthen consumers' emotional connection to the brand.
(Sykora et al., 2022)	Digital experiences through social media	Positive digital experiences, such as prompt responses on social media, reinforce consumer-brand relationships.
(Xu & Hu, 2022)	Digital reward programs	Exclusive discounts and loyalty points via social media enhance consumer trust in the brand.
(Ampadu et al., 2022)	Content personalization and brand loyalty	Product recommendations based on consumer preferences create unique experiences that boost loyalty.
(Zhang & Liu-Thompkins, 2024)	Email-based loyalty programs	Personalized email marketing improves long-term consumer engagement with the brand.

2. The Relevance of A/B Testing Methods in Marketing Research

The A/B testing method has emerged as a crucial tool in marketing research, particularly for evaluating the effectiveness of digital marketing strategies. This technique allows companies to compare two versions of marketing elements, such as advertisements, web pages, or emails, to determine which yields better results. According to (Wu et al., 2023), A/B testing provides a data-driven approach that facilitates more accurate decision-making by directly measuring consumer preferences and behaviors. Furthermore, this method is frequently employed to enhance conversion rates and customer engagement across various digital channels. The flexibility of A/B testing enables businesses to tailor their marketing strategies based on specific empirical findings.

Given the rapid development of digital platforms, A/B testing has become increasingly relevant as a method for continuously optimizing the customer experience.

One primary application of A/B testing is in evaluating the design and content elements on digital platforms. (Liu, 2022) notes that this method is often used to assess the effectiveness of visual design elements, including layouts, color schemes, and call-to-action (CTA) buttons. (Kreicbergs et al., 2024) further highlight that A/B testing assists companies in understanding consumer preferences for different communication styles, whether formal or informal. The data generated from such tests provides valuable insights that can refine marketing elements to better meet the needs of target audiences. By delivering measurable results, businesses can enhance brand appeal while maximizing the effectiveness of their marketing campaigns. This capability positions A/B testing as a highly strategic tool for creating more targeted marketing communications.

In personalized marketing, A/B testing also plays a vital role in evaluating the success of personalization strategies. (Kreicbergs et al., 2024) point out that this method is commonly employed to test consumer responses to personalized content, such as product recommendations tailored to purchase histories. Their research indicates that successful personalization strategies not only increase customer satisfaction but also strengthen brand loyalty. Moreover, A/B testing enables companies to identify the most effective personalization elements, thereby allowing for more efficient allocation of marketing resources. By adopting a data-driven approach, companies can continue developing personalization strategies that are both relevant and aligned with consumer preferences in the digital era.

The relevance of A/B testing in marketing is further underscored by its capacity to support more measured strategic decision-making. (Abell & Biswas, 2023) reveal that this method is widely used in the evaluation of digital campaigns, including social media advertisements and email marketing. Insights derived from A/B tests provide valuable information about campaign elements that contribute most significantly to improved metrics such as clicks or purchases. Additionally, A/B testing minimizes risks, as results can be obtained quickly without disrupting overall marketing strategies. With these advantages, A/B testing has become an integral component of marketing research, enabling businesses to better understand consumer needs while effectively enhancing their campaign performance.

III.   RESEARCH METHOD

The research methodology in this study employs a combination of A/B Testing and multivariate analysis to examine the impact of digital content personalization strategies on brand loyalty among consumers from two different cultural groups. This approach was selected because it provides in-depth insights into how content personalization influences various brand loyalty-

related variables. The study uses primary data obtained directly through A/B Testing experiments, ensuring that the results accurately reflect real-world conditions. The experiment involves two consumer groups: Group A, which receives personalized digital content tailored to individual preferences, and Group B, which is provided with standard, non-personalized digital content. By comparing these two approaches, the study focuses on evaluating the differences in outcomes generated by each strategy in fostering brand loyalty.

The A/B Testing experiment involves 200 participants evenly divided into two groups, with distribution based on attributes such as culture, age, gender, and education level. Group A is exposed to digital content specifically designed to reflect individual preferences, aiming to enhance consumer engagement with the brand. Conversely, Group B receives generic digital content without personalization, representing a traditional marketing approach. During the experiment, consumer responses are measured using various indicators such as brand loyalty, satisfaction levels, and the tendency to recommend the product to others. These responses are quantified using a 1–5 Likert scale, enabling statistical analysis of the data. This experimental design not only compares the effectiveness of the two strategies but also provides relevant data for analyzing the influence of other variables, such as culture and demographics.

Descriptive statistics are employed to provide an in-depth overview of the characteristics of the consumer groups participating in the study. Variables such as culture, age, gender, and education level are analyzed to ensure that the two groups have equivalent distributions of characteristics, thereby maintaining the validity of the experimental results. Equivalence of characteristics between groups is a critical prerequisite in A/B Testing experiments, as it ensures that differences in outcomes are genuinely attributable to the strategies being tested, rather than to other demographic factors. Additionally, descriptive tables detailing group characteristics offer comprehensive information on the distribution of variables, such as cultural proportions, average age, gender distribution, and education levels. This information not only supports internal validation but also provides relevant context for interpreting the research findings. Through this descriptive analysis, the researchers can ensure that the experimental data offers a robust foundation for drawing accurate and reliable conclusions.

Table 2. Description of Consumer Group Characteristics

Variable	Group A (Personalized)	Group B (Standard)
Culture	60% Culture 1, 40% Culture 2	60% Culture 1, 40% Culture 2
Average Age	28 years	30 years
Gender	50% Male, 50% Female	45% Male, 55% Female

Education	70% Undergraduate, 30% Non-Undergraduate	65% Undergraduate, 35% Non-Undergraduate

Data analysis was conducted using MANOVA to identify the effects of independent variables, namely content strategy and culture, on brand loyalty as the dependent variable. MANOVA was chosen because it allows simultaneous analysis of multiple dependent variables, providing more comprehensive results than univariate analysis. In this study, the MANOVA formula applied in (1).

$$F = \frac{variance\ between\ groups}{variance\ within\ groups} \qquad (1)$$

The MANOVA results indicate that the content personalization strategy has a significant effect on brand loyalty, with an F-value that is statistically significant (p < 0.05). These findings suggest that personalized content strategies foster a closer relationship between the brand and consumers, ultimately enhancing their loyalty. To provide a clearer illustration, Table 3 presents the comparative results of the A/B Testing, highlighting the differences in effectiveness between the strategies.

Table 3. A/B Testing Comparison Results

Response Variable	Group A (Personalized)	Group B (Standard)	p-value
Brand Loyalty	4.5 (SD 0.8)	3.8 (SD 1.0)	< 0.05
Consumer Satisfaction	4.7 (SD 0.7)	4.0 (SD 0.9)	< 0.05
Product Recommendation	4.6 (SD 0.9)	4.1 (SD 1.1)	< 0.05

This analysis demonstrates that personalization in digital marketing strategies significantly impacts brand loyalty, while consumer culture also moderates this relationship. These findings underscore the importance of understanding individual preferences and cultural values in designing effective marketing strategies. By employing this approach, the study provides a comprehensive overview of the effectiveness of marketing strategies tailored to consumer characteristics. Moreover, personalization not only increases consumer engagement but also strengthens their emotional connection with the brand. Consumer culture as a moderating factor highlights the necessity of aligning marketing strategies with relevant social norms and local values. Therefore, the practical implications of this study encourage companies to integrate personalization and cultural sensitivity into their marketing strategies to sustainably enhance brand loyalty.

IV. RESULT

A. *A/B Testing Results*

The A/B Testing experiment revealed a significant difference in brand loyalty levels between the two groups. Group A, which received personalized digital content, recorded an average brand loyalty score of 4.5 (SD 0.8), whereas Group B, exposed to generic digital content, recorded an average score of 3.8 (SD 1.0). These findings strengthen the argument that content personalization positively contributes to consumer brand loyalty. Moreover, personalized content not only enhances consumers' emotional engagement with the brand but also creates a more relevant and meaningful experience for them. In this context, the results underscore the importance of data-driven approaches in designing effective digital marketing strategies. Previous research supports these findings, demonstrating that well-executed personalization can improve consumers' positive perceptions of a brand while fostering long-term relationships.

The positive response to personalized content is further reflected in consumer satisfaction scores, with Group A averaging 4.7 (SD 0.7) compared to 4.0 (SD 0.9) in Group B. Additionally, Group A exhibited a higher likelihood of recommending products to others, with an average score of 4.6 (SD 0.9) versus 4.1 (SD 1.1) in Group B. These differences indicate that personalization not only boosts immediate satisfaction but also encourages advocacy behaviors, which are key indicators of consumer loyalty. Over time, such strategies can create a domino effect, where satisfied consumers become brand ambassadors, contributing to organic growth. Figure 1 provides a visual illustration of these differences, further reinforcing the argument that personalization is a critical component of modern digital marketing. Additional research is necessary to explore the extent to which demographic or cultural factors influence the effectiveness of personalization. However, these results already provide a strong foundation for further implementation.
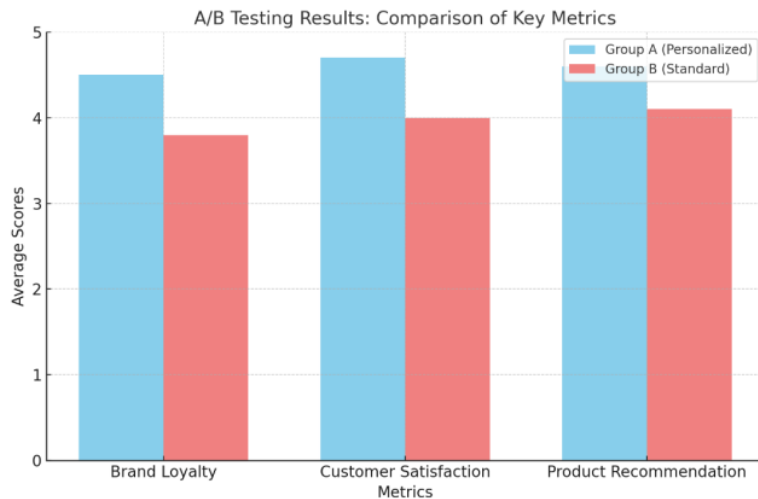
Figure 1. A/B Testing Results: Comparison of Brand Loyalty, Satisfaction, and Product Recommendation

B. Multivariate Analysis Results

The MANOVA revealed that culture acts as a significant moderator in determining the effectiveness of digital marketing strategies. Consumer groups with collectivist cultural backgrounds demonstrated more positive responses to personalized digital content compared to those from individualist cultures. This finding suggests that consumer preferences for digital content are influenced not only by the content's quality but also by the social values and cultural norms they uphold. In collectivist cultures, content emphasizing communal values, such as togetherness and solidarity, is more readily accepted due to its strong emotional relevance. Conversely, consumers from individualist cultures tend to appreciate content that highlights individuality and personal uniqueness. These insights emphasize the necessity of culturally segmented market strategies to maximize the effectiveness of digital marketing campaigns.

The analysis revealed a significant F-value ($p < 0.05$) for the interaction between culture and digital marketing strategies, confirming the influence of culture on brand loyalty. Figure 2 illustrates this interaction, showing that content emphasizing community values achieves higher brand loyalty scores within collectivist cultural contexts. This finding aligns with cross-cultural marketing theories, which assert that communication strategies tailored to cultural norms have a higher likelihood of success. Additionally, these results provide empirical evidence of the relationship between cultural elements and consumer responses to personalized digital marketing.

The data reflect the dynamics emerging in cross-cultural marketing contexts, particularly regarding how cultural values influence perceptions and responses to delivered content.
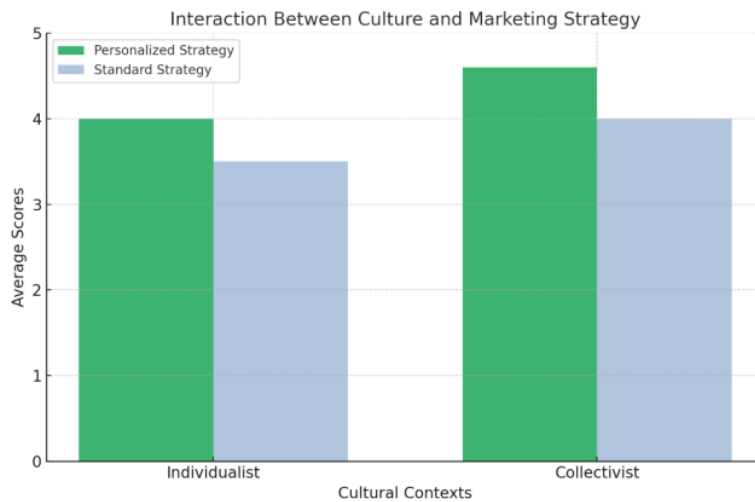

Figure 2. Cultural Moderation Effects: Interaction Between Culture and Brand Loyalty

Figure 2 illustrates that personalized strategies are more effective in increasing brand loyalty scores across both cultural contexts compared to standard strategies. Consumers from collectivist cultural backgrounds reported higher brand loyalty scores for personalized strategies compared to those from individualist cultures, reflecting a greater emotional resonance with community-oriented values. In contrast, loyalty scores for the standard strategy were lower in both cultural groups, with a significant difference still observed between collectivist and individualist cultures. The graph further indicates that while personalization is generally more effective, its impact is more pronounced in collectivist cultural contexts. This relationship underscores the importance of understanding cultural contexts in designing effective and relevant digital marketing strategies.

The statistical analysis using MANOVA provides crucial insights into the influence of digital marketing strategies, culture, and their interaction on brand loyalty. This analysis was designed to identify the individual and combined contributions of each variable. As a method capable of evaluating the relationships between independent and dependent variables simultaneously, MANOVA is highly relevant to this study. Table 4 summarizes the F-values and p-values for the variables of digital marketing strategies, culture, and their interaction. These values reflect the strength of the relationships between these variables and the measured brand loyalty. The

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information in the table aids in interpreting the statistical significance underlying the study's findings, providing quantitative evidence of the importance of each factor examined.

Table 4. Multivariate Analysis Results

Variable	F-Value	p-Value
Digital Strategy	23.45	3.8 (SD 1.0)
Culture	15.32	4.0 (SD 0.9)
Strategy-Culture Interaction	12.87	4.1 (SD 1.1)

Table 4 presents the multivariate analysis results, showing the F-values and p-values for the three primary variables in this study: digital marketing strategies, culture, and the interaction between strategy and culture. The digital marketing strategy variable yielded an F-value of 23.45 with a p-value < 0.001, indicating a significant effect on brand loyalty. The culture variable also showed significant results, with an F-value of 15.32 and a p-value < 0.001, suggesting that culture plays a critical role in shaping consumer responses to marketing. Additionally, the interaction between digital strategy and culture produced an F-value of 12.87 with a p-value < 0.001, demonstrating that the effects of digital strategy vary depending on the cultural context. The extremely low p-values across all three variables indicate that these relationships are unlikely to have occurred by chance. These findings support the argument that both strategy and culture, as well as their interaction, must be considered when designing effective marketing campaigns.

The moderating effect of culture on brand loyalty was further analyzed to evaluate differences in loyalty scores based on the type of marketing strategy employed. This study compared two primary cultural groups, individualist and collectivist, in their responses to personalized and standard strategies. Table 5 provides a summary of the average brand loyalty scores for each combination of cultural group and strategy type. The data in this table illustrate how consumer preferences for digital marketing strategies are influenced by cultural values. By comparing these scores, significant response patterns within each cultural context can be identified. These findings form the basis for understanding the role of culture as a moderating variable in enhancing the effectiveness of digital marketing strategies.

Table 5. Summary of Cultural Moderation Effects on Brand Loyalty

Culture	Personalized Strategy	Standard Strategy
Individualist	4.0	3.5
Collectivist	4.6	4.0

Table 5 summarizes the average brand loyalty scores based on the combination of marketing strategy and cultural context. Among individualist cultures, the personalized strategy yielded an average brand loyalty score of 4.0, higher than the standard strategy, which scored 3.5. Conversely, within collectivist cultures, the personalized strategy achieved the highest average loyalty score of 4.6, compared to 4.0 for the standard strategy. These results indicate that personalized strategies are more effective than standard strategies in enhancing brand loyalty across both cultural contexts. However, the impact of personalization is more pronounced within collectivist cultures, reflecting a preference for values emphasizing community and shared experiences. The observed differences in scores support the notion that tailoring marketing strategies based on cultural context can significantly improve consumer responses.

V.   DISCUSSION

The findings of this study demonstrate that personalization-based digital marketing strategies have a significant impact on brand loyalty, particularly within collectivist cultural contexts. These results align with Hofstede's theory, which posits that cultural values influence consumer behavior (Blut et al., 2022). In collectivist cultures, which emphasize values such as community and togetherness, consumers are more likely to respond positively to content that highlights these elements. This reinforces the notion that marketing strategies accounting for cultural contexts can enhance the overall effectiveness of digital campaigns. Moreover, this study supports the idea that personalized approaches in marketing not only increase the relevance of content but also strengthen the emotional connection between brands and consumers. Personalization thus emerges as a crucial component in creating meaningful consumer experiences in an increasingly competitive market.

This research corroborates earlier findings by (Leonidas & Alexandra, 2024), who revealed that personalization and interactive content play pivotal roles in enhancing brand loyalty. Their study found that consumers with high expectations for personalized experiences tend to exhibit deeper emotional engagement. These insights are consistent with our findings, which highlight the ability of personalization to deepen the emotional bond between consumers and brands. Consequently, personalization is not merely relevant to marketing strategies but also serves as a critical element in fostering long-term loyalty. The role of personalization becomes even more pronounced when combined with cultural elements, enabling more relevant and contextual campaigns. This underscores the potential of personalization-based strategies to serve as a competitive advantage in complex global markets.

Additionally, the multivariate analysis in this study reveals that culture acts as a significant moderator in the effectiveness of digital marketing strategies. These findings support research by

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(Mangiò et al., 2023), which identified emotion-driven strategies as more effective in countries with cultural orientations favoring emotional warmth. In this context, culture not only influences how consumers respond to marketing messages but also plays a crucial role in shaping how such strategies are designed and implemented. These findings contribute novel empirical evidence to the relationship between cultural elements and the effectiveness of personalization in digital marketing. Integrating cultural elements into marketing strategy planning thus becomes an indispensable step for companies seeking to operate globally.

However, this study has several limitations that warrant consideration. One limitation is the lack of attention to other variables, such as demographic or psychographic factors, that might influence consumer responses to digital marketing strategies. This suggests the need for further research to explore how these factors interact with cultural elements in shaping the effectiveness of campaigns. Additionally, while this study provides valuable insights, the generalizability of its findings may be limited to specific contexts, given the diversity of cultural values across countries. Future research is therefore encouraged to delve deeper into these dynamics to provide more comprehensive guidance for marketing practitioners. Overall, this study offers a vital foundation for the development of more focused and data-driven digital marketing strategies.

VI.   CONCLUSION AND RECOMMENDATION

This study reveals that personalization-based digital marketing strategies are proven to be more effective in enhancing brand loyalty compared to standard strategies. This effectiveness is particularly significant across different cultural contexts, with a greater impact observed among collectivist cultural groups compared to individualist ones. Consumers in collectivist cultures appear more responsive to marketing approaches that emphasize shared values and community. Conversely, consumers in individualist cultures tend to respond positively to strategies that highlight personalization and individual uniqueness. These findings underscore the importance of personalization in digital marketing strategies, especially in fostering deeper emotional connections with consumers. Moreover, the analysis indicates that cultural factors play a significant moderating role in influencing consumer responses to the applied marketing strategies. Consequently, integrating cultural elements into digital marketing strategy planning can be a more strategic approach to enhancing the effectiveness of global marketing campaigns while strengthening consumer loyalty across diverse market segments.

Based on these findings, it is recommended that companies adapt their digital marketing strategies to align with relevant cultural contexts to better meet consumer preferences. Such adjustments are critical as cultural values influence how consumers respond to marketing content, both emotionally and cognitively. Strategies tailored to cultural values have significant potential

to increase brand loyalty and strengthen consumer relationships through more personalized and culturally relevant approaches. Additionally, further research is recommended to include a broader range of cultural variations to expand the generalizability of the findings and identify deeper patterns in cross-cultural contexts. Comparative studies across cultures could provide additional insights into significant differences in consumer preferences driven by social norms and traditional values. Longitudinal studies could also contribute by evaluating the long-term impacts of personalization-based marketing strategies on brand loyalty, offering a more comprehensive understanding of the effectiveness of these strategies in fostering sustainable consumer relationships.

REFERENCES

Abell, A., & Biswas, D. (2023). Digital Engagement on Social Media: How Food Image Content Influences Social Media and Influencer Marketing Outcomes. *Journal of Interactive Marketing*, *58*(1), 1–15. https://doi.org/10.1177/10949968221128556

Ampadu, S., Jiang, Y., Debrah, E., Antwi, C. O., Amankwa, E., Gyamfi, S. A., & Amoako, R. (2022). Online Personalized Recommended Product Quality and E-Impulse Buying: A Conditional Mediation Analysis. *Journal of Retailing and Consumer Services*, *64*, 102789. https://doi.org/10.1016/j.jretconser.2021.102789

Blut, M., Beatty, S. E., & Northington, W. M. (2022). Cultural Personal Values and Switching Costs Perceptions: Beyond Hofstede. *Journal of Business Research*, *150*, 339–353. https://doi.org/10.1016/j.jbusres.2022.06.005

Boustani, N. M., & Chammaa, C. (2023). Youth Adoption of Innovative Digital Marketing and Cross-Cultural Disparities. *Administrative Sciences*, *13*(6), 151. https://doi.org/10.3390/admsci13060151

Brandão, A., Ribeiro, B., & Gadekar, M. (2023). You Ruined Our Love Story, but I Just Cannot Hate You—A Moderation–Mediation Analysis of Past Experienced Brand Love and Brand Hate. *International Journal of Consumer Studies*, *47*(3), 1126–1138. https://doi.org/10.1111/ijcs.12892

Cardoso, A., Gabriel, M., Figueiredo, J., Oliveira, I., Rêgo, R., Silva, R., Oliveira, M., & Meirinhos, G. (2022). Trust and Loyalty in Building the Brand Relationship with the Customer: Empirical Analysis in a Retail Chain in Northern Brazil. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), 109. https://doi.org/10.3390/joitmc8030109

Dimitrios, B., Ioannis, R., Ntalakos, A., & Nikolaos, T. (2023). Digital Marketing: The Case of Digital Marketing Strategies on Luxurious Hotels. *Procedia Computer Science*, *219*, 688–696. https://doi.org/10.1016/j.procs.2023.01.340

Forghani, E., Sheikh, R., Hosseini, S. M. H., & Sana, S. S. (2022). The Impact of Digital Marketing Strategies on Customer's Buying Behavior in Online Shopping Using the Rough

Set Theory. *International Journal of System Assurance Engineering and Management*, *13*(2), 625–640. https://doi.org/10.1007/s13198-021-01315-4

Guan, C., Hung, Y. C., & Liu, W. (2022). Cultural Differences in Hospitality Service Evaluations: Mining Insights of User Generated Content. *Electronic Markets*, *32*(3), 1061–1081. https://doi.org/10.1007/s12525-022-00545-z

Gündüzyeli, B. (2024). Artificial Intelligence in Digital Marketing Within the Framework of Sustainable Management. *Sustainability*, *16*(23), 10511. https://doi.org/10.3390/su162310511

Homburg, C., & Wielgos, D. M. (2022). The Value Relevance of Digital Marketing Capabilities to Firm Performance. *Journal of the Academy of Marketing Science*, *50*(4), 666–688. https://doi.org/10.1007/s11747-022-00858-7

Ibrahim, B. (2022). Social Media Marketing Activities and Brand Loyalty: A Meta-Analysis Examination. *Journal of Promotion Management*, *28*(1), 60–90. https://doi.org/10.1080/10496491.2021.1955080

Kaur, R., Singh, R., Gehlot, A., Priyadarshi, N., & Twala, B. (2022). Marketing Strategies 4.0: Recent Trends and Technologies in Marketing. *Sustainability*, *14*(24), 1–17. https://doi.org/10.3390/su142416356

Keke, M. E. (2022). The Use of Digital Marketing in Information Transport in Social Media: The Example of Turkish Companies. *Transportation Research Procedia*, *63*, 2579–2588. https://doi.org/10.1016/j.trpro.2022.06.297

Kreicbergs, T., Ščeulovs, D., & Bernovskis, A. (2024). Brand and Masculinity Archetypes As An Innovative Research Approach for Analyzing Consumer Preferences on Masculinity in Advertising. *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(1), 100184. https://doi.org/10.1016/j.joitmc.2023.100184

Lambillotte, L., Magrofuoco, N., Poncin, I., & Vanderdonckt, J. (2022). Enhancing Playful Customer Experience with Personalization. *Journal of Retailing and Consumer Services*, *68*, 103017. https://doi.org/10.1016/j.jretconser.2022.103017

Laor, T. (2022). My Social Network: Group Differences in Frequency of Use, Active Use, and Interactive Use on Facebook, Instagram and Twitter. *Technology in Society*, *68*, 101922. https://doi.org/10.1016/j.techsoc.2022.101922

Leonidas, T., & Alexandra, T. (2024). Leveraging Big Data Analytics for Understanding Consumer Behavior in Digital Marketing: A Systematic Review. *Human Behavior and Emerging Technologies*, *2024*(1), 3641502. https://doi.org/10.1155/2024/3641502

Liu, X. (2022). Animation Special Effects Production Method and Art Color Research Based on Visual Communication Design. *Scientific Programming*, *2022*(1), 7835917. https://doi.org/10.1155/2022/7835917

Mangiò, F., Pedeliento, G., Andreini, D., & Zarantonello, L. (2023). How Persuasive is Woke Brand Communication on Social Media? Evidence from a Consumer Engagement Analysis

on Facebook. *Journal of Brand Management*, *31*(4), 345–381. https://doi.org/10.1057/s41262-023-00347-4

Masrianto, A., Hartoyo, H., Hubeis, A. V. S., & Hasanah, N. (2022). Digital Marketing Utilization Index for Evaluating and Improving Company Digital Marketing Capability. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(3), 153. https://doi.org/10.3390/joitmc8030153

Mende, M., Scott, M. L., Ubal, V. O., Hassler, C. M. K., Harmeling, C. M., & Palmatier, R. W. (2023). Personalized Communication as a Platform for Service Inclusion? Initial Insights Into Interpersonal and AI-Based Personalization for Stigmatized Consumers. *Journal of Service Research*, *27*(1), 28–48. https://doi.org/10.1177/10946705231188676

Rashidi-Sabet, S., & Bolton, D. E. (2024). Commitment-Trust Theory in Social Media Interactions: Implications for Firms. *Journal of Marketing Management*, *40*(13), 1–36. https://doi.org/10.1080/0267257x.2024.2434143

Riegger, A. S., Merfeld, K., Klein, J. F., & Henkel, S. (2022). Technology-Enabled Personalization: Impact of Smart Technology Choice on Consumer Shopping Behavior. *Technological Forecasting and Social Change*, *181*, 121752. https://doi.org/10.1016/j.techfore.2022.121752

Sahi, G. K., Devi, R., Gupta, M. C., & Cheng, T. C. E. (2022). Assessing Co-Creation Based Competitive Advantage Through Consumers' Need for Differentiation. *Journal of Retailing and Consumer Services*, *66*, 102911. https://doi.org/10.1016/j.jretconser.2022.102911

Santos, Z. R., Cheung, C., Coelho, P. S., & Rita, P. (2022). Consumer Engagement in Social Media Brand Communities: A Literature Review. *International Journal of Information Management*, *63*, 102457. https://doi.org/10.1016/j.ijinfomgt.2021.102457

Sarkis, N., Jabbour Al Maalouf, N., & El Lakiss, R. (2024). Examining Influencer Marketing: The Roles of Para-Social Relationships, Unpaid Collaborations, and Trustworthiness in Shaping Consumer Buying Behavior. *Cogent Business and Management*, *11*(1), 2419501. https://doi.org/10.1080/23311975.2024.2419501

Singh, V., Nanavati, B., Kar, A. K., & Gupta, A. (2023). How to Maximize Clicks for Display Advertisement in Digital Marketing? A Reinforcement Learning Approach. *Information Systems Frontiers*, *25*(4), 1621–1638. https://doi.org/10.1007/s10796-022-10314-0

Sykora, M., Elayan, S., Hodgkinson, I. R., Jackson, T. W., & West, A. (2022). The Power of Emotions: Leveraging User Generated Content for Customer Experience Management. *Journal of Business Research*, *144*, 997–1006. https://doi.org/10.1016/j.jbusres.2022.02.048

Tran, L. A. P., & Chang, T. Y. (2024). What Makes Customers Loyal to an Online Booking Brand? The Effects of Online Brand Experience and Brand Attachment. *Journal of Quality Assurance in Hospitality & Tourism*, *25*(2), 187–214. https://doi.org/10.1080/1528008X.2022.2109239

Wu, J. J. W., Mazzuchi, T. A., & Sarkani, S. (2023). Comparison of Multi-Criteria Decision-Making Methods for Online Controlled Experiments in a Launch Decision-Making Framework. *Information and Software Technology*, *155*, 107115. https://doi.org/10.1016/j.infsof.2022.107115

Xu, X., & Hu, Z. (2022). Effect of Introducing Virtual Community and Community Group Buying on Customer's Perceived Value and Loyalty Behavior: A Convenience Store-Based Perspective. *Frontiers in Psychology*, *13*, 1–22. https://doi.org/10.3389/fpsyg.2022.989463

Xuan, Q. T., Truong, H. T. H., & Quang, T. V. (2023). The Impacts of Omnichannel Retailing Properties on Customer Experience and Brand Loyalty: A Study in the Banking Sector. *Cogent Business and Management*, *10*(2), 2244765. https://doi.org/10.1080/23311975.2023.2244765

Yum, K., & Kim, J. (2024). The Influence of Perceived Value, Customer Satisfaction, and Trust on Loyalty in Entertainment Platforms. *Applied Sciences*, *14*(13), 5763. https://doi.org/10.3390/app14135763

Zhang, J., & Liu-Thompkins, Y. (2024). Personalized Email Marketing in Loyalty Programs: The Role of Multidimensional Construal Levels. *Journal of the Academy of Marketing Science*, *52*(1), 196–216. https://doi.org/10.1007/s11747-023-00927-5

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