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Impact of Generative AI Technologies on Consumer Engagement and Digital Marketing

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Abstract. Generative artificial intelligence (AI) has reshaped digital marketing through automated content creation, personalization, and improved interaction with customers. This paper examines how the emergence of generative AI technologies affects consumer behavior and marketing effectiveness, through a systematic review of articles published between 2021 and 2025. The findings indicate that AI-based personalization, real-time communication, and automated content creation increase consumer engagement, satisfaction, and conversion rates. These gains come with challenges of trust, ethics, and the authenticity of content. The study synthesizes the research findings into a framework of how generative AI can be used in modern digital marketing.

Keywords. Generative AI; consumer engagement; digital marketing; personalization; AI-generated content

I. Introduction

Generative artificial intelligence (AI) has emerged as a disruptive technology in digital marketing, allowing organizations to automate content creation, personalize content, and interact with customers [1], [2]. Applications such as AI chatbots and content generation tools let marketers deliver highly customized experiences to consumers.

Consumer engagement is a critical element of marketing performance, since it influences customer satisfaction, customer loyalty, and purchasing behavior. Empirical research shows that AI-based marketing strategies raise engagement substantially through real-time interaction and content delivery [3]. Generative AI also improves operational efficiency and reduces marketing costs.

Despite these advantages, AI-generated content raises problems of trust, transparency, and ethics [4], [5]. This paper therefore examines the role of generative AI in consumer engagement and online marketing, based on empirical evidence.

Recent empirical studies show that generative AI technologies can have a strong effect on consumer behavior, because they allow personalization and real-time interaction. For example, AI-based systems have been shown to increase user engagement by making customized recommendations and delivering adaptive content [3]. Although adoption is increasing, there is still no consensus on the long-term effects of generative AI on trust, authenticity, and consumer perception. This gap calls for further empirical research.

II. Methodology

This paper uses a systematic literature review to examine empirical studies on generative AI in digital marketing. Relevant literature was retrieved from databases such as Google Scholar, Scopus, and IEEE Xplore.

The inclusion criteria admitted only empirical studies published from 2021 to 2025 that focused on generative AI applications in advertising and consumer interaction. Conceptual and theoretical studies, and studies unrelated to marketing, were excluded.

The final sample consisted of 17 studies. The data were analyzed by thematic analysis to identify the key variables that affect consumer engagement, such as personalization, content creation, and customer interaction.

The review followed a defined protocol to support the reliability and validity of the research. Relevant studies were identified with keywords such as generative AI, consumer engagement, and digital marketing, and screening removed duplicate and irrelevant articles. The studies retained were critically assessed for methodological rigor and for relevance to the research objective.

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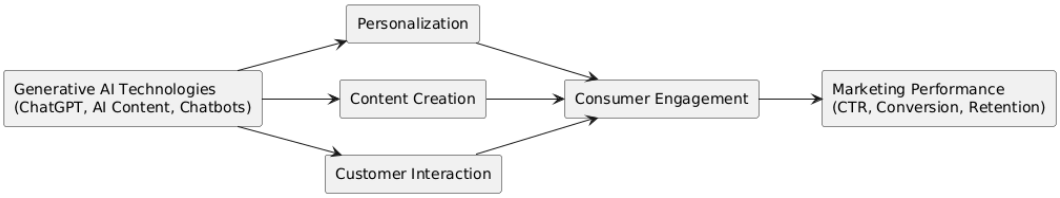


Fig. 1. Conceptual framework of generative AI in digital marketing.

III. Conceptual Framework

As illustrated in Fig. 1, the conceptual framework shows the relationship between generative AI technologies and consumer engagement in digital marketing. Generative AI tools, such as AI-driven content generators, recommendation systems, and chatbots, form the main independent variable that influences marketing processes.

The framework identifies three mediating variables: personalization, content creation, and customer interaction. Personalization tailors content to the needs and interests of consumers, so marketers can produce more relevant, consumer-friendly content. For content creation, generative AI allows high-quality, scalable marketing content to be produced efficiently. Customer interaction refers to the real-time communication enabled by AI-powered chatbots and conversational agents.

These mediating variables affect consumer engagement, meaning user interaction, participation, and emotional attachment to digital content. Engagement in turn improves marketing performance, which can be measured by click-through rates, conversion rates, and customer retention.

The framework therefore shows a causal flow in which generative AI technologies improve digital marketing performance through several engagement-based pathways. It gives a systematic account of how AI raises the performance of digital marketing.

The framework also implies that consumer engagement acts as a mediating variable between generative AI and marketing performance. AI technologies do not improve performance directly, but indirectly through better user interaction and experience.

IV. Results and Discussion

A. Summary of Empirical Studies

A comparative analysis of the selected studies shows consistent trends in the effectiveness of generative AI technologies. Survey-based studies [6] place more emphasis on user perception and acceptance, whereas experimental studies [7] place more emphasis on behavioral change in consumer engagement. This combination of methods strengthens the validity of the findings.

The results also show that personalization is more effective for engagement than content automation without personalization. The value of generative AI therefore rests not only on its content generation capabilities but also on its ability to adapt to the individual tastes and preferences of consumers.

Some studies also report limitations, such as consumer skepticism toward AI-generated content and concerns over data privacy. These factors can influence the relationship between AI use and engagement outcomes.

Table 1 summarizes the empirical research on the effects of generative AI on consumer interaction, giving the research method and key findings of each study. Most of the studies adopt quantitative designs based on surveys and experiments, so the evidence in this field is largely empirical. Jiang and co-authors [6] used a survey-based design to measure consumer responses, and Wiputra and co-authors [7] used an experimental design to measure changes in behavior.

Table 1. Empirical Studies on Generative AI and Consumer Engagement

First author	Year	Method	Key findings
Jiang [6]	2022	Survey	AI chatbot communication improves satisfaction and engagement
Wiputra [7]	2024	Experiment	AI enhances customer interaction
Patil [8]	2024	Case study	Personalization increases engagement

The findings indicate that generative AI improves consumer engagement through better personalization, greater interaction, and more effective delivery of content to consumers. The diversity of methods also adds to the reliability of the results, since different approaches reach similar conclusions.

B. Discussion of Findings

Empirical evidence shows that generative AI is highly effective at improving the consumer experience through personalization, automation, and real-time engagement. AI-powered personalization lets marketers deliver personalized content that raises customer satisfaction and engagement rates and also increases customer loyalty [2]. Generative AI also makes content creation more efficient, so businesses can produce high-quality marketing content at scale [1]. Because AI-powered chatbots respond instantly, customers get a more engaging experience, and customer interaction and engagement improve. For marketing performance, AI-based approaches help increase conversion and customer retention rates. Still, ethical issues, a lack of transparency, and a possible loss of authenticity can limit the success of generative AI in marketing [4], [5].

V. Conclusion

This paper analyzed the contribution of generative AI technologies to consumer engagement and digital marketing using empirical evidence. The findings show that generative AI is most effective at increasing personalization, content generation, and customer communication, which together improve marketing performance. Despite these advantages, questions of trust, ethics, and transparency must be addressed. Further studies are needed on the long-term effects of generative AI and on ways to balance automation with human creative work.

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Author Contributions

All authors contributed to the conception and preparation of this work and approved the final version of the manuscript.

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Declaration of Generative AI Use

The authors declare that no generative artificial intelligence tools were used in the preparation of this manuscript. The authors take full responsibility for the content of the publication.

Data Availability

No new data were created or analyzed in this study.

Conflicts of Interest

The authors declare no conflict of interest.

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