

The Influence of Artificial Intelligence Marketing and Generative Storytelling on Brand Engagement in the Culinary Industry in West Java

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ABSTRACT

This study investigates the influence of Artificial Intelligence (AI) marketing and creative storytelling on brand engagement in the culinary industry in West Java. Using a quantitative approach, data were collected from 150 respondents through a structured Likert-scale questionnaire and analyzed using SPSS Version 25. Descriptive statistics, reliability and validity tests, and multiple linear regression analysis were employed to examine the relationships between variables. The results indicate that both AI marketing and creative storytelling have a significant positive effect on brand engagement, with creative storytelling showing a slightly stronger influence. Combined, these factors explain 38.2% of the variance in brand engagement. The study highlights the importance of integrating AI-driven marketing strategies with compelling narratives to strengthen consumer interaction and loyalty, providing practical guidance for culinary businesses seeking competitive advantage in West Java.

Keywords: Artificial Intelligence Marketing, Creative Storytelling, Brand Engagement, Culinary Industry, West Java.

1. INTRODUCTION

The rapid development of technology has transformed marketing practices across industries, including the culinary sector. Among emerging technologies, Artificial Intelligence (AI) has become a pivotal tool for businesses to optimize marketing strategies, personalize consumer experiences, and enhance engagement [1], [2]. AI marketing enables companies to analyze consumer behavior, predict preferences, and deliver targeted content effectively, thereby fostering stronger brand-consumer relationships.

In parallel, creative storytelling has emerged as a powerful communication strategy that allows brands to connect emotionally with consumers. Storytelling not only conveys the brand's values and identity but also enhances memorability and consumer attachment [3]–[5]. In the context of the culinary industry, where experiential consumption and sensory engagement are essential, integrating creative stories into marketing campaigns can significantly impact brand engagement.

West Java, as one of Indonesia's most vibrant culinary regions, hosts a variety of traditional and modern food businesses competing for consumer attention. While numerous culinary businesses employ digital marketing, there is limited empirical evidence regarding the combined influence of AI-driven marketing and creative storytelling on brand engagement in this region [5], [6]. Understanding this relationship is crucial for marketers seeking to enhance customer loyalty, brand perception, and competitive advantage.

This study aims to examine the influence of Artificial Intelligence (AI) marketing and creative storytelling on brand engagement within the culinary industry in West Java. Using a quantitative approach, the research employs a structured survey administered to 150 respondents, with data analyzed through SPSS Version 25. The focus is to assess the strength and significance of

these relationships, providing empirical evidence on how technology-driven marketing and narrative strategies can enhance consumer involvement and attachment to culinary brands.

Specifically, the study seeks to: (1) examine the effect of AI marketing on brand engagement; (2) investigate the impact of creative storytelling on brand engagement; and (3) analyze the relative influence between AI marketing and storytelling in shaping consumer engagement. The findings are expected to offer theoretical contributions by expanding existing literature on digital marketing and narrative-based consumer behavior. Practically, this research provides actionable insights for culinary businesses in West Java, helping them optimize brand engagement through more effective AI-enhanced marketing techniques and compelling storytelling strategies.

2. LITERATURE REVIEW

2.1 *Artificial Intelligence (AI) Marketing*

Artificial Intelligence (AI) marketing refers to the use of advanced algorithms, machine learning, and data analytics to optimize marketing activities, personalize customer experiences, and predict consumer behavior [7]. AI tools enable businesses to analyze vast amounts of customer data, segment audiences, recommend products, and deliver targeted content effectively [8], [9]. In the culinary industry, AI marketing can include chatbots for customer service, personalized menu recommendations, predictive analytics for demand forecasting, and AI-powered advertising campaigns. Prior research indicates that AI marketing positively affects consumer engagement, satisfaction, and loyalty, as it allows businesses to interact with customers more efficiently and meaningfully [10], [11].

H1: Artificial Intelligence marketing has a positive effect on brand engagement in the culinary industry.

2.2 *Creative Storytelling*

Creative storytelling is the strategic use of narratives to communicate a brand's values, identity, and message to consumers [5], [6]. Storytelling engages consumers emotionally, making the brand experience memorable and fostering deeper attachment [6]. In the culinary context, storytelling can involve sharing the origin of dishes, the cultural heritage behind recipes, or customer experiences that highlight brand values. Previous studies show that creative storytelling enhances brand awareness, emotional connection, and engagement, particularly in industries where experience and emotion are central to consumer choice [3], [4].

H2: Creative storytelling has a positive effect on brand engagement in the culinary industry.

2.3 *Brand Engagement*

Brand engagement refers to the degree of consumer interaction, emotional attachment, and participation with a brand [12], [13]. Engaged consumers are more likely to exhibit loyalty, advocate for the brand, and actively participate in brand-related activities. Brand engagement is influenced by multiple factors, including marketing strategies, brand communication, and experiential initiatives. In the culinary industry, brand engagement can manifest as repeated purchases, positive reviews, social media interaction, and word-of-mouth promotion [14], [15].

2.4 *The Integration of AI Marketing and Creative Storytelling*

The integration of AI marketing and creative storytelling represents a contemporary approach to enhancing brand engagement. While AI provides precise targeting and personalization based on data-driven insights, storytelling adds emotional depth and narrative appeal. Combined, these strategies can create highly interactive, memorable, and personalized brand experiences, leading to stronger consumer engagement [16]–[18]. This combination is particularly relevant in the culinary sector, where sensory experience, culture, and narrative play significant roles in consumer decision-making.

H3: AI marketing and creative storytelling simultaneously have a positive effect on brand engagement in the culinary industry.

3. METHODS

3.1 Research Design

This study employs a quantitative research design to examine the influence of Artificial Intelligence (AI) marketing and creative storytelling on brand engagement in the culinary industry in West Java. A quantitative approach is suitable for testing hypotheses and determining the strength and significance of relationships between variables using numerical data [19].

3.2 Population and Sample

The population of this study consists of consumers who have interacted with culinary businesses in West Java, including restaurants, cafes, and food service outlets. A total of 150 respondents were selected using purposive sampling, a non-probability sampling method that targets individuals who have experience with culinary brands and digital marketing interactions [20]. The sample size is adequate for multiple regression analysis, following the rule of thumb that the number of respondents should be at least 10 times the number of independent variables [21].

3.3 Variables and Operational Definitions

The study examines three main variables: Artificial Intelligence (AI) Marketing (X1), defined as the use of AI tools, algorithms, and data-driven strategies to engage customers through personalization, automation, predictive analytics, and AI-powered advertising; Creative Storytelling (X2), which refers to the use of compelling narratives to communicate brand values and experiences through elements such as emotional appeal, brand stories, content originality, and narrative consistency; and Brand Engagement (Y), representing the level of consumer interaction, emotional attachment, and participation with a brand, measured through indicators like customer loyalty, social media interaction, brand advocacy, and repeat purchase intention. All variables in this study were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.4 Data Collection

Primary data were collected using structured questionnaires distributed both online and offline to the selected respondents. The questionnaire was designed based on validated indicators from previous studies [22]–[24] and adapted to the culinary context in West Java. Before full deployment, the instrument was pilot-tested with 20 respondents to ensure clarity and reliability.

3.5 Data Analysis

Data were analyzed using SPSS Version 25 through several statistical techniques, including descriptive statistics to summarize respondent demographics and overall response patterns, validity and reliability testing to ensure that each instrument accurately measured its intended variable and produced consistent outcomes, multiple linear regression analysis to assess the individual and simultaneous effects of AI marketing and creative storytelling on brand engagement, and hypothesis

testing using t-tests for individual predictors and F-tests for the overall regression model, with a significance level set at $\alpha = 0.05$.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The study involved 150 respondents from the culinary industry in West Java. The demographic analysis showed that 55% of respondents were female and 45% were male, with the majority aged 21–30 years (40%), followed by those aged 31–40 years (35%). In terms of education, 50% held a bachelor's degree, 30% held a diploma, and 20% came from other educational backgrounds. Regarding interaction frequency, 60% of participants reported engaging with culinary brands online at least once a week, while 25% interacted 2–3 times per month. These demographics indicate that respondents were generally digitally active and familiar with online culinary branding.

Descriptive statistics for the main variables further revealed that respondents tended to agree that culinary brands they interacted with had implemented AI marketing and creative storytelling strategies effectively. The variable means were consistently above 4.00, suggesting strong positive perceptions toward both marketing approaches and overall brand engagement. AI Marketing (X1) recorded a mean of 4.02 (SD = 0.58), Creative Storytelling (X2) achieved the highest mean at 4.15 (SD = 0.55), and Brand Engagement (Y) also showed a high mean of 4.08 (SD = 0.60). These results indicate that consumers generally experience impactful technology-driven and narrative-based marketing practices that contribute to higher engagement with culinary brands.

4.2 Validity and Reliability

The validity of each questionnaire item was tested using Pearson correlation against the total score, and all items produced correlation coefficients (r) greater than 0.30, indicating that every item was valid and appropriately measured its intended construct. Reliability testing using Cronbach's alpha further confirmed the consistency of the instrument, with all variables meeting the minimum reliability threshold, demonstrating that the questionnaire items were internally consistent and suitable for further analysis.

The reliability test results showed that AI Marketing (X1) had a Cronbach's alpha of 0.874, Creative Storytelling (X2) scored 0.892, and Brand Engagement (Y) achieved the highest reliability with a value of 0.914, all of which fall within the category of strong internal consistency. These findings confirm that all measurement instruments used in the study were highly reliable and appropriate for further statistical analysis.

4.3 Multiple Regression

Multiple linear regression analysis was conducted to examine the influence of AI marketing and creative storytelling on brand engagement.

Table 1. Multiple Regression

Predictor	B	Std. Error	t-value	Sig.
AI Marketing (X1)	0.423	0.081	5.255	0.000
Creative Storytelling (X2)	0.515	0.074	7.292	0.000
Constant	1.101	0.252	4.401	0.000

The results of the multiple regression analysis in Table 1 reveal that both AI Marketing (X1) and Creative Storytelling (X2) exert significant positive effects on Brand Engagement. AI Marketing shows a regression coefficient (B) of 0.423 with a standard error of 0.081 and a t-value of 5.255 ($p = 0.000$), indicating that AI-driven strategies such as personalization, automation, and predictive analytics contribute meaningfully to enhancing consumer engagement with culinary brands. This finding suggests that consumers value marketing approaches that feel tailored and technologically

advanced, aligning with their individual needs and behaviors. Meanwhile, Creative Storytelling demonstrates an even stronger influence, with a coefficient of 0.515, a standard error of 0.074, and a t-value of 7.292 ($p = 0.000$). This underscores the importance of emotionally resonant narratives, consistent brand stories, and original content in deepening connections between consumers and brands, highlighting that storytelling remains a more powerful driver of emotional engagement compared to purely technological marketing tools.

Further supporting the model's strength, the constant value of 1.101 suggests that a baseline level of brand engagement exists even without the contribution of AI Marketing and Creative Storytelling—likely explained by other factors such as product quality, customer experience, or brand reputation. The model's overall statistical significance is confirmed by the F-test result, $F(2,147) = 45.623$, $p < 0.001$, indicating that the combined influence of both predictors is meaningful. Additionally, the R^2 value of 0.382 shows that AI marketing and creative storytelling together account for 38.2% of the variance in brand engagement. These findings collectively demonstrate that while both variables significantly enhance brand engagement, creative storytelling emerges as the slightly stronger predictor in shaping consumer attachment and interaction within the culinary industry.

Discussion

The findings support all three hypotheses proposed in the study. First, AI marketing is shown to have a positive influence on brand engagement (H1 accepted), consistent with previous research such as [25], [26], which highlights how AI-driven personalization, predictive analytics, and automated communication enhance consumer interaction and loyalty. In the culinary industry, tools like chatbots, personalized menu or product recommendations, and targeted promotional messages make brand interactions more relevant and efficient, ultimately increasing consumer engagement. Second, creative storytelling also significantly affects brand engagement (H2 accepted), reaffirming insights from [27], [28], who argue that narrative-based marketing strengthens emotional attachment, improves brand recall, and encourages consumer advocacy. For culinary businesses, sharing stories related to recipes, cultural heritage, brand origins, or customer experiences helps deepen emotional bonds and enhances the overall brand experience.

Furthermore, the combined influence of AI marketing and creative storytelling explains 38.2% of the variance in brand engagement (H3 accepted), indicating that both variables work synergistically to enhance consumer connection. The integration of data-driven marketing and compelling narrative content allows culinary brands to deliver personalized yet emotionally resonant messages, creating a powerful engagement strategy in West Java's competitive culinary landscape. Overall, the study highlights the importance of blending technological innovation with creative content. Culinary entrepreneurs and marketers are encouraged to adopt AI-based tools while simultaneously developing meaningful storytelling approaches to maintain and strengthen brand engagement over time.

CONCLUSION

This study concludes that both Artificial Intelligence marketing and creative storytelling significantly enhance brand engagement in the culinary industry in West Java. AI marketing improves personalization, efficiency, and consumer relevance, while creative storytelling strengthens emotional connection and memorability. Among the two, creative storytelling has a slightly stronger influence on consumer engagement. Together, these strategies explain 38.2% of the variance in brand engagement, indicating their combined importance in fostering loyal and interactive customers. The findings suggest that culinary businesses should adopt an integrated approach that combines AI technology with compelling narratives to enhance brand presence, customer interaction, and overall competitiveness in a rapidly evolving market.

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