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THE EFFECT OF STORYTELLING IN ADVERTISING ON PURCHASE INTENTION: A STUDY ON ARTIFICIAL INTELLIGENCE APPLICATIONS

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Abstract:
Storytelling, one of the oldest forms of human communication, serves as a cognitive tool for meaning-making, value transmission, and decision-making. Because it integrates emotion and cognition, storytelling has been widely used to influence attitudes and behaviors. The study examines two AI-generated advertising films: one employing a rational advertising appeal that highlights functional product benefits, and the other an emotional advertising appeal that enables empathy and emotional connection with the spectators. The main characteristic of the study is evaluating participants' progress in AI literacy, given the gen-AI nature of the advertising content. The research first presents the theoretical bases of storytelling and its relationship with advertising, then evaluates the effects of generative AI and story-based advertisements on consumers' purchase intentions through analyzing AI-assisted storytelling in advertising using the AIDMSAS model. The results disclose that AI-powered storytelling can notably change consumers' decision-making.

Keywords:
Marketing Communication, Advertising, Advertising Appeals, Storytelling, Digital Storytelling, Artificial Intelligence, Artificial Intelligence Literacy

1. Introduction

Storytelling has always been a key way people communicate. In the past, it helped people and communities understand their world, share values, and set social norms. As storytelling moved from spoken word to digital formats, it became an important tool for brands to connect with consumers.

Today's technology enables the creation and personalization of stories for specific audiences. Storytelling has become more important in advertising because it helps brands build emotional connections with consumers. As Fog et al. (2005, p. 6) note, storytelling improves brand recall and can directly affect what people choose to buy.

Advances in artificial intelligence have changed how stories are created. AI can now generate text, images, and videos, which has changed both the creative and strategic sides of advertising (Kietzmann et al., 2018, p. 265). Storytelling and the way audiences relate to technology are now key factors in the effectiveness of advertising.

A person's understanding of artificial intelligence now affects how well they can understand and judge AI-generated content (Long & Magerko, 2020, p. 4). This means marketers need to think not just about the message, but also about who the audience is and how the message is delivered.

This study examines how AI-supported storytelling in advertising affects people's intention to buy products. It compares stories that focus on product features with those that aim to create emotional connections. The goal is to add new knowledge to the fields of storytelling, artificial intelligence, and purchase intention.

2. Advertising

Advertising is a key ingredient of marketing and a form of intended communication that aims at influencing the attitudes and behaviors of target audiences. The structure conveys information about products, services, or ideas. Advertising serves as an instrument that enables brands to make themselves known, increase awareness, and build relationships with consumers (Kotler & Keller, 2016, p. 628).

Advertising not only fulfills a commercial function but also assumes a prominent role in shaping cultural meanings and social values. In this respect, advertisements act as symbolic texts that reflect social norms and lifestyles while shaping consumer perceptions (Belk, 1988, p. 140).

2.1 Advertising and Consumer Behavior

Consumer behavior refers to the processes by which individuals select, purchase, use, and evaluate products or services to satisfy their needs and desires. Advertising plays a critical role in guiding these processes by providing information, shaping perceptions, and influencing decision-making mechanisms (Solomon, 2018, p. 33).

Advertising messages influence consumers by addressing both cognitive and emotional dimensions. Cognitive responses involve information processing, learning, and memory, while emotional responses involve feelings such as pleasure, excitement, trust, and empathy (Batra & Ray, 1986, p. 235). The effectiveness of advertising largely depends on its ability to activate these dimensions in a balanced manner.

2.1.1 Advertising Effects and Hierarchy-of-Effects Models

Advertising effectiveness examines conceptualized consumer response as a sequential process using hierarchy-of-effects models. These models suggest that consumers move through a series of stages from exposure to action.

One of the earliest and most widely known models is the AIDA model, which consists of four stages: Attention, Interest, Desire, and Action. This model assumes that advertising first captures consumers' attention, then stimulates interest, creates desire, and finally leads to purchase behavior (Strong, 1925, p. 85).

Another influential model is AIDMA, which extends the AIDA framework by incorporating Memory as an additional stage. According to this model, consumers must remember the advertising message for it to influence future purchasing decisions (Hall, 1924, p. 55).

With the development of digital media and interactive communication environments, traditional linear models have been expanded. The AISAS model, introduced by Dentsu, includes Search and Share dimensions that reflect consumers' active participation in information-seeking and content-dissemination methods in online environments (Sugiyama & Andree, 2011, p. 79).

2.1.2 The AIDMSAS Model

The AIDMSAS model incorporates conventional hierarchy-of-effects models with today's digital behaviors. It consists of seven stages: Attention, Interest, Desire, Memory, Search, Action, and Share. This model deliberates the multidimensional nature of consumer decision-making processes in digital contexts. Consumers not only receive notifications but also vigorously explore and share information within their networks (Wei & Lu, 2013, p. 437).

By combining both cognitive and behavioral aspects, the AIDMSAS model provides an all-around framework for analyzing advertising effectiveness in digital settings. In this study, the AIDMSAS model is the primary analytical tool to examine how AI-supported storytelling advertisements influence consumers' purchase intentions.

2.1.3 Advertising Appeals

Advertising appeals refer to persuasive message strategies used to attract attention and motivate consumers. Appeals are the underlying motivations or incentives embedded in advertising messages that encourage consumers to respond in a desired manner (Kotler & Armstrong, 2018, p. 460).

Among the various types of advertising appeals, rational and emotional appeals are the most commonly examined in marketing literature.

2.1.4 Rational and Emotional Advertising Appeals

Rational appeals focus on the functional and utilitarian benefits of products or services. These appeals emphasize attributes such as quality, performance, durability, price, and efficiency, appealing to consumers' logical reasoning and problem-solving abilities (Belch & Belch, 2021, p. 279).

Rational advertising is adequate when customers are involved in decision-making and scour information before purchasing. Consumers estimate options based on objective criteria and perceived significance.

Emotional appeals, on the other hand, aim to influence consumers by eliciting emotional responses rather than relying solely on logical arguments. Emotional advertising seeks to establish affective connections through feelings such as happiness, nostalgia, fear, empathy, or belonging (Holbrook & Batra, 1987, p. 406).

Emotional appeals are adequate in establishing brand attachment and augmenting message memorability. Advertisements can influence mindsets and behaviors. For instance, even though the functional product differences are minimal, they engage with consumers at an emotional level.

2.2 Storytelling

Storytelling is the art of sharing experiences, events, and meanings through narratives conveyed coherently and engagingly. Throughout history, storytelling has served not only as entertainment but also as a means of transmitting knowledge, values, and cultural norms across generations (Denning, 2005, p. 4). Storytelling fosters meaning-making by organizing information into narrative layouts that are easier to comprehend and remember. Stories enable individuals to interpret complex realities by linking causes and consequences within a temporal series (Bruner, 1991, p. 6).

2.2.1 Theoretical Foundations of Storytelling

The theoretical foundations of storytelling are rooted in classical narrative theory. Aristotle's Poetics identifies the vital components of storytelling: plot, character, and conflict. Aristotle stresses that a well-constructed plot should possess a beginning, middle, and end, forming a coherent and unified whole (Aristotle, trans. 1996, p. 23).

Freytag's Dramatic Pyramid conceptualizes narrative progression through five stages: exposition, rising action, climax, falling action, and resolution. This model has been widely applied to literary and dramatic works and later adapted for various media formats, including advertising narratives (Freytag, 1863/1900, p. 115).

In contemporary storytelling literature, Christopher Booker's model of seven basic plot structures has gained prominence. All narratives can be categorized into one of seven archetypal plots, such as "overcoming the monster," "the quest," or "rebirth." This approach highlights the repetitive and universal nature of storytelling patterns across cultures and media.

The Pixar storytelling model emphasizes cause-and-effect relationships and emotional progression through a sequence of "once upon a time" statements, allowing stories to unfold dynamically while maintaining audience engagement (Fog, Budtz & Yakaboylu, 2005, p. 35).

2.2.2 Storytelling as a Communication Tool

Storytelling is a powerful communication device that enables messages to be delivered in an engaging, emotionally resonant manner. Unlike immaculately informational communication, storytelling incorporates cognitive and emotional dimensions, allowing audiences to relate personally to the narrative (Escalas, 2004, p. 170).

Stories create immersive experiences that enhance message recall and persuasion. By identifying with characters and situations, audiences are more likely to internalize the values and messages embedded within stories (Green & Brock, 2000, p. 702). This quality makes storytelling a compelling strategy in contexts with heightened attention competition, such as advertising.

2.2.3 Digital Storytelling

Digital storytelling refers to the practice of creating and sharing narratives through digital technologies. It integrates multimedia components such as text, images, audio, and video to produce interactive and immersive narratives (Lambert, 2013, p. 2).

The rise of digital outlets has transformed storytelling from a linear, one-way process into a participatory and interactive experience. Spectators are no longer passive recipients of narratives but actively engage with, modify, and spread stories across digital networks (Jenkins, 2006, p. 4).
Digital storytelling enables personalization and scalability, allowing content to be tailored to particular preferences and disseminated to large audiences simultaneously. These characteristics make digital storytelling attractive for marketing communication strategies.

2.3 Storytelling in Advertising

Storytelling has become an important strategy in advertising as brands seek to differentiate themselves in saturated markets. By embedding products within narratives, advertisers can convey brand values and meanings beyond functional attributes (Fog et al., 2005, p. 7).
In advertising narratives, brands or consumers are often positioned as protagonists who face challenges and achieve resolution through the product or service. This allows consumers to envision themselves within the story, enriching emotional engagement and persuasion (Woodside, Sood & Miller, 2008, p. 103).
Story-based advertisements are effective in creating emotional bonds and increasing memorability. Research indicates that narratives are more likely to be remembered and shared, especially in digital environments where content circulates based on user engagement (Escalas & Stern, 2003, p. 566).
Storytelling enables advertisers to address both rational and emotional appeals simultaneously. While functional product information can be integrated into the narrative, emotional elements enhance immersion and identification, strengthening the advertisement's overall persuasive impact.

2.4 Artificial Intelligence–Supported Advertising

Artificial intelligence has become one of the most transformative technological developments in recent years, significantly affecting sectors such as marketing and advertising. AI technologies enable the automation of data analysis, content production, personalization, and decision-making processes, allowing advertising activities to be executed more efficiently and strategically (Kietzmann et al., 2018, p. 265).
In advertising, artificial intelligence is used across programmatic advertising, customer segmentation, recommendation systems, chatbots, and content creation. AI-supported advertising enables brands to interpret large volumes of data and deliver desired content to targeted consumers at the right time and through proper channels, based on machine-learned patterns and datasets (Davenport, Guha, Grewal & Bressgott, 2020, p. 25).

2.4.1 Artificial Intelligence Literacy

AI literacy refers to one's ability to understand, evaluate, and interact with AI systems. This concept encompasses not only technical knowledge, along with awareness of how AI systems work, potential benefits, and limitations (Long & Magerko, 2020, p. 4).
In advertising, AI literacy plays a critical role in shaping consumers' perceptions and evaluations of AI-generated content. Individuals with higher AI literacy are expected to be more familiar with AI-powered persuasion techniques in advertising.
Nevertheless, AI literacy isn't just about recognizing AI-generated content. It also includes understanding AI's influence on content personalization, data use, and decision-making processes. Therefore, AI literacy can be considered a multidimensional construct that affects consumers' trust, acceptance, and engagement with AI-supported advertising.

2.4.2 Generative Artificial Intelligence and Prompt Engineering

Gen-AI refers to AI systems capable of producing algorithmically original content by learning patterns from large datasets. These systems can generate text, images, audio, and video content that resemble human-created outputs (Russell & Norvig, 2021, p. 102).
In advertising, gen-AI is increasingly used to produce emotionally engaging, contextually relevant advertising stories by dissecting narratives and responses that align with brand identities and consumer preferences. Gen-AI also enables rapid production and adaptation of storytelling content, offering advantages such as cost efficiency, scalability, and personalization. Simultaneously, it raises questions regarding creativity, authorship, and the boundaries between human and machine-generated narratives. (Gündüzyeli, 2024)

Artificial intelligence technologies provide significant efficiencies in both individual and organizational contexts. However, the outputs generated by these systems are not always deterministic or fully consistent. Variability in results highlights the importance of structured human guidance in AI-driven content creation. In this regard, the concept of prompt engineering, which has emerged within the field of Human–Computer Interaction (HCI), has gained increasing relevance.

A prompt refers to the textual input or command provided to AI systems to guide model behavior and task execution. Within the context of AI-supported storytelling in advertising, prompt engineering can be conceptualized not merely as a technical input mechanism but as a strategic narrative design tool. The specificity, framing, and intentional structure of prompts directly influence the emotional tone, persuasive architecture, and cognitive pathways embedded within AI-generated advertising narratives. Accordingly, the effectiveness of AI-based storytelling cannot be evaluated independently of the human-designed input structures that guide the generative process. In this sense, prompt engineering represents a mediating layer between human strategic intention and machine-generated narrative output, shaping how advertising appeals are constructed and how consumer decision processes are activated.

2.5 Purchase Intention

Purchase intention refers to the likelihood that a consumer will purchase a particular product or service. It is widely used as a predictive indicator of actual purchasing behavior in marketing research (Fishbein & Ajzen, 1975, p. 288).

Purchase intention is shaped by multiple factors, including attitudes toward the product, perceived value, emotional responses, and external influences such as social norms and advertising messages. Advertising plays a role in forming purchase intention by influencing both cognitive evaluations and emotional reactions (Dodds, Monroe & Grewal, 1991, p. 312).

2.5.1 The Relationship Between Advertising and Purchase Intention

Effective advertising can positively influence consumers' purchase intentions by providing relevant information and persuasive cues, as numerous studies have shown. Advertising reduces uncertainty and enhances consumers' confidence in their purchasing decisions (MacKenzie, Lutz & Belch, 1986, p. 130).

Successful advertisements attract attention and resonate with consumers' values, fostering favorable mindsets and increasing purchase likelihood. Advertising appeals, structural narrative, and emotional engagement are integral to purchase intention.

2.5.2 Storytelling and Purchase Intention

Storytelling enhances the persuasive impact of advertising by embedding product information within meaningful narratives. Story-based advertisements boost emotional engagement and identification, thereby strengthening brand attitudes and increasing purchase intention (Escalas, 2004, p. 168).

Research suggests that consumers exposed to narrative advertising are more likely to develop positive brand perceptions and exhibit higher purchase intentions compared to those exposed to purely informational messages. This effect is pronounced when stories evoke emotional responses and align with consumers' self-concepts (Woodside et al., 2008, p. 100).

2.5.3 Artificial Intelligence–Based Storytelling and Purchase Intention

The embedding of artificial intelligence into storytelling practices introduces new dynamics into the relationship between advertising and purchase intention. AI-assisted storytelling enables the creation of narratives tailored to personal tastes and contexts and can improve engagement and persuasion. Although effectiveness may rely on elements such as genuineness, narrative, and AI literacy.

3. Methodology

This study was designed based on a quantitative research approach and conducted within the framework of a relational survey model. The overall research framework aimed to test the theoretical structure grounded in the AIDMSAS model. Participants' responses to advertisements employing rational and emotional appeals were comparatively analyzed in order to examine differences in cognitive and behavioral pathways.

Data were collected through an online survey. Participants were exposed to two distinct advertising films generated using artificial intelligence technology. Although the advertisements were produced through AI systems, the production technology was not explicitly disclosed to participants in order to prevent bias related to source awareness. After viewing each advertisement, respondents evaluated the content using structured measurement scales.

The collected data were analyzed using SPSS 26 and AMOS 26 software. Confirmatory factor analysis (CFA) was conducted to assess construct validity, and structural equation modeling (SEM) was employed to examine the relationships among variables within the AIDMSAS framework.

In addition, participants' levels of artificial intelligence literacy were measured using the Meta AI Literacy Scale (MAILS) developed by Carolus et al. (2022), with the aim of providing a descriptive contribution regarding individual technological competence within the analytical framework.

3.1. Conceptual Model and Hypotheses

Figure 1 presents the conceptual research model of the study. The model builds upon the classical AIDA (Attention–Interest–Desire–Action) approach and extends it by incorporating additional dimensions such as Memory, Search, and Share in order to provide a more comprehensive explanation of consumer behavior. With this extended structure, the AIDMSAS model enables a holistic analysis of consumer decision-making in digital and interactive advertising environments by integrating both cognitive and behavioral components.

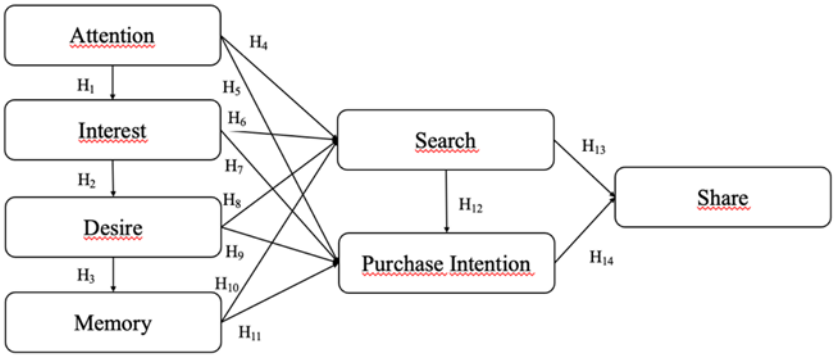

Figure 1. Conceptual Research Model

The theoretical model of this study is based on the following hypotheses:

H1: Attention has a positive effect on Interest.
H2: Interest has a positive effect on Desire.
H3: Desire has a positive effect on Memory.
H4: Attention has a positive effect on Search.
H5: Attention has a positive effect on Purchase Intention.
H6: Interest has a positive effect on Search.
H7: Interest has a positive effect on Purchase Intention.
H8: Desire has a positive effect on Search.
H9: Desire has a positive effect on Purchase Intention.
H10: Memory has a positive effect on Search.
H11: Memory has a positive effect on Purchase Intention.
H12: Search has a positive effect on Purchase Intention.
H13: Search has a positive effect on Share.
H14: Purchase Intention has a positive effect on Share.

3.2. Participant Profile

Of the 457 participants constituting the study sample, 58.9% were female, 40.9% were male, and 0.2% identified as other. Regarding marital status, 56.5% were single, and 43.5% were married. The majority of participants held a university degree (71.1%), followed by those with a master's degree (23.9%). Most participants belonged to middle- and upper-income groups, with the highest proportion (18.6%) concentrated in the 35,001–45,000 TL income range.

3.3. Analysis of Rational Appeal–Based Storytelling Advertisement

The confirmatory factor analysis of the rational appeal–based advertisement using the AIDMSAS scale demonstrated strong structural validity, with factor loadings exceeding 0.70. Only one item (ATT1 – "I looked at the advertisement carefully") was removed from the model due to a low loading value of 0.45. The model fit indices (CFI = 0.92, TLI = 0.90, RMSEA = 0.072) fell within acceptable limits recommended in the literature (Hu & Bentler, 1999; Kline, 2016), indicating an acceptable model fit.

Participants exhibited higher levels of trust and behavioral intention, particularly in sections where product benefits were clearly presented. High scores on the "Search" and "Memory" dimensions suggest that rational content leaves a more lasting imprint on cognitive processes.

Table 1: Validity and Reliability for Rational Appeal–Based Storytelling Advertisement

Item	Factor	Factor Weight	CR	AVE
ATT3	Attention	0,86	0,83	0,71
ATT2		0,83		
INT3	Interest	0,87	0,91	0,77
INT2		0,83		
INT1		0,94		
DES3	Desire	0,86	0,94	0,83
DES2		0,95		
DES1		0,93		
SEA1	Search	0,91	0,89	0,72
SEA2		0,93		
SEA3		0,90		
PUR4	Purchase Intention	0,90	0,94	0,83
PUR3		0,90		
PUR2		0,93		
PUR1		0,94		
SHA1	Share	0,89	0,95	0,83
SHA2		0,93		
SHA3		0,9		
MEM3	Memory	0,82	0,93	0,82
MEM2		0,91		
MEM1		0,82		

3.4. Analysis of Emotional Appeal–Based Storytelling Advertisement

In the analysis of emotional content, scale items similarly exhibited factor loadings above 0.70, indicating strong measurement validity. The model fit indices were high (CFI = 0.94, TLI = 0.92, RMSEA = 0.065), indicating that emotional storytelling exerted a strong effect on the consumer's cognitive structure.

Participants gave higher scores in the "Interest," "Desire," and "Share" dimensions for the emotional advertisement. This finding suggests that strategies aimed at establishing emotional bonds are particularly effective at generating shareable content.

Table 2: Validity and Reliability for Emotional Appeal–Based Storytelling Advertisement

Item	Factor	Factor Weight	CR	AVE
ATT3	Attention	0,88	0,84	0,64
ATT2		0,85		
ATT1		0,65		
INT3	Interest	0,91	0,95	0,86
INT2		0,91		
INT1		0,95		
DES3	Desire	0,90	0,95	0,87
DES2		0,97		
DES1		0,93		
SEA1	Search	0,93	0,95	0,86
SEA2		0,93		
SEA3		0,91		
PUR4	Purchase Intent	0,90	0,95	0,84
PUR3		0,92		
PUR2		0,92		
PUR1		0,92		
SHA1	Share	0,83	0,94	0,83
SHA2		0,94		
SHA3		0,97		
MEM3	Memory	0,89	0,92	0,78
MEM2		0,92		
MEM1		0,85		

3.5. Analysis of Artificial Intelligence Literacy

As the Artificial Intelligence Literacy scale represents a newly structured instrument in the literature, an exploratory factor analysis (EFA) was conducted to examine its factor structure. Prior to the analysis, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed to assess the suitability of the data for factor analysis. The KMO value was calculated as 0.93, and Bartlett's test was significant ($\chi^2(153) = 7350.578$, $p < 0.001$), indicating that the data were appropriate for factor analysis. In the subsequent analysis of the Artificial Intelligence Literacy scale, the items similarly exhibited factor loadings above 0.70, indicating strong measurement validity. The measurement was based on the Meta AI Literacy Scale (MAILS) that was incorporated into the research design to define the sample profile and to describe participants' level of technological competence, thereby offering a methodological contribution by systematically accounting for sample characteristics in AI-based advertising research. Composite Reliability (CR) and Cronbach's Alpha (α) values were high (CR ranging between

0.85 and 0.96; α ranging between 0.86 and 0.94), demonstrating strong internal consistency. The Average Variance Extracted (AVE) values ranged from 0.65 to 0.79, confirming that convergent validity was achieved.

3.6. Structural Equation Modeling Analysis

In this section, the results of the structural equation modeling conducted separately for the rational and emotional appeal–based advertising contents are presented, and the relationships among the variables are explained.

3.6.1. Structural Model for the Rational Appeal–Based Advertisement

The structural model proposed for the rational appeal–based advertisement included 14 hypotheses. Following the SEM analysis, 10 of the 14 hypothesized paths were found to be statistically significant. Four hypotheses (H4, H5, H7, and H11) were excluded from the final model due to non-significant path coefficients.

Model fit indices indicated a good level of fit between the proposed model and the observed data ($\chi^2/df = 3.227$, CFI = 0.96, TLI = 0.96, IFI = 0.96, NFI = 0.95, RFI = 0.94, RMSEA = 0.07). These values fall within the recommended thresholds in the literature (Hu & Bentler, 1999; Kline, 2016), confirming the adequacy of the structural model.

The hypothesis testing results are summarized in Figure 2.

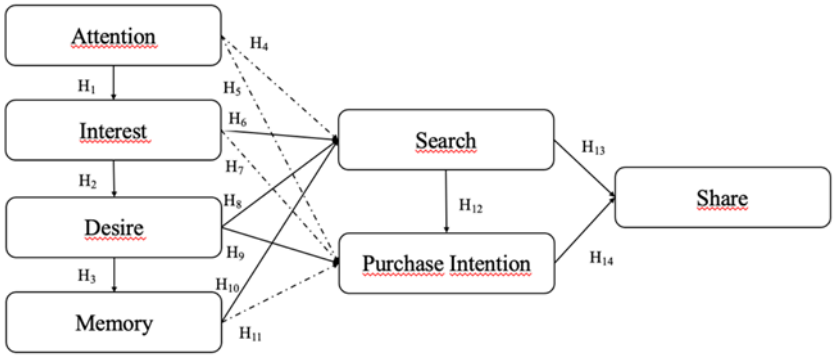

Figure 2. Structural Paths After SEM for the Rational Appeal–Based Advertisement

The results reveal that Attention strongly influences Interest ($\beta = 0.97$, $p < .001$), indicating that initial exposure plays a critical role in rational advertising contexts. Similarly, Interest significantly predicts Desire ($\beta = 0.83$, $p < .001$), and Desire significantly predicts Memory ($\beta = 0.70$, $p < .001$) and Purchase Intention ($\beta = 0.56$, $p < .001$). Furthermore, Search significantly affects both Purchase Intention ($\beta = 0.46$, $p < .001$) and Share behavior ($\beta = 0.61$, $p < .001$). Overall, the majority of the theoretically proposed relationships were supported in the rational appeal–based model.

3.6.2. Structural Model for the Emotional Appeal–Based Advertisement

For the emotional appeal–based advertisement, the structural model also included 14 hypotheses. Following the CFA and SEM procedures, 8 paths were found to be statistically significant, while the remaining paths were excluded due to non-significant coefficients.

Model fit indices suggested an acceptable level of fit ($\chi^2/df = 4.446$, CFI = 0.94, TLI = 0.93, IFI = 0.95, NFI = 0.93, RFI = 0.92, RMSEA = 0.087). Although the RMSEA value slightly exceeded the ideal threshold of 0.08, the overall fit indices remained within acceptable ranges (Hu & Bentler, 1999; Kline, 2016), indicating that the model provides a reasonable representation of the data.

The hypothesis testing results are presented in Figure 3.

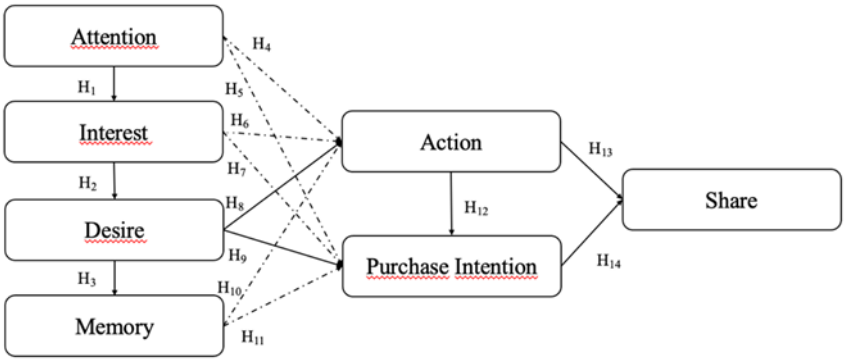

Figure 3. Structural Paths After SEM for the Emotional Appeal–Based Advertisement

Similar to the rational model, Attention strongly predicts Interest ($\beta = 0.96$, $p < .001$). Interest significantly affects Desire ($\beta = 0.53$, $p < .001$), and Desire significantly influences Memory ($\beta = 0.62$, $p < .001$), Search ($\beta = 0.78$, $p < .001$), and Purchase Intention ($\beta = 0.49$, $p < .001$).

Unlike the rational model, the effects of Memory on Search and Purchase Intention were not statistically significant. However, Search significantly predicts both Purchase Intention ($\beta = 0.53$, $p < .001$) and Share behavior ($\beta = 0.52$, $p < .001$). Additionally, Purchase Intention has a significant but relatively modest effect on Share ($\beta = 0.37$, $p < .001$).

Overall, the emotional appeal–based structural model demonstrates acceptable model fit and provides statistically meaningful support for the majority of the theoretically proposed relationships.

4. Discussion and Conclusion

This study examined the effects of AI-generated rational and emotional appeal–based advertising content on the consumer decision-making process within the framework of the AIDMSAS model. In both advertising conditions, the measurement models demonstrated acceptable fit indices, and factor loadings generally exceeded the recommended thresholds, supporting the structural integrity of the constructs. The structural models further confirmed the validity of the AIDMSAS framework in the context of AI-supported advertising, with 10 of 14 hypotheses supported in the rational condition and 8 of 14 supported in the emotional condition.

One of the most notable findings is that the pathway (Attention → Interest → Desire → Memory) operated in both content types. This result indicates that, regardless of whether the advertisement was based on rational or emotional appeals, consumers progressed through a similar cognitive–affective sequence in the decision-making process. However, clear divergences emerged in the later stages of the process depending on appeal type. In the rational condition, Interest, Desire, and Memory significantly triggered Search behavior, suggesting that rational storytelling strengthens evaluation processes such as information verification, comparison, and claim validation. In contrast, in the emotional condition, Desire emerged as the primary driver of Search, indicating a more motivation-centered and selective decision route.

In both models, Desire had a direct and significant effect on Purchase Intention, highlighting its central role as the key mechanism linking narrative engagement to behavioral outcomes. Moreover, the absence of a direct effect of Attention on either Search or Purchase Intention suggests that attention functions as an initiating but not a sustaining force; the critical threshold lies in the transformation of attention into interest and, more importantly, into desire.

Another important finding related to the digital decision-making ecosystem is that, in both models, Search and Purchase Intention significantly influenced Share behavior. This result indicates that consumer decision-making extends beyond purchase and culminates in social dissemination, thereby supporting the "Share" stage of the AIDMSAS model in the context of AI-based advertising.

Given that the stimuli were AI-generated, participants' AI literacy levels were also assessed to contextualize the sample profile. The relatively high literacy scores suggest that the findings reflect responses from a technologically competent consumer segment.

Overall, the findings largely support the core assumptions of the AIDMSAS model while demonstrating that AI-generated advertising can activate different decision routes depending on the appeal type. Rational appeals reinforce a more information-oriented and verification-driven process, whereas emotional appeals generate a more motivation-centered and flexible decision path centered on desire. From a managerial perspective, appeal strategy should be regarded not merely as a creative choice but as a strategic mechanism that shapes the architecture of consumer decision-making leading to search, purchase intention, and sharing behaviors. The findings indicate that, whether an AI-generated advertisement speaks to logic or emotion, the AIDMSAS model remains a valid framework for explaining consumer decision-making; however, the linear and sequential nature of the process becomes more flexible at certain stages depending on the type of appeal, redefining the pathways through which decisions are formed.

The observed flexibility in certain stages of the decision process suggests that consumer behavior in digital environments has become increasingly dynamic and multidimensional. This highlights the importance of moving beyond strictly linear models and incorporating contextual and situational factors into contemporary decision-making frameworks. The fact that rational and emotional appeals reach purchase intention through different cognitive and affective pathways further underscores the need for diversified marketing communication strategies rather than one-size-fits-all approaches.

This study contributes to the literature by empirically extending the applicability of the AIDMSAS model to AI-generated advertising contexts. The findings demonstrate that the model not only remains valid in technology-mediated narrative environments but also accommodates nonlinear decision pathways depending on the type of advertising appeal. By revealing the multidimensional and dynamic nature of contemporary consumer decision-making, the study offers a conceptual expansion of the AIDMSAS framework.

Furthermore, by comparatively examining rational and emotional appeals within AI-generated storytelling, the research advances the advertising appeals literature through a stage-based analysis of differential cognitive and affective activation patterns. In addition, the integration of the Meta AI Literacy Scale (MAILS) into the research design provides a methodological contribution by systematically accounting for technological competence as a defining characteristic of the sample profile in AI-based advertising research.

From a managerial perspective, the findings suggest that AI applications offer scalable and cost-efficient content production capabilities without necessarily compromising persuasive effectiveness. However, the strategic quality of AI-generated advertising depends less on the technology itself and more on the expertise of marketing professionals guiding the generative process. In this regard, prompt engineering emerges as a strategic narrative design practice that shapes persuasive tone, appeal structure, and decision-route activation. As input quality increases, the resulting outputs become more strategically aligned, persuasive, and behaviorally effective.

This study demonstrates how storytelling in AI-generated advertising—through rational and emotional appeals—reconfigures the architecture of consumer decision-making. By integrating narrative strategy with technology-mediated persuasion, the findings contribute to marketing theory and digital advertising practice by offering a structured and empirically grounded understanding of how appeal-dependent decision pathways unfold in AI-driven communication environments.

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