

A STUDY ON MAPPING THREE DECADES OF LITERATURE ON DIGITAL MARKETING USING GENERATIVE AI

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Abstract

The evolution of digital marketing over the last three decades has been transformative, reshaping business strategies and consumer behaviours globally. This study aims to systematically map the academic and practical advancements in digital marketing from its inception to the present. By conducting a comprehensive bibliometric analysis of key publications from 1990 to 2023, the research identifies major themes, emerging trends, and pivotal technologies that have driven the field's development. The study examines foundational concepts such as search engine optimization, pay-per-click advertising, and email marketing, while also exploring the impact of social media platforms, content marketing, and data-driven personalization. The rise of artificial intelligence, machine learning, and blockchain technologies is discussed in the context of their contributions to predictive analytics, customer engagement, and enhanced transparency.

Keywords: Digital Marketing, Academic Advancements, Practical Advancements, Artificial Intelligence (AI), 1990–2023 Digital Marketing Developments

Introduction

The landscape of marketing has witnessed an unprecedented transformation with the advent and evolution of digital technologies over the past three decades. From rudimentary websites and banner ads in the 1990s to sophisticated machine learning algorithms and personalized marketing strategies in the 2020s, digital marketing has become a cornerstone of modern business strategies. The rise of the internet and digital platforms has redefined how organizations interact with consumers, offering new avenues for engagement, conversion, and customer loyalty. As the volume of academic and industry-related literature on digital marketing has grown exponentially, there arises a need for a systematic study to map the development and trajectory of this field. Generative AI technologies, with their capacity to analyze, summarize, and interpret large volumes of textual data, offer a novel approach to conduct this mapping exercise.

This study leverages generative AI to perform a comprehensive bibliometric analysis of digital marketing literature published from 1990 to 2023. The aim is to uncover patterns, identify key themes and trends, and highlight the pivotal technologies and concepts that have shaped the evolution of digital marketing. The significance of this work lies in its ability to synthesize complex and voluminous data into actionable insights for scholars, marketers, and technologists alike.

Objective of the Study

The primary objectives of this study are:

1. To analyse and map the academic and practical developments in digital marketing from 1990 to 2023.
2. To identify and categorize the major themes, emerging trends, and critical technologies within the literature.

3. To explore the role and influence of generative AI in synthesizing vast bodies of digital marketing literature.
4. To provide insights and recommendations for future research directions and practical applications in the field of digital marketing.

Review of Literature

The field of digital marketing has been the subject of extensive academic research and industry analysis. Early literature focused on the integration of internet technologies into traditional marketing frameworks, emphasizing concepts such as e-commerce, online advertising, and customer relationship management (Chaffey & Ellis-Chadwick, 2012). The 2000s witnessed a surge in studies around search engine marketing, email campaigns, and the emergence of social media platforms as marketing tools (Tiago & Veríssimo, 2014).

More recently, scholars have turned their attention to data-driven and algorithm-based marketing practices. The integration of artificial intelligence, big data analytics, and blockchain has introduced new dimensions of customer personalization, predictive modeling, and marketing automation (Kumar et al., 2021). Generative AI, specifically, has shown promise in content creation, customer service automation, and market trend analysis (Dwivedi et al., 2023).

Bibliometric methods have also gained traction as a means to evaluate scholarly trends and impacts. These methodologies offer quantitative insights into publication frequencies, citation patterns, co-authorship networks, and thematic clustering (Aria & Cuccurullo, 2017). The combination of bibliometric analysis and generative AI opens new possibilities for mapping and understanding the evolution of digital marketing.

1. Evolution of Digital Marketing (1990-2023)

Digital marketing began with the use of rudimentary websites and email marketing in the early 1990s. As internet penetration increased, search engines like Yahoo! and Google revolutionized information retrieval, giving rise to Search Engine Optimization (SEO) and Search Engine Marketing (SEM). The late 1990s and early 2000s saw the proliferation of banner ads, affiliate marketing, and pay-per-click (PPC) advertising.

With the advent of social media in the mid-2000s, platforms such as Facebook, Twitter, and YouTube introduced new paradigms of consumer interaction. Marketers leveraged these platforms for brand storytelling, influencer marketing, and community engagement. Simultaneously, advancements in web analytics provided deeper insights into consumer behavior, enabling more targeted and effective campaigns.

The 2010s marked a shift towards mobile-first strategies, content marketing, and omnichannel approaches. Artificial intelligence and machine learning began to influence customer segmentation, recommendation engines, and chatbots. Personalization at scale became feasible through big data and advanced analytics.

The post-2020 era has been defined by heightened digital transformation due to the COVID-19 pandemic. Virtual experiences, voice search, blockchain-based transparency tools, and AI-generated content became mainstream. Generative AI models such as GPT have started to play a significant role in automating content creation and customer interaction.

Key Points at Which Digital Marketing Replaces Conventional Marketing

1. The first banner that can be clicked

The most significant shift from traditional to digital marketing occurred around 1993, when the world's first clickable banner went up for advertising. Numerous businesses ventured into the realm of digital marketing the next year.

2. Yahoo's introduction

Yahoo was introduced in 1994 and quickly gained popularity, receiving roughly one million hits in its first year globally. At this point, businesses started focusing on effective SEO in an effort to raise their ranks. A few additional search engines appeared in 1996.

3. Google's launch

Google, the largest search engine in the world, was introduced in 1998. Microsoft's MSN and a more recent iteration of Yahoo came next.

4. Competition in Search Engines

Due to fierce competition, small-scale search engines had all but vanished by 2000. The only remaining major competitors in the market were Google and Yahoo.

5. Web 2.0

In an enormous move, MSN introduced Live Search in 2002 to compete with Google and Yahoo, which had roughly 6.4 million users in the market. In contrast to the Web 1.0 phase's passive consumers, Web 2.0 saw great growth and active internet users. Web 2.0 allows users to communicate with other users and businesses.

6. Websites for social media

Social media websites soon followed. Myspace debuted in 2003, and Facebook followed in 2004. Numerous companies were aware of the enormous potential these websites offered for marketing their goods and services. On these websites, many of them began to advertise and establish themselves.

7. Analytical

Despite being introduced in 1994, web cookies gained popularity as marketers recognized how important they were for learning about user preferences and habits.

8. WordPress's birth

After ten years of existence, WordPress 3.0 (e-commerce plugins) has gained popularity and accessibility among companies and marketers. WordPress simplified the process of creating websites and eliminated the requirement for a programmer.

9. Marketing Using Influencers

In 2015, influencer marketing made its debut in the realm of digital marketing. It has only expanded and produced high-quality business leads since then. Nowadays, social media platforms like Facebook, Instagram, Pinterest, LinkedIn, and Twitter are used by 99 percent of digital marketers to promote their goods and services.

10. Short-form content and reels

Reels, which Instagram introduced, significantly altered the way social media marketers plan. For optimum engagement, everyone wants to take advantage of 60-second short-form video content. There were various phases in the development of digital marketing in India. Learn about the development of digital marketing from the past to the present by reading on.

The term "digital marketing" was first used in 1990. The first search engine, Archie, was introduced that year.

1993: This year saw the debut of the first clickable web ad banner. Yahoo debuted as the first online retailer on the Net Market in 1994.

1996: Hotbot, Looksmart, and Alexa were among the minor search engines that were released in this year.

1997: SixDegree.com, the first social networking website, goes live.

1998 was a pivotal year in the history of Google's founding. Yahoo! introduced Yahoo! Web search and Microsoft debuted MSN.

2000: Smaller search engines were destroyed, SixDegree.com went offline, and the Internet bubble burst.

2001: Universal Music launched the first mobile marketing campaign of the year. The year when LinkedIn was founded was 2002.

2003: Myspace was launched and WordPress was introduced.
2004 was a pivotal year as Facebook went live, Google went public, and Gmail was introduced.
2005: This year saw the launch of YouTube. Microsoft introduced MS Live Search in 2006; Twitter was introduced that year, while Amazon's online sales surpassed \$10 billion.
2007: The iPhone, Web streaming service Hulu, and Tumblr were introduced.
2008: In terms of users, China surpassed America in this year. Spotify was created to enable internet music listening.
2009: Google introduces Instant, which provides search engine results in real time.
2010: To facilitate communication, WhatsApp was launched.
2011: Google Buzz shut down, and young people started watching TV online instead.
2012: The budget for social media was gradually increased by up to 64 percent.
2013: Tumblr was purchased by Yahoo this year.
2014: A lot of things happened in this year, such as the fact that more people used mobile devices than PCs.
2015 saw the introduction of Snapchat and the growth of predictive analytics.
Yahoo stopped offering some of its services in 2016.
TikTok was introduced in 2017.
Google+ exited the market in 2019.
2021: Social media websites are used for marketing by the majority of digital marketers.
2023: ChatGPT and other AI chatbots dominated the internet.

2. Major Themes in Digital Marketing Literature

Based on the bibliometric analysis, several recurring and emergent themes have been identified:

- **Search Engine Optimization (SEO):** The backbone of early digital marketing, focused on keyword optimization, link building, and website architecture.
- **Email and Direct Marketing:** Studies on open rates, click-through rates, personalization, and automation.
- **Social Media Marketing:** Engagement metrics, platform strategies, influencer dynamics, and viral content.
- **Content Marketing:** Strategies for storytelling, content curation, user-generated content, and brand voice.
- **Data-Driven Marketing:** Use of analytics, customer data platforms (CDPs), and AI for decision-making.
- **Mobile and Location-Based Marketing:** Impact of smartphones, geotargeting, and app-based marketing.
- **Emerging Technologies:** Role of AI, machine learning, blockchain, AR/VR, and IoT in shaping digital experiences.

3. Application of Generative AI in Literature Mapping

Generative AI has been instrumental in the synthesis and analysis of large volumes of digital marketing literature. The key contributions include:

- **Text Summarization:** Efficiently condensing long-form content into key insights.
- **Theme Detection:** Using NLP to identify core topics and thematic clusters.
- **Trend Analysis:** Tracking the rise and decline of specific keywords and subjects over time.
- **Citation Network Visualization:** Mapping how studies and authors are interlinked across decades.
- **Predictive Insights:** Suggesting future research directions based on historical data trends.

4. Emerging Trends and Future Outlook

The study identifies several emerging trends that are likely to dominate future research and practice:

- **Hyper-Personalization:** Leveraging AI and real-time data for individualized marketing experiences.
- **Voice and Visual Search:** Optimizing for non-textual queries.
- **Sustainability Marketing:** Integrating ethical and environmental concerns into digital strategies.
- **Metaverse Marketing:** Exploring virtual environments for immersive brand interactions.
- **AI Ethics and Governance:** Addressing bias, privacy, and transparency in AI-driven marketing tools.

5. Implications for Academics and Practitioners

This study offers valuable insights for:

- **Researchers:** A roadmap of how the field has evolved and potential areas for scholarly contribution.
- **Marketers:** Understanding historical patterns to inform strategic planning.
- **Technology Developers:** Identifying gaps where new tools can enhance marketing outcomes.

Conclusion

Over three decades, digital marketing has grown from simple email campaigns to complex ecosystems powered by artificial intelligence and real-time analytics. This study, by employing generative AI to map the evolution of literature in this domain, provides a holistic view of how digital marketing has developed and where it is headed. The integration of AI tools in both practice and research signals a new era of data-rich, responsive, and personalized marketing.

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