

Understanding Instagram's Power in Influencing Consumer Behavior: Neuromarketing Studies

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ABSTRACT

This study aims to analyze the application of neuromarketing elements in Instagram marketing strategies to influence consumer behavior. Using the PICO framework (Population, Interest, Context), the study focuses on consumers exposed to digital marketing on Instagram, emphasizing neuromarketing elements such as visualization, personalization, and emotional engagement. A systematic literature review approach was employed based on the PRISMA protocol, screening over 4,000 articles to ensure relevance and quality. The data were processed through thematic analysis to uncover patterns and key themes related to neuromarketing-based marketing on Instagram. The findings indicate that elements such as visual aesthetics (Gestalt principles), emotional content, and user-generated content (UGC) significantly contribute to enhancing engagement and building emotional connections with consumers. The study also highlights that neuromarketing elements can influence long-term memory and purchasing decisions through visually appealing and emotionally relevant content. Furthermore, message congruence between brand content and UGC was shown to improve positive perceptions of marketing campaigns. This research contributes by expanding the understanding of neuromarketing applications in the context of visually driven social media platforms like Instagram. Its implications are relevant for both academics conducting further studies and digital marketing practitioners seeking to optimize their strategies through neuroscience-based approaches. The study also recommends further exploration of consumer behavior impacts in comparative analyses across other social media platforms.

Keywords: consumer behavior; digital marketing strategies; Instagram; neuromarketing; social media
Subject classification codes: • SDG 8: Decent Work and Economic Growth; • SDG 9: Industry, Innovation, and Infrastructure; • SDG 12: Responsible Consumption and Production.

INTRODUCTION

Instagram was first launched in October 2010 by Kevin Systrom and Mike Krieger as a photo-sharing application, attracting 25,000 users within a single day. By April 2012, Instagram was acquired by Facebook for \$1 billion, at which point it already had 50 million users. Since then, Instagram has continuously evolved, introducing new features such as video sharing in 2013, Stories in 2016 (similar to Snapchat), and IGTV in 2018 for long-form videos. Shopping features were also introduced in 2018, enabling users to purchase products directly through the app. In 2020, Instagram launched Reels to compete with TikTok, followed by numerous updates to support content creators and monetization efforts. By 2021, Instagram surpassed 2 billion monthly active users. In 2023, it launched Threads, a text- and media-sharing platform designed to compete with Twitter. Instagram's evolution highlights its adaptability to social media trends and user demands, making it one of the most influential digital platforms.

Instagram has been regarded as an effective platform for marketing to influence consumer behavior since the early 2010s when social media began to be seen as an interactive space for brands and consumers (Kaplan & Haenlein, 2010). Digital marketing has increasingly emphasized visual elements and personalization as key aspects, as discussed by Tiago and Veríssimo (2014). Research by Casaló et al. (2017) reveals that consumer satisfaction, hedonism, and social influence drive engagement on Instagram, with visual elements such as photos and videos playing a significant role in capturing

consumer attention. Influencer marketing has also become a central focus, with Lou and Yuan (2019) and De Veirman et al. (2017) demonstrating that influencer credibility and follower count significantly impact consumer trust and attitudes toward brands, particularly through visually appealing content. Furthermore, Voorveld et al. (2018) highlight Instagram's advantages over other platforms in fostering emotional connections between consumers and brands, thanks to its visual strength and ability to share personal experiences. Narrative power and consumer reviews, as discussed by Kozinets et al. (2010), are also key in building brand loyalty through storytelling. Appel et al. (2020) conclude that Instagram will remain a primary marketing tool due to its ability to leverage data for more effective personalization. Combining visual, social, and personalized elements, Instagram has significantly shaped consumer behavior.

Before the digital era, consumer behavior was predominantly influenced by traditional media such as television, radio advertisements, and direct experiences. Kotler et al. (2014) argued that marketing at the time was more one-directional, where consumers passively received brand messages through conventional media. Consumer decision-making was also more reliant on social influences from family and friends, as explained by Engel, Blackwell, and Miniard (2005) and Solomon (2020). Behavioral models during this period were relatively linear and heavily dependent on direct experiences, as described by Howard (1969) and Schiffman et al. (1951). The decision-making process was simpler, with limited interactions beyond purchasing, and loyalty was largely built through personal experiences and direct relationships with brands.

The digital era introduced a dramatic shift in consumer behavior with the emergence of social media and data-driven marketing. Laudon (2008) emphasized that consumers now have direct access to product information, comparisons, and brand interactions via digital platforms. Kotler et al. (2016) underscored the importance of personalization in digital marketing, enabling brands to tailor messages according to consumer preferences. Solomon (2008) explained how social media, particularly Instagram, strongly influences consumer decision-making, with significant peer and online recommendation effects. Social media has also introduced the concept of social comparison, as shown by Tiggemann and Slater (2014), influencing self-perception and purchase decisions. Influencer marketing has become a key factor in the digital era, with studies by Casaló et al. (2017) and De Veirman et al. (2017) showing that influencer credibility boosts consumer trust in brands. Furthermore, social media fosters stronger emotional engagement, as explored by Voorveld et al. (2018) and Lou and Yuan (2019). As a result, the digital era has transformed how consumers interact with brands, making them more connected, informed, and involved in purchasing decisions.

Neuromarketing is an interdisciplinary field that leverages neuroscience to gain deeper insights into consumers' emotional and cognitive processes. The concept emerged in the early 2000s with advancements in brain imaging technologies like functional magnetic resonance imaging (fMRI) and electroencephalography (EEG). Zaltman (2003), through the Zaltman Metaphor Elicitation Technique (ZMET), pioneered the use of neurocognitive techniques to explore consumers' emotional associations with brands. Lee et al. (2007) expanded neuromarketing by utilizing fMRI to map brain areas involved in emotional responses to advertisements, demonstrating that emotions play a crucial role in purchase decisions. Subsequently, Fugate (2007) introduced biometric techniques such as eye-tracking and galvanic skin response (GSR) to measure real-time consumer engagement. In the 2010s, Kahneman (2011), in *Thinking, Fast and Slow*, conceptualized the role of the "fast system" (emotional) in consumer decision-making, supporting findings that most purchase decisions occur subconsciously. Morin (2011) further noted that neuromarketing uncovers unconscious emotional responses to create more effective marketing strategies. Plassmann et al. (2012) integrated neurophysiological insights with big data, paving the way for large-scale consumer behavior analysis. Karim and Kamal (2024) examined how digital interactions, including social media, shape consumer emotions and brand perceptions, introducing a digital-based neuromarketing approach. Recent research by Lee et al. (2018) utilized EEG to design advertisements targeting specific brain areas associated with happiness, trust, or memory. With advanced technological integration, neuromarketing has become a strategic tool for understanding consumers' emotional and cognitive motivations, enabling marketers to craft more personalized and effective campaigns.

This study shares similarities with previous research that discusses neuromarketing in digital consumer behavior and social media contexts. Alvino et al. (2024) highlighted that neuromarketing contributes to measuring the effectiveness of digital advertisements using techniques such as eye tracking and EEG, while Vences et al. (2020) emphasized the role of neuromarketing in building emotional connections between organizations and audiences on social media, focusing on social and psychological influences. Additionally, de Jesus et al. (2022) underscored the importance of visual elements, positive emotions, and personalization in advertisements to capture consumer attention. The systematic

review approach employed in this study is also aligned with the methods used by Sinha et al. (2024) and Srivastava & Bag (2024) to explore key trends in neuromarketing. However, this study presents significant differences, offering unique novelty. No prior research has specifically explored Instagram as the primary platform for understanding consumer behavior through a neuromarketing approach. Studies such as Alvino et al. (2024) and Vences et al. (2020) have discussed social media in general without focusing on a specific platform like Instagram, with its distinctive features such as reels, stories, and live sessions. Moreover, while previous research has frequently addressed visual and emotional elements, these aspects have not been examined in depth in the context of Instagram, despite its heavy reliance on visual appeal to influence consumers.

The primary focus of this research is to understand how neuromarketing elements are applied in Instagram marketing to influence consumer behavior. The study is based on the PICo framework, which involves the following:

1. Population: Consumers exposed to digital marketing on Instagram.
2. Interest: The use of neuromarketing to influence consumer behavior, such as purchasing decisions, engagement, or emotional responses.
3. Context: Instagram as a social media or digital marketing platform.

The PICo (Population/Problem, Interest, Context) framework is a tool used to formulate research questions in qualitative studies and systematic reviews, focusing on specific experiences or social phenomena (Lockwood et al., 2015). It is derived from PICO, which is more common in quantitative research, and helps organize key research elements systematically (Holly et al., 2012).

The primary research question posed is: How are neuromarketing elements applied in Instagram marketing to influence consumer behavior?. This study aims to contribute by identifying the techniques and strategies utilized to leverage Instagram as a neuromarketing-based marketing medium and by explaining their impact on consumer behavior. This approach is not only relevant for academics but also provides practical insights for digital marketers seeking to optimize Instagram as a neuroscience-based marketing platform.

METHODS

The literature review in this study adopts a systematic and scientific approach to assess existing studies, aiming to understand the current state of knowledge and address specific research questions (Fahimnia et al., 2015). This process maps the research domain and evaluates future research directions to advance the field (Tranfield et al., 2003). Following the guidelines from Saunders et al. (2009), the literature review is conceptualized as an adaptive cycle involving the definition of keywords, searching relevant literature, and analyzing findings to address the research questions. This study employs the five-step approach proposed by Rowley and Slack (2004), which includes identifying research questions, developing a search strategy, evaluating the literature, analyzing the findings, and compiling a report. The applied protocol facilitates the identification of recent research areas, with all literature data sourced from Scopus, the largest bibliometric database encompassing more than 20,000 peer-reviewed journals (Fahimnia et al., 2015).

This study uses the PRISMA framework to conduct a systematic literature review, ensuring transparency, accountability, and a systematic methodology in selecting and analyzing relevant articles. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) is a framework designed to enhance transparency and accountability in reporting systematic reviews (SR) and meta-analyses (Moher et al., 2009). PRISMA includes a 27-item checklist covering key aspects such as search strategy, selection criteria, and analysis methods, along with a flow diagram outlining the article selection process in four stages: identification, screening, eligibility, and inclusion. This framework minimizes bias, ensures replicability, and enhances the reliability of research findings (Liberati et al., 2009). Furthermore, PRISMA has extensions for specific needs, such as PRISMA-S for search strategies and PRISMA-ScR for scoping reviews. By emphasizing transparency and systematicity, PRISMA has become the gold standard in systematic literature reviews.

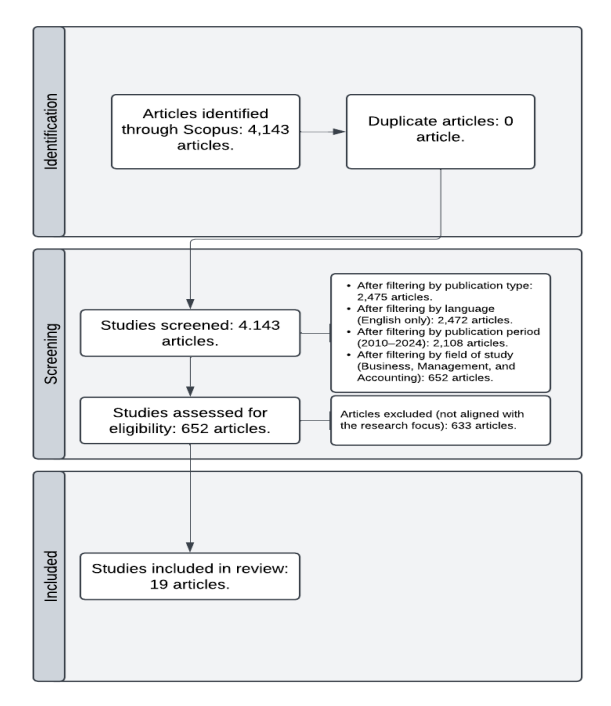


Figure 1. Flow Diagram of the PRISMA Protocol

Defining Keywords (Search Strategy)

The literature search was conducted extensively using primary keywords relevant to the study topic, including "Neuromarketing," "Instagram," and "Consumer Behavior." The keywords applied were: (Neuromarketing OR Neuroscience OR Brain-Based Marketing) AND (Instagram OR Visual-Based Social Media) AND (Consumer Behavior OR Customer Decision-Making OR Buying Behavior OR Consumer Response). Boolean operators "AND" and "OR" were used to expand the search to articles addressing various variations of these keywords, focusing on the application of neuromarketing elements in Instagram marketing and their relationship to consumer behavior. The search was performed in the "title, abstract, keywords" tab in the Scopus database. This strategy initially yielded 4,143 articles, which were then further filtered based on predefined inclusion and exclusion criteria to ensure relevance to the research focus.

Refining the Initial Results (Inclusion and Exclusion Criteria)

The literature search applied inclusion and exclusion criteria to ensure the relevance of selected articles. The selection was limited to journal articles and literature reviews, while conference papers, book chapters, comments, and others were excluded due to their lower academic rigor (Ramos-Rodríguez & Ruiz-Navarro, 2004). The first exclusion criterion, publication type, reduced the articles to 2,475. Subsequently, only English-language articles were retained, leaving 2,472 articles. The articles were then filtered by publication period (2010–2024), capturing the rise of Instagram as a visual marketing platform, advancements in neuromarketing technologies such as fMRI and EEG, shifts in consumer behavior due to digitalization, and the dominance of social media in marketing strategies. This filtering left 2,108 articles. Finally, only articles from the fields of Business, Management, and Accounting were considered, resulting in 652 articles. The final results were exported in .csv and BibTeX formats for further analysis, with additional filtering through abstract and full-text reviews to ensure alignment with the research focus.

The data analysis process in this study employs thematic analysis to identify, organize, and explore patterns emerging in the literature related to neuromarketing on Instagram and consumer behavior. Thematic analysis in qualitative research, as described by Braun and Clarke (2006), involves several stages, including familiarization with data, coding, identifying themes, and reporting findings. Subsequent research by Braun and Clarke (2013) provides practical guidelines for applying this method in qualitative research, while Nowell, Norris, White, and Moules (2017) highlight the importance of theme verification to ensure the credibility of the analysis. Clarke and Braun (2013) further discuss

the challenges of teaching thematic analysis and strategies to address them. These foundational works underpin the application of thematic analysis in systematic literature reviews, enabling the identification of key themes in studies on neuromarketing, Instagram, and consumer behavior.

RESULTS

Table 1. Review Articles

Author (Year)	Journal	Research Objective	Methodology	Key Findings	Contribution to Literature	Recommendations for Future Research
Sinha et al. (2024)	Academy of Marketing Studies Journal	To provide comprehensive theoretical insights into the conscious and subconscious brain in e-commerce consumer behavior using neuromarketing.	Systematic literature review of peer-reviewed journal publications (2012–2022).	Neuromarketing studies in e-commerce explore concepts such as trust, purchase intention, emotional activation, product evaluation, buying decisions, and consumer rankings. Research focuses on brain areas related to trust and cognition in e-commerce.	Contributed to literature by providing an in-depth review of the use of neuromarketing to understand e-commerce consumer behavior, with emphasis on brain areas associated with trust and cognition.	Offers directions for future research in e-commerce neuromarketing, including exploring the relationship between the brain and consumer purchasing decisions.
Kajla et al. (2024)	Journal of Consumer Behavior	To use bibliometric analysis to understand the evolution and main themes in neuromarketing and provide insights for future research.	Bibliometric analysis of 383 articles listed in the Scopus database.	Key themes in neuromarketing include consumer decision-making, marketing and consumer behavior, advertising, non-invasive techniques for ad effectiveness, ERP (Event-Related Potentials), and fMRI in brand extension.	Provided an overview of the most researched topics in neuromarketing and identified gaps in existing literature.	Suggests exploring existing gaps in more depth, especially regarding the influence of non-invasive techniques and ERP on consumer purchase decisions.
Alvino et al. (2024)	International Journal of Internet Marketing and Advertising	To review the use of neuromarketing in digital marketing, social media, and mobile marketing.	Scoping review of 68 relevant articles in the field of neuromarketing.	Neuromarketing contributes to measuring online ad effectiveness, persuasion, preferences, salient features, and user experience. Eye	Provided insights into how neuromarketing is applied in digital advertising and	Encourages further exploration of new techniques such as voice and breath analysis, as well as a deeper

		along with future research directions.		tracking and electroencephalography (EEG) are the most frequently used techniques.	explained how neuroscience techniques are used to measure consumer reactions to online ads.	understanding of the impact of online ads on consumer behavior.
Srivastava & Bag (2024)	Benchmarking: An International Journal	To investigate the potential use of facial recognition and neuromarketing in modern marketing based on data and neuro signals.	Systematic literature review using the PRISMA framework to select relevant articles from the Scopus database.	Identified five key themes in neuromarketing and facial recognition marketing that are relevant to modern marketing but remain underexplored.	Offered an updated review of the application of technologies such as neuromarketing and facial recognition in marketing, aiding the design of AI-based marketing strategies.	Recommends further research into the deeper applications of these techniques and identifying novel ways to optimize AI-based marketing strategies.
Casado-Aranda et al. (2023)	Psychology & Marketing	To provide an overview of knowledge development, current research streams, and theoretical models in neuromarketing within communication contexts.	Comprehensive analysis of 861 publications using keyword co-occurrence analysis and science mapping tools.	Found rapid growth in neuromarketing publications in communication, with a slight decline in citation counts post-peak. The use of brain imaging tools for persuasion studies in virtual environments and social marketing contexts is growing.	Offered insights into the application of neuromarketing tools in communication, particularly in social marketing and sustainability, while highlighting emerging methods such as neural synchronization and deep learning.	Recommends further exploration of new techniques in neuromarketing and more in-depth studies in social communication and sustainable marketing contexts.
de Jesus et al. (2022)	Research, Society and Development	To conduct a systematic review identifying how	Systematic review of articles collected from PubMed,	Found that consumer-focused ads should be personalized, evoke positive emotions,	Provided insights into neuromarketing methodologies	Future research should focus on standardizing neuromarketing research

		neuromarketing is studied in consumer behavior contexts using experimental protocols and statistical analysis.	ScienceDirect, and DOAJ (2016–2020), filtered based on inclusion and exclusion criteria. Thirteen articles were selected after screening.	use images and sounds of famous individuals, and feature appealing packaging. Highlighted the need for more consistent methodological standards in neuromarketing to allow replication and validation of hypotheses.	s and the importance of personalization in ads and the use of celebrity figures. Emphasized the need for standardized protocols in neuromarketing research to ensure replicability and hypothesis validation.	protocols for easier replication and more validated results. Further research on the impact of specific elements, such as positive emotions and celebrities, is also needed.
Vences et al. (2020)	Frontiers in Psychology	To review the effectiveness of neuromarketing as a tool for enhancing emotional connections between organizations and audiences on social media, focusing on biometric measurements used to predict user behavior.	Theoretical review of available scientific literature from Web of Science on neuromarketing in the context of social media.	Neuromarketing can enhance communication effectiveness between organizations and audiences on social media, emphasizing the role of social and psychological influences. Effectiveness depends not only on technology but also on social factors like user behavior imitation.	Provided insights into the role of neuromarketing in strengthening emotional relationships on social media, revealing the importance of social influence in user decisions.	Future studies should explore how neuromarketing can be applied more effectively across various social media platforms and its impact on cultural differences in social media use.
Singh et al. (2023)	Journal of Theoretical and Applied Electronic Commerce Research	To provide a comprehensive overview of the neuromarketing field and offer insights and directions for research and practical applications in business	Systematic literature review of 51 articles from the Web of Science database.	Identified six main research themes: 1) Neuromarketing evolution, 2) Definitions and tools, 3) Neuromarketing in practice, 4) Social value of neuromarketing, 5) Neuromarketing and consumer behavior, 6)	Provided insights into the theoretical evolution, definitions, tools, practices, social value, and influence of neuromarketing on	Recommends further development of neuromarketing theories and practical applications for businesses, focusing on its use to support sustainable products and practices.

and academia.	Neuromarketing for sustainable business development.	consumer behavior. Contributed to sustainable business development by using neuromarketi ng to understand consumer behavior in sustainable product contexts.
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Table 2. Research Summary

Author(s)	Year of Publication	Research Objective	Research Variables	Research Subjects
Bigné, E., Ruiz-Mafé, C., & Badenes-Rocha, A.	2023	To identify the impact of negative emotions on brand trust and the intention to share CSR-related content.	Negative emotions, Brand trust, Intention to share	Instagram users
Kakaria, S., Saffari, F., Ramsøy, T. Z., & Bigné, E.	2023	To analyze impulsive and unplanned purchasing behavior in virtual stores.	Impulsive buying, Unplanned buying, Cognitive load	Consumers in VR environments
		To examine the flow experience, involvement, and presence in virtual shopping.	Flow experience, Involvement, Presence	
Virto, N. R., Manzano, J. A., García-Madariaga, J., & López, F. B.	2024	To investigate how Instagram influences users' intention to visit famous museums in Spain.	Credibility of source, Content novelty, Engaging content, Brand attitude, Perceived enjoyment, Visit intention	Instagram users (956 respondents)
Ballester, E., Ruiz, C., Rubio, N., & Veloutsou, C.	2025	To explore how similarity and parasocial relationships affect followers' engagement behaviors.	Similarity, Parasocial relationships, Credibility, Engagement behaviors	1,012 followers of micro-influencers on Instagram
Belanche, D., Casaló, L. V., Flavián, M., & Ibáñez-Sánchez, S.	2021	To understand the effectiveness of influencer marketing based on the fit between influencer, consumer, and product.	Influencer-consumer fit, Influencer-product fit, Consumer-product fit	372 followers of a popular fashion influencer on Instagram

Juárez-Varón, D., Mengual-Recuerda, A., Capatina, A., & Cansado, M. N.	2023	To analyze the most effective stimuli in attracting consumer attention in fashion shoe stores.	Visual stimuli, Skin galvanic response, Visual attention	Consumers aged 30-55 with a middle-high economic level who have previously purchased the products
Šola, H. M., Mikac, M., & Rončević, I.	2022	To analyze user behavior when viewing Facebook pages to enhance engaging content.	Visual attention, User emotions, Engagement	59 participants (ages 20-55)
Zhang, J., Yun, J. H., & Lee, E. J.	2021	To investigate neural indicators of engagement with content as drivers of click behavior on social media.	Content engagement, Click behavior	21 students (ages 18-29)
Gountas, J., Gountas, S., Ciorciari, J., & Sharma, P.	2019	To compare the impact of public service messages on binge drinking using focus group discussions and EEG.	Advertisement influence, EEG, Focus group discussion	40 students (ages 18-25)
Casado-Aranda, L. A., Dimoka, A., & Sánchez-Fernández, J.	2019	To analyze the effect of online trust signals on trust, risk, and purchase intention using neuroimaging.	Online trust signals (endorsement seal, rating system, guarantee statement), Trust, Risk, Purchase intention	29 participants (15 women), average age 25.04 years
Hakim, A., Klorfeld, S., Sela, T., Friedman, D., Shabat-Simon, M., & Levy, D. J.	2021	To improve consumer preference prediction using EEG data and machine learning algorithms.	EEG data, Self-report, Product choice	33 participants (13 men), ages 19-41
Bigne, E., Simonetti, A., Ruiz, C., & Kakaria, S.	2021	To determine the effectiveness of online ads on social media and the impact of congruence between ads and UGC content on visual attention and ad recall.	Visual attention, Ad recall, Ad congruence	104 users of TripAdvisor in Spain
Tajvidi, M., Richard, M. O., Wang, Y., & Hajli, N.	2020	To analyze the process of brand co-creation through information sharing in social commerce.	Information sharing in social commerce, Social support, Relationship quality, Privacy concerns	Social media users and social commerce platform users
Giray, C., Yon, B., Alniacik, U., & Giriskan, Y.	2022	To investigate the influence of subjective and objective knowledge, mood state, connection to nature (CtN), and	Subjective knowledge (SK), Objective knowledge (OK), Mood, Connection to	60 women with children (ages 0-18)

		visual attention on organic purchasing.	Nature (CtN), Visual Attention (VA)	
Bhardwaj, S., Rana, G. A., Behl, A., & de Caceres, S. J. G.	2023	To review neuromarketing literature from 2011-2021 to identify research themes, build a theoretical framework, and provide future research directions.	Neuromarketing, Consumers, Neuroscience, Technology, Consumer response	156 peer-reviewed articles in Scopus database
Jinha Lee, Heejin Lim, Woo Gon Kim	2025	To investigate the influence of food presentation based on Gestalt theory on visual appeal, photo sharing intention, engagement, and visit intention in tourism-themed Instagram content.	Gestalt presentation (gestalt vs. non-gestalt), Shape variation (triangle vs. rectangle), Color variation, Human element (hand-in-frame), Instagram caption length, Engagement	Instagram users in a tourism context, gender data (male and female)
Adalarasu, K., Begum, K. G., Priyan, M. V., Devendranath, C., & Sriram, G. V.	2025	To understand consumer brain responses to different ad genres using electroencephalography (EEG) to explore the relationship between ad genre and consumer behavior.	EEG activity (theta band energy, heart rate frequency index, workload index, task load index), Ad genre (celebrity, animal, dialogue, animation, jingle), Brain locations (frontal, temporal, parietal)	22 volunteers watching video ads (50-90 seconds)
García-Carrión, B., Del Barrio-García, S., Muñoz-Leiva, F., & Porcu, L.	2025	To analyze the effect of message congruence between DMO-created content and eWOM on consumer perceptions and responses.	Message congruence (high vs. low), Destination positioning strategy (natural environment vs. gastronomy), Ocular indicators, Brain activity, Behavioral response	Experimental participants in destination promotion (nature and gastronomy themes)
Bastiaansen, M., Straatman, S., Driessen, E., Mitas, O., Stekelenburg, J., & Wang, L.	2018	To assess the effectiveness of destination marketing content through emotional responses recorded with EEG after participants watched films related to specific destinations.	Emotional response based on EEG (event-related potentials/ERPs), Marketing stimulus (Bruges and Kyoto destination photos), Film type (destination-related vs. unrelated)	Two participant groups watching the film "In Bruges" (destination Bruges) or "The Rum Diary" (non-destination)

DISCUSSION

The Influence of Visual Aesthetics on Consumer Engagement on Instagram

Visual aesthetics play a crucial role in attracting attention and enhancing consumer engagement on Instagram. According to research by Jinha Lee, Heejin Lim, and Woo Gon Kim (2025), Gestalt principles in visual presentation (shapes, colors, human elements, and caption length) can improve visual appeal and the intent to share photos. The combination of triangular shapes and appealing colors was found to be especially effective, particularly when involving human elements such as “hand-in-frame.” Research by Adam Hakim, Shira Klorfeld, and Tal Sela (2020) confirms the importance of visual composition, including color variations and product labels, in increasing engagement. These compositions provide a more aesthetically pleasing visual experience, creating an emotional connection between consumers and brands. Furthermore, research by Marcel Bastiaansen et al. (2018) shows that visual content highlighting tourist destinations, such as photos or videos, can evoke positive emotional responses. This is highly relevant for Instagram, which prioritizes visual images as the main medium for attracting users. A visual aesthetics strategy based on Gestalt principles and color composition can enhance consumer engagement on Instagram. Human elements and visual content that leverage the appeal of destinations can also improve content attractiveness.

Neurological Responses to Emotionally Engaging Instagram Content

Neuromarketing has provided new insights into how the human brain responds to carefully crafted Instagram content. K. Adalarasu et al. (2025) used EEG to assess neurological activity in response to ads featuring elements such as celebrities, animation, and jingles, which were found to trigger positive emotions and content recall in long-term memory. Ads based on dialogue, however, were less engaging and remained in short-term memory. Marcel Bastiaansen et al. (2018) support these findings, showing that emotionally engaging destination content can enhance brain responses. For example, the film “In Bruges” triggered stronger emotional reactions to destination images of Bruges compared to other destinations. Instagram can leverage similar content to maximize emotional impact. Furthermore, Beatriz García-Carrión et al. (2025) used fMRI to measure the message congruence between Destination Marketing Organizations (DMOs) content and eWOM. High-congruence messages triggered more positive brain responses, highlighting the importance of emotional relevance in Instagram marketing. Content on Instagram that triggers neurological responses, such as through celebrities, animation, and emotionally relevant messaging, can enhance engagement and content recall. The use of EEG and fMRI technology can help predict consumer preferences.

User-Generated Content (UGC) and Message Congruence in Instagram Marketing

User-generated content (UGC) is a vital element in Instagram marketing due to its authenticity and relevance. Research by Beatriz García-Carrión et al. (2025) emphasizes the importance of congruence between DMOs' content and UGC to create positive perceptions and attract visual attention. Messages with high congruence between UGC and brand promotions enhance campaign effectiveness. Additionally, research by Bigne et al. (2021) shows that authentic UGC has a greater power to build engagement compared to direct promotional content from brands. This is because UGC feels more authentic and creates a closer connection between the brand and consumers. Adam Hakim et al. (2020) also highlight that aesthetic variations in UGC, such as color and product labels, enrich the visual experience and help the audience feel more connected to the brand. Authentic and relevant UGC, along with congruence between UGC and brand content, is an essential strategy for Instagram marketing. This allows consumers to feel more emotionally connected and creates an engaging visual experience.

Visual Interactivity and Consumer Preferences

Visual interactivity on Instagram can be analyzed using technologies like eye-tracking and EEG, which help understand consumer attention to design elements. Research by Caner Giray et al. (2022) used eye-tracking to identify how Instagram users interact with certain visual designs, including shapes, colors, and branding elements. The results show that prominent visual elements attract more attention. Adam Hakim et al. (2020) found that interactive elements like product labels maximize engagement. Meanwhile, Beatriz García-Carrión et al. (2025) used ocular indicators to analyze consumer attention to message congruence between UGC and promotional content. Research by Marcel Bastiaansen et al. (2018) supports this approach, using EEG to measure consumers' emotional preferences for visual content, such as tourism destinations, that highlight emotional appeal. Enhanced visual interactivity through design elements, analyzed

with neuromarketing technologies (eye-tracking, EEG), can help understand consumer preferences. Attractive visual elements, such as product labels and emotional content, can boost the appeal of Instagram.

Strategies for Optimizing Instagram Content to Enhance Consumer Behavior

Optimizing Instagram content requires integrating aesthetic, emotional, and communication strategies. Jinha Lee et al. (2025) emphasize the importance of using Gestalt principles, human elements, and color to create visual appeal. These elements significantly increase the intent to share and engage consumers. K. Adalarasu et al. (2025) add that content featuring celebrities or animation can maximize consumer preferences and strengthen emotional connections. This is consistent with findings from Bigne et al. (2021), which show that integrating authentic UGC with brand strategies enhances consumer engagement. Meanwhile, Beatriz García-Carrión et al. (2025) stress the importance of integrated marketing communication (IMC) strategies that align with DMOs and consumers to boost positive perceptions. This strategy should encompass aesthetic elements, emotional relevance, and user experience-based content. Instagram content optimization strategies should integrate visual aesthetics, emotional content, and relevant UGC. These elements help enhance consumer engagement and strengthen their connection with the brand.

CONCLUSION

Visual aesthetics play a significant role in attracting attention and enhancing consumer engagement on Instagram. Research findings indicate that Gestalt principles, such as the use of shapes, colors, human elements, and caption length, are effective in increasing visual appeal and photo-sharing intent. Content that highlights emotional elements, such as tourism destinations or celebrities, can trigger stronger neurological responses, enhancing long-term memory recall and consumer engagement. User-generated content (UGC) has also proven to be highly effective in fostering engagement, especially when there is high congruence between UGC and brand messaging. The practical implications of these findings suggest that brands should leverage visually appealing aesthetics and emotional relevance to create closer connections with consumers. The use of neuromarketing technologies such as EEG and eye-tracking can be valuable tools for designing more effective content that attracts audience attention. For marketers, it is crucial to focus on message congruence that creates deeper emotional engagement between consumers and brands, as well as integrating visual and interactive elements that boost engagement. However, this study has limitations, particularly in terms of generalizability, as it focuses only on Instagram without comparing it to other platforms, and the limitations of neuromarketing technology, which may not always be available in all studies. Future research could explore the influence of other factors, such as consumer behavior patterns or the broader context of social media platform usage. Practitioners can also take advantage of neuromarketing technology to personalize and optimize Instagram marketing campaigns, focusing on visual and emotional experiences that resonate with audiences.

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