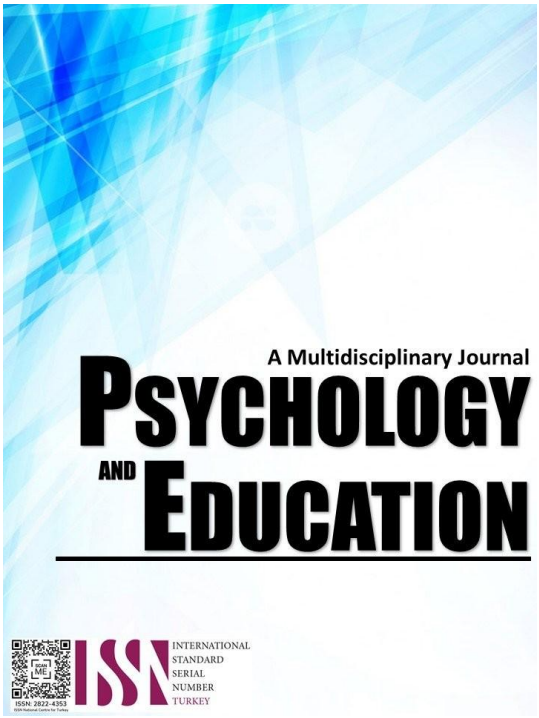
BIBLIOMETRIC ANALYSIS OF DIGITAL MARKETING: MAPPING THE INTELLECTUAL LANDSCAPE AND EMERGING TRENDS



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 50
Issue 9
Pages: 1016-1025
Document ID: 2025PEMJ4917
DOI: 10.70838/pemj.500901
Manuscript Accepted: 12-16-2025

Psych Educ, 2025, **50**(9): 1016-1025, Document ID:2025PEMJ4917, doi:10.70838/pemj.500901, ISSN 2822-4353

CC BY NC

Research Article

Bibliometric Analysis of Digital Marketing: Mapping the Intellectual Landscape and Emerging Trends

Mary Ann P. Carranza,* Allen Grace M. Sarmiento
For affiliations and correspondence, see the last page.

Abstract

Digital marketing has evolved into a multidisciplinary field that integrates management, economics, psychology, and information systems. This study conducts a bibliometric analysis of scholarly publications from 2010 to 2024 to map the intellectual and conceptual foundations of digital marketing. Using co-citation and co-occurrence techniques with VOSviewer, the research identifies seven co-citation clusters spanning consumer-centric branding, methodological rigor, strategic ecosystems, behavioral psychology, and quantitative modeling. Complementary keyword analysis reveals five thematic clusters highlighting social media engagement, technology acceptance, big data analytics, innovation ecosystems, and methodological validation. Findings demonstrate that digital marketing has transitioned from traditional promotional practices to interactive, data-driven, and strategically embedded ecosystems that co-create value between firms and consumers. The analysis highlights opportunities, such as innovation, flexibility, and competitiveness, while also acknowledging challenges, including inequality, labor market disruptions, and ethical concerns. By delineating conceptual distinctions and tracing intellectual genealogies, this study positions digital marketing as a well-established scholarly domain intersecting with sustainability, inclusivity, and resilience. The results provide a roadmap for future research and practice, emphasizing the need for methodological rigor, human-centric approaches, and strategic alignment in the digital age.

Keywords: *bibliometric analysis, big data, co-citation, consumer behavior, co-occurrence, digital transformation, innovation, marketing, sustainability*

Introduction

Digital marketing has undergone significant changes over the last twenty years, evolving from traditional brand-centric campaigns to complex, technology-driven ecosystems where consumer participation, innovation, and strategic value creation are of equal importance. This evolution is an expression of the fundamental change in marketing research, which has shifted to digital technologies as being not just a mere communication medium but integral to the redefinition of competitive advantage based on networked relations between firms, consumers, and technologies (Adner, 2006, 2010; Amit & Zott, 2001, 2015). The central concepts applied are drawn from consumer behavior, technology adoption, and quantitative modeling, all of which, when combined, can provide a comprehensive perspective on what underpins digital marketing as an intellectual subject area.

The consumer-centric formative foundational paradigm in digital marketing has been exponentially magnified from one of branding (brand identity and brand personality) (Aaker, 1997; Myers, 2003) to include social media marketing and influencer reach and AI-(artificial intelligence)-crowdsourced customer service engagement (Ashley & Tuten, 2015; Audrezet et al., 2020; Adam et al., 2021). These trends signal a shift from unidirectional to more interactive, participatory branding environments, in which authenticity and algorithmic intelligence are implicated in consumer–brand relations (Berger & Milkman, 2012; Brodie et al., 2011). This shift emphasizes the need to recognize digital marketing as a promotional practice and, more importantly, as co-creation of value.

Even though digital marketing research has expanded rapidly and diversified, the field remains fragmented, in part due to its interdisciplinary nature and rapid technological development. This diversity presents a challenge for researchers and practitioners who seek to navigate the vast amount of health-related PNS-oriented literature and identify key directions, trends, and influential articles. One such method is bibliometric analysis, particularly the co-citation technique, which offers a rigorous and unbiased approach to mapping the intellectual structure of digital marketing research (Aria & Cuccurullo, 2017). Bibliometrics identifies clusters of group research, seminal theories, and emergent topics based on citation patterns, providing a systematic indication of the field's evolution.

The strategic and innovation-centric underpinnings of digital marketing are articulated effectively through a lens of digital transformation and ecosystem perspectives (Adner, 2017; Bharadwaj et al., 2013). These models focus on the transition from firm-centric marketing to networked partnerships, leveraging digital technologies to sustain competitive advantage. The fact that digital transformation is combined with environmental sustainability and innovation management also illustrates the increasing complexity and strategic relevance of digital marketing in modern business settings (Appio et al., 2021; Ardito et al., 2021).

Additionally, consumer adoption and behaviour in the field of digital marketing is significant. Theories such as the Theory of Planned Behaviour (Ajzen, 1991) and the Technology Acceptance Model (Davis, 1989) offer valuable insights into the psychological and behavioral predictors of technology use. These models have been further extended through frameworks such as UTAUT2 and trust-based to explain the adoption of mobile banking and other digital services, demonstrating that digital marketing is “all about” human beings (Alalwan et al., 2017; Agarwal & Prasad, 1998).

The importance of quantitative modeling and methodological rigor also extends to the development of digital marketing research.

Since then, structural equation modeling (Anderson & Gerbing, 1988; Bagozzi & Yi, 2012) and validation of statistical power (Faul et al., 2007) have become standard methods for assessing complex relationships and empirical strength. The improvement of these methods has enabled digital marketing to evolve into a data-rich and theory-informed field that can predict consumer behavior and inform decision-making in management strategy (Bass, 1993; Ali et al., 2018).

Recent studies demonstrate that digital marketing is entering a new phase defined by AI-driven personalization, immersive consumer experiences, and sustainability-oriented strategies. Kumar et al. (2024) emphasize that firms increasingly leverage generative AI and automation to optimize content creation and consumer targeting, while simultaneously navigating heightened concerns over transparency and data privacy. Rosário and Dias (2025) further argue that digital marketing now serves as a socio-economic adaptation mechanism, striking a balance between innovation and ethical responsibility in contexts of shrinking budgets and rising consumer expectations. These insights highlight that digital marketing is not only a technological practice but also a strategic response to evolving societal demands, reinforcing the need for human-centric, ethically conscious, and methodologically rigorous approaches in future research.

Given the rich and rapidly growing environment, it is essential to conduct an in-depth bibliometric analysis that systematically examines the intellectual structure of digital marketing research. Such an analysis will serve to galvanize the highest-level thematic clusters, seminal papers, and nascent developments that are ripe to inform scholarship, practice, and policy. It will also highlight future research opportunities and gaps, aiming to further expand the dimensions and relevance of digital marketing research in the present information age.

Literature Review

Digital marketing is the strategic promotion of products or services through digital channels, primarily via search engines, social media, email, and mobile applications. The literature converges on the view that digital marketing has evolved from a peripheral promotional tool into a core strategic capability, enabling firms to compete in increasingly connected, data-rich environments.

Recent contributions to the literature emphasize that digital marketing is becoming increasingly integrated with data governance, ethical personalization, and regulatory compliance. Dutt et al. (2024) argue that advanced data analytics and evolving consumer narratives are reshaping marketing communications, necessitating that firms integrate storytelling with algorithmic precision to sustain engagement. Beyari and Hashem (2025) highlight that AI-powered personalization, while enhancing consumer loyalty, raises ethical concerns around privacy, bias, and manipulation, underscoring the need for transparency and accountability in digital campaigns. Complementing this, Gungunawat et al. (2024) note that hyper-personalized marketing driven by AI is transforming consumer experiences but also intensifying debates about autonomy and surveillance. At the regulatory level, new frameworks, such as the Digital Services Act and taxation policies on digital services, are expected to be implemented in 2025, illustrating how governments are intervening to ensure compliance, consumer protection, and equitable participation in the digital economy. Collectively, these studies suggest that contemporary digital marketing scholarship is not only concerned with technological innovation but also with the institutional, ethical, and societal dimensions of marketing practice, positioning the field at the intersection of competitiveness, governance, and consumer rights.

The rise of digital marketing is rooted in broader technological and societal transformations. The “digital revolution” and advances in information and communication technologies (ICTs) have reshaped both economic structures and everyday life, expanding access to information and lowering the costs of connectivity (Felipa, 2017; Wirtz, 2019). Within this context, marketing remains a central organizational function, linking societal needs with economic and social activities and requiring close integration with R&D, production, human resources, and finance.

Initially, promotion relied on word of mouth and printed media, but as consumers migrated online, firms followed, giving rise to digital marketing as a distinct branch of marketing science. Digital marketing involves the use of electronic signals, such as websites, digital displays, mobile devices, and other digital media, to mediate marketing activities and enhance the customer experience by addressing granular preferences (Mocanu & Szakal, 2023). From this perspective, marketing can “be said to have been born digital” in the sense that the Internet has become a primary medium for satisfying needs and desires through exchange.

The evidence across multiple studies is robust and consistent. Dwivedi et al. (2021) note that digital marketing enables businesses to engage with customers in real time, target audiences precisely, and measure campaign performance, thereby facilitating continuous campaign optimization. Sharabatiet al. (2024) emphasize that digital marketing has become increasingly effective as digital platforms have become integrated into daily life, and consumer preferences have shifted toward digital devices. This shift is also reflected in macro-level analyses that frame the Internet as “the most powerful tool” in business (Yannopoulos, 2011) and highlight how digitalization is reshaping branding, pricing, and consumer behavior.

Furthermore, digital marketing transforms business strategies through digital technologies, becoming. More widespread and effective with digital platform integration, and a growing preference for digital devices over physical store visits. Over the past decade, global events such as the COVID-19 pandemic have further accelerated this transformation, compelling firms across sectors to adopt or intensify their digital presence.

Methodology

Research Design

This study employed a bibliometric research design to map and analyze the scholarly landscape of digital marketing systematically. Bibliometric analysis enables the identification of publication trends, influential authors, key journals, and thematic clusters within the field. The design integrates both performance analysis (examining productivity indicators such as publication counts and citations) and science mapping techniques (exploring intellectual and conceptual structures through co-citation and co-occurrence networks). The approach is exploratory and descriptive, aiming to provide a comprehensive overview of the evolution and philosophical foundations of digital marketing research.

Procedure

The bibliographic data for this study were retrieved from the Scopus database, which was selected due to its comprehensive coverage of high-quality, peer-reviewed journals, conference proceedings, and scholarly publications across multiple disciplines. Scopus is widely recognized for its rigorous indexing standards, making it a reliable source for bibliometric and systematic analyses of academic literature.

The inclusion criteria focused on publications that explicitly contained the terms "digital marketing," "online marketing," "internet marketing," or "social media marketing" in their titles, abstracts, or keywords to ensure direct relevance to the field. Eligible document types included journal articles, conference papers, review articles, and book chapters. Only publications written in English were considered to maintain consistency in interpretation and analysis. The timeframe was limited to works published between 2010 and 2024 to capture the development and evolution of digital marketing research.

Exclusion criteria were applied to maintain the scholarly rigor and relevance of the dataset. Non-scholarly items such as editorials, notes, and errata were excluded. Publications that used the term "digital" in a purely technical or non-marketing context, particularly in fields such as computer science without clear marketing relevance, were also removed. Additionally, duplicate records across different document types were identified and excluded to prevent redundancy in the analysis.

Data cleaning was conducted after exporting the raw dataset in CSV format to ensure accuracy, consistency, and reliability. This process involved removing duplicate and incomplete records, standardizing author names and institutional affiliations, and harmonizing keywords by merging synonymous terms such as "e-marketing" and "electronic marketing." Citation counts and publication metadata were also verified to minimize errors and inconsistencies in the dataset.

To systematically retrieve relevant literature, a Boolean search strategy was employed using the Scopus advanced search function. The query combined key digital marketing terms within the title, abstract, and keyword fields and applied filters for document type and language. This approach ensured that the final dataset consisted of high-quality, relevant, and peer-reviewed scholarly works suitable for comprehensive bibliometric analysis.

Data Analysis

The cleaned dataset was analyzed using VOSviewer, a widely recognized software tool for bibliometric mapping and visualization. VOSviewer was employed to examine relationships in the literature systematically and to generate visual representations that reveal the intellectual and conceptual structure of digital marketing research.

A co-citation analysis was conducted to examine references that are frequently cited together across the selected publications. This analysis identified clusters of influential authors, journals, and seminal works that collectively shape the intellectual foundation of the digital marketing field. By highlighting the most frequently co-cited sources, the analysis provided insights into the dominant theories, frameworks, and foundational studies that underpin current research.

In addition, a co-occurrence analysis was performed, focusing on keywords and terms that co-occur in titles, abstracts, and author-provided keywords. This approach facilitated the mapping of thematic clusters, revealing dominant research topics such as consumer engagement, social media platforms, and big data analytics. The analysis also traced the temporal evolution of key concepts, enabling the identification of emerging themes and shifts in research focus.

Visualization techniques were used to present the results of both analyses effectively. Network maps illustrated the relationships among authors, journals, and keywords, while density and overlay visualizations highlighted influential clusters and temporal trends within the literature. The integration of co-citation and co-occurrence analyses provided a comprehensive view of both the intellectual structure and conceptual development of the digital marketing research domain.

Ethical Considerations

This study upholds ethical standards in bibliometric research by relying solely on secondary data from the Scopus database, thereby avoiding issues related to human participation, consent, and confidentiality, while ensuring transparency, accuracy, and integrity in data handling. All records were cleaned and standardized to prevent duplication or misattribution, and citations were reported faithfully

to acknowledge intellectual contributions without manipulation. The Boolean search strategy, inclusion and exclusion criteria, and analytical procedures were documented to promote replicability and minimize bias, while interpretations were grounded in empirical evidence rather than subjective preference. Finally, the study acknowledges that digital marketing scholarship is increasingly engaging with sensitive issues, such as consumer privacy, algorithmic bias, and labor market disruption, and thus highlights these ethical dimensions as critical areas for future inquiry, ensuring that findings contribute responsibly to both academic discourse and practical applications.

Results and Discussion

Co-citation Analysis

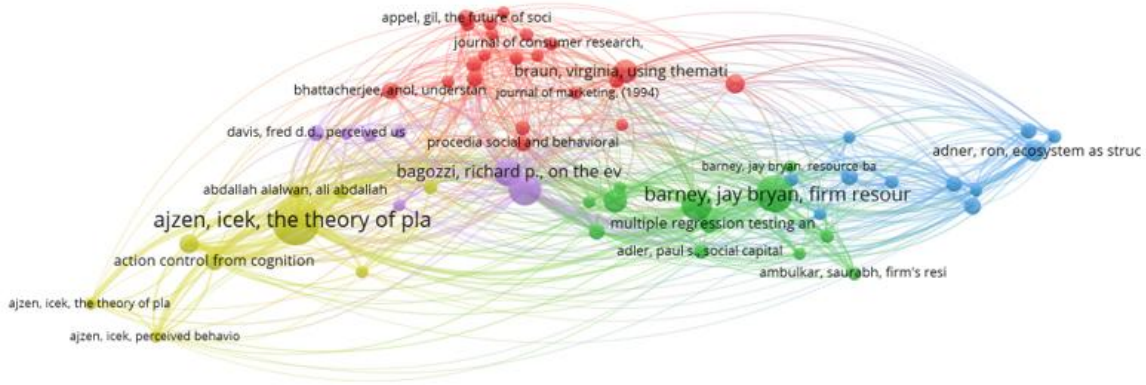


Figure 1. *Co-citation Analysis of Digital Transformation*

Cluster 1 (Red)

According to the co-citation analysis, Cluster 1 (Red) represents the traditional consumer-centric digital marketing approach, tracing a curve from classic brand management to current digital engagement themes. This cluster integrates three interrelated research streams that have been active in the digital marketing literature since the late 1990s. The cluster also aligns with research that lays the theoretical foundations for understanding how brands carry symbolic meaning, such as brand identity and personality research (Aaker, 1997; Myers, 2003). That foundation transitioned to the social media marketing and engagement literature (Ashley & Tuten, 2015; Appel et al., 2020; Brodie et al., 2011), which focuses on how brands utilize various digital platforms to foster consumer-brand relationships through innovative content strategies and participatory experiences. The rise of influencer marketing and studies exploring authenticity (Audrezet et al., 2020) indicate a move away from institutional forms of persuasion toward peer-to-peer interactions. It is also an example of how credibility becomes a site for mediation in algorithmically curated environments. Methodologically, the cluster combines content virality mechanisms (Berger & Milkman, 2012), customer experience frameworks (Becker & Jaakkola, 2020), and AI-based customer service (Adam et al., 2021), reflecting the emerging trend of behavioral psychology, technology adoption, and experiential marketing that meets at this nexus. The bibliometric tools (Aria & Cuccurullo, 2017) and analytical methods (Blei et al., 2003; Braun & Clarke, 2006) that are integrated emphasize the rigor of the cluster's efforts to map the intellectual structure of digital marketing. In general, Cluster 1 reveals a historical narrative of transitioning from brand-centric instruction to consumer-driven, technology-enabled experiential engagement ecosystems, with authenticity, interactivity, and algorithmic intelligence redefining marketing practices.

Cluster 2 (Green)

Cluster 2 outlines the methodological and analytical spine of digital marketing research, comprising foundational papers on structural modeling, strategic management, psychometrics, and big data. It is this cluster that coalesces the quantifiable exactness of marketing science with the strategic coherence of firm performance. Cluster 2 sheds light on the evolution of methodological advancements, employing literature such as Bagozzi and Yi, Benitez et al., and Carroll and Greene to demonstrate how the methodology has been interpreted. These papers made significant contributions to the study of conventions, etching the activation of the practicability and empirically testability of constructs such as consumer trust, engagement, and satisfaction. Additionally, in this cluster, one finds these applications alongside various classical firm resources and advantage theories, as well as their hybridization with digital marketing capabilities. Others, such as Akter et al., who illustrate the positive correlation between significant data analytics capability and firm performance and strategic alignment, imply the rise of path-proven-based marketing. Adler and Kwon, on the other hand, conceptualize the relational divisions of digital developments.

Furthermore, this cluster reviews analytical advancements in the constructs of statistical tests for mediation and moderation, as well as classic econometric models, such as those by Arellano and Bond, which employ the dynamic panel approach, allowing for both longitudinal and cross-sectional studies. In conclusion, this cluster relates to a past trend of demythologization and to the maturation

of the methodology. The methodology transformed digital marketing from soft descriptive investigations into possibly falsifiable, theory-driven science. Thus, marketers can now accurately gauge digital engagement, predict consumer trends, and manage performance strategically through behaviorally informed and computationally precise frameworks.

Cluster 3 (Blue)

Cluster 3 captures the strategic and innovative base of digital marketing, where traditional firm-centric approaches to marketing have been replaced by networked, ecosystem-level value creation. The studies in this cluster, together with the preceding two clusters [(a) and (b)], paint a broad picture of how digital transformation has transformed competition, collaboration, and innovation within marketing and business strategy. The theoretical foundations of Adner's (2006, 2010, 2017) contributions to the study of ecosystems are firm interdependencies and the ecosystem view, which posits that firms are closely integrated entities that require alignment with partners, technologies, and consumers to succeed. This systems approach reframes digital marketing as an 'adaptive encounter' rather than a transactional act between co-creating actors (Lusch et al., 2009). In the same vein, Amit and Zott (2001, 2015: legacy) begin to understand value creation as digital interdependencies, in which technology platforms, customer interactions, and innovation capabilities strengthen competitive advantage. The inclusion of digital transformation frameworks (Appio et al., 2021; Ardolino et al., 2018; Ardito, Tregua, & Petruzzelli, 2021) extends these notions by demonstrating how companies can leverage the combined use of digital technologies, environmental sustainability, and innovation management to build resilience and growth capabilities. Bharadwaj et al. (2013) extend this by conceptualizing DBS as a new strategic dimension that combines IT and marketing to improve responsiveness, personalization, and long-term customer relationships. This cluster also identifies post-pandemic research avenues, including Amankwah-Amoah's investigation into the digitalization forced by COVID-19, which underscores the enhanced role of digital tools in ensuring business continuity and competitiveness. The hermeneutical connections within the cluster between strategic management scholars and innovation researchers suggest a shared transition from marketing communication to capability development, with a special focus on adaptivity and data governance in relation to digital orchestration. In short, Cluster 3 captures a previous trend toward strategic digitalization—that is, marketing as not just a means of promotion, but an innovative player in shaping ecosystems and reconfiguring resources and capabilities because of changes in stakes‖ (p.319), leading to sustainable competitive advantages through the process of digitally transforming information, approaches, or practices across organizations.

Cluster 4 (Yellow)

Cluster 4 reflects the psychological and behavioral foundations of digital marketing research, specifically theories that predict why and how people embrace, use, or connect with Internet-enabled devices, services, and applications. This cluster is rooted in behavioral science, psychology, and information systems, providing a theoretical foundation for consumer decision-making and technology acceptance behavior in marketing. Characterized by the underpinnings of seminal works such as Ajzen's (1991) Theory of Planned Behaviour (TPB) and Bandura's (1977) Social Cognitive Theory, this cluster highlights both attitudes and perceived behavioural control/self-efficacy as significant drivers of digital engagement. These models have guided decades of empirical research on consumer adoption of online platforms, mobile applications, and new technologies. Heilbroner et al. (Anderson & Dibb, 2002) and Klaus et al. (2013) argue that social/cognitive dimensions drive digital practice through beliefs and attitudes. In addition, Paqmane (1980) and Heffernan (1988) extend understanding of the drivers of beliefs, intentions, and social norms that enable online behaviors. Sitting at the intersection of psychology and technology, Agarwal & Prasad (1998) propose the concept of personal innovativeness to examine how individual differences affect adoption intentions for new digital applications. Based on this, Alalwan et al. (2017) refute these theories by employing UTAUT2 and trust-based models to investigate the influence of perceptions regarding trust, usability, and social impact on the adoption of mobile banking services and other digital service technologies. Together, these works illustrate the move from theoretical conjecture to a situation-bound study of digital behavior. This cluster reflects a historic tendency in digital marketing, where theory-based models of behavior served as the primary motivational and cognitive rationale for digital adoption. It signals a turn in marketing literature toward human-centric technology-triggered interaction, and that technology adoption can be as psychological and social as it is technological. Overall, members of Cluster 4 continue to emphasize that effective digital marketing practice requires a balance between technological advancements and human intention, trust, and perceived value.

Cluster 5 (Violet)

Cluster 5 is the quantitative and methodological heart of digital marketing research, focusing on tools for model testing, model validation, and technology adoption analysis. This constellation grounds digital marketing research in empirical evidence and metrics, thereby enabling the field to transition from theoretical discussion to statistically based knowledge. At the theoretical level, Davis (1989) developed the Technology Acceptance Model (TAM), which argues that perceived usefulness and ease of use are key factors influencing individuals' attitudes towards adopting new technologies. This framework remains relevant in several digital marketing contexts, including user acceptance of online systems, e-commerce, and mobile technologies. Building on this empirical basis, Anderson and Gerbing (1988), Bagozzi and Yi (1988), and Ali et al. (2018) further pushed for structural equation modeling (SEM) as preferred analytics in testing complex relationships including attitudes, trust, satisfaction, and behavioral intention; their influence standardized methodological rigor fostering marketing research's validity, reliability, and replicability. As a complement to this methodological development, Bass (1993) foresaw the field of marketing science becoming increasingly data-driven and model-based, urging the adoption of prediction-oriented and simulation-based approaches to understanding consumption behavior. Faul et al. (2007)

expanded on this with G*Power. This statistical analysis software helps estimate sample sizes to achieve adequate analytical power, thereby enabling empirically generated results to be more confidently trusted. Together, these papers provide the quantitative foundations still in use today for measuring digital marketing.

In summary, Cluster 5 continues a historical trajectory of academic evolution in digital marketing research, moving toward measurement innovation and structural modeling, supported by analytical validation. The combination of TAM-SEM power analysis enabled a more organized understanding of digital behaviors. More generally, this cluster demonstrates how methodological clarity enabled marketing researchers to measure mechanisms of perception, estimate diffusion expectations, and develop digital-age theories supported by a robust empirical base.

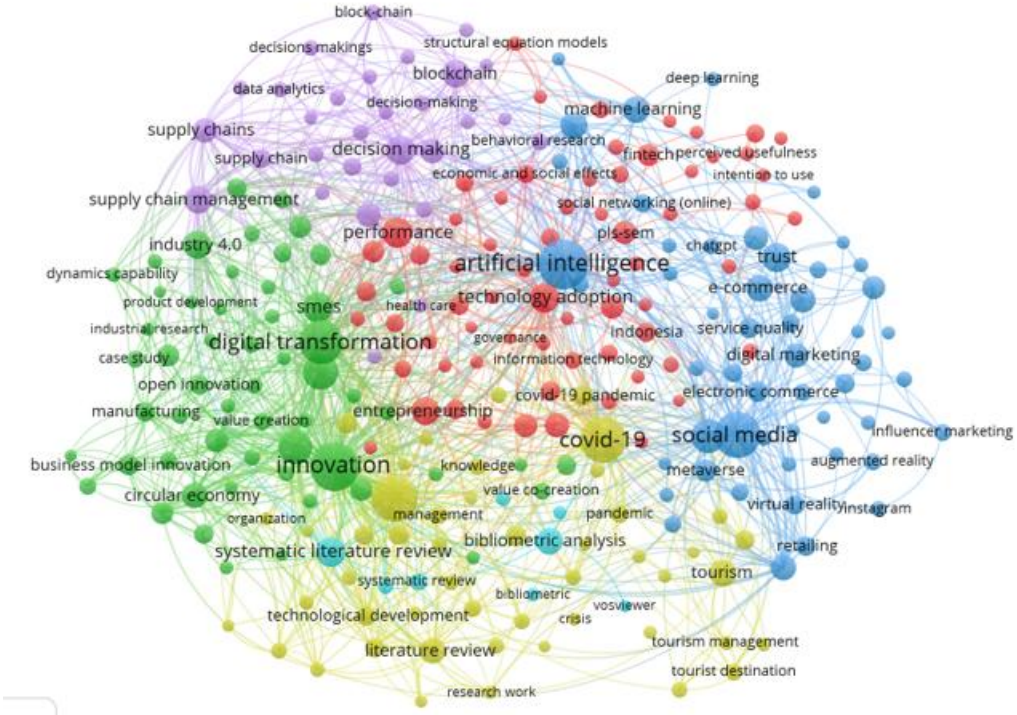


Figure 2. *Co-Occurrence Analysis of Digital Transformation*

Cluster 1 (Red)

The first node prototype centers on terms such as social media, engagement, content, and influencer. This cluster arises from the central role social platforms play in informing digital marketing strategies. Research in this stream demonstrates how interactive and user-generated content, as well as influencer partnerships, are reshaping consumer-brand connections. Unlike traditional one-way communication, social media platforms foster participatory ecosystems in which authenticity and trust are crucial for engagement. Digital marketing researchers have shown that the success of a campaign depends on its ability to 'Go viral,' tug at heartstrings, and gain algorithmic visibility. The cluster exemplifies how Facebook, Instagram, and TikTok have become laboratories for experimenting with consumer behavior, brand storytelling, and community building.

Cluster 2 (Green)

The second group is centered around keywords as technology acceptance, consumer confidence, behavioral intention, and acceptance models. It bridges digital marketing and the psychological factors that underpin consumer choice. This cluster encompasses the prevailing theories that inform why consumers use or do not use digital technology, such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT2). Trust, perceived usefulness, and ease of use are key factors influencing adoption in environments such as mobile banking, e-commerce, and online applications. Moreover, you can see from this cluster that digital marketing is about more than just new technology; here, technology is strategically aligned with people's psychology. By combining behavioral economics with marketing practice, the authors demonstrate how consumer attitudes influence digital engagement.

Cluster 3 (Blue)

This group represents the data-driven core of digital marketing, where companies use large-scale datasets to gain insights into user behavior, optimize campaigns, forecast trends, and achieve other key business objectives. Studies in this area demonstrate how analytics changes marketing from intuitive decision-making to fact-based decisions. With big data, marketers can segment, personalize, and

respond in real time to deliver individualized experiences at scale. For example, machine learning models can predict consumer churn, recommend products, and optimize advertising spend. The link between digital marketing and agencies is deep: they rely on analytics to measure engagement, assess ROI, and continually refine their strategies. There is also a moral aspect here; data privacy and transparency are now core to consumer trust.

Cluster 4 (Yellow)

The fourth cluster is based on terms such as digital transformation, innovation, ecosystems, and strategy. It links digital marketing to broader organizational and strategic changes spurred by technology. This cluster examines how companies reconfigure their resource sets, introduce new business models, and utilize tools and technologies to achieve competitive advantage. Digital marketing is conceptualized not just as a practice for promotion, but as an innovation ecosystem enabler, the place and space where organizations (firms) interact with consumers and technologies to collaborate on developing new value. Other research focuses on aligning marketing with IT and innovation management, revealing how digital transformation impacts customer experience and strategic agility. The link between this cluster and digital marketing refers to the general understanding that marketing and organizational adaptation in the digital age are synonymous. It represents a shift in perspective: marketing is no longer peripheral to digital strategy but central to orchestrating innovation, resilience, and sustainable growth in response to the shifting undercurrents of the current business climate.

Cluster 5 (Violet)

This is the cluster of methods that support digital marketing research. In academia, such concerns are reflected in the requirement to empirically validate constructs in studies (e.g., trust, satisfaction, or engagement). Analytical sophistication, including but not limited to SEM, mediation/moderation analysis, and power analysis, is necessary to properly analyze the complexities of relationships in a digital context. The link to digital marketing is obvious: new research techniques enable researchers to transition from descriptive studies to predictive, theory-based findings. By utilizing robust models, researchers can accurately measure consumer perceptions, evaluate the effectiveness of campaigns, and advance theoretical development. This cluster also demonstrates maturity in digital marketing as a field disciplined by methodology, to which empirical validation contributes legitimate credibility and informs practice. It reinforces the need for methodological stringency to ensure that literature on digital marketing is both scientifically sound and practical.

Cluster 6 (Blue Green)

The sixth cluster focuses on sustainability, ethics, corporate social responsibility (CSR), and responsible marketing. It also ties digital marketing to a rising interest in socially and environmentally mindful business operations. The research in this cluster emphasizes that consumers expect brands to consider ethical values and to declare their positions on transparency and sustainability-related goals more now than before. Digital media intensify these expectations further, giving customers the means to find fault and broadcast brand behavior. Academics maintain that responsible digital marketing is a moral necessity and can also lead to competitive advantage, as consumers reward brands they view as responsible. This convergence is symptomatic of digital marketing's journey from a purely profit-driven venture to a medium that recognizes the dual importance of social and environmental considerations.

Conclusions

Digital media marketing has evolved into a vibrant, multidisciplinary discipline that bridges consumer behavior, technology, and methodological precision. The bibliometric analysis revealed the evolution of the field from brand-centered communication to interactive, data-driven ecosystems, with a focus on engagement, authenticity, and algorithmic intelligence. This change illustrates the field's sensitivity to new technology and its ability to absorb multiple theoretical paradigms into a consistent intellectual structure.

Co-citation and co-occurrence analyses revealed six distinct clusters that collectively constitute the intellectual and conceptual framework of digital marketing. These clusters represent social media engagement, consumer adoption, big data analytics, innovation and transformation, methodological rigor, and sustainability. Together, they demonstrate how the field of digital marketing has evolved into a discipline that combines creativity with empirical accuracy, while also fulfilling its ethical and social responsibilities. The tension between these clusters is indicative of the field's interdisciplinary character and its impetus for both academic exploration and practical application.

In summary, the study suggests that digital marketing is more than just an advertising activity; it is a strategic and innovation-led process within broader corporate and societal contexts. By systematically mapping its intellectual landscape, the study clarifies the field's developmental trajectory, introduces key works and new frontiers that have influenced that development, and calls attention to a nascent emphasis on sustainability and ethics. The results inform the evolution of digital marketing and confirm it as a central determinant of competitive advantage in today's digital age.

Further studies should build on this result and expand the scope of bibliometric analyses to include additional databases, such as Web of Science and Google Scholar, to capture a broader set of publications and perspectives. Researchers are also invited to investigate longitudinal analyses of how clusters develop over time, especially as they respond to disruptive technologies (e.g., artificial intelligence, blockchain/the metaverse). Furthermore, a combination of qualitative methods with bibliometric mapping may shed light

on how digital marketing strategy is being practiced. Finally, more emphasis should be placed on sustainability and ethics; digital marketing is not just about driving business, but also about how everyone can utilize digital channels to make the world more financially sustainable and a better place.

References

Aaker, J. L. (1997). Dimensions of Brand Personality. Journal of Marketing Research, 34(3), 347–356. https://doi.org/10.1177/002224379703400304

Adam, M., Wessel, M., & Benlian, A. (2021). AI-based Chatbots in Customer Service and Their Effects on User Compliance. Electronic Markets, 31(2). Springer. https://doi.org/10.1007/s12525-020-00414-7

Adler, P. S., & Kwon, S.-W. (2002). Social Capital: Prospects for a New Concept. Academy of Management Review, 27(1), 17–40. https://doi.org/10.5465/amr.2002.5922314

Adner, R. (2006, April). Match Your Innovation Strategy to Your Innovation Ecosystem. Harvard Business Review. https://hbr.org/2006/04/match-your-innovation-strategy-to-your-innovation-ecosystem

Adner, R. (2017). Ecosystem as Structure: An Actionable Construct for Strategy. Journal of Management, 43(1), 39–58. https://doi.org/10.1177/0149206316678451

Agarwal, R., & Prasad, J. (1998). A Conceptual and Operational Definition of Personal Innovativeness in the Domain of Information Technology. Information Systems Research, 9(2), 204–215. https://doi.org/10.1287/isre.9.2.204

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Akter, S., Wamba, S. F., Gunasekaran, A., Dubey, R., & Childe, S. J. (2016). How to Improve Firm Performance Using Big Data Analytics Capability and Business Strategy Alignment? International Journal of Production Economics, 182(1), 113–131. https://doi.org/10.1016/j.ijpe.2016.08.018

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors Influencing the Adoption of Mobile Banking by Jordanian Bank Customers: Extending UTAUT2 with Trust. International Journal of Information Management, 37(3), 99–110.

Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. International Journal of Contemporary Hospitality Management, 30(1), 514–538. https://doi.org/10.1108/ijchm-10-2016-0568

Allenby, G. M., & Ginter, J. L. (1995). Using Extremes to Design Products and Segment Markets. Journal of Marketing Research, 32(4), 392–403. https://doi.org/10.1177/002224379503200402

Amit, R., & Zott, C. (2015). Crafting Business Architecture: the Antecedents of Business Model Design. Strategic Entrepreneurship Journal, 9(4), 331–350. https://doi.org/10.1002/sej.1200

Amoah, J. A., Khan, Z., Wood, G., & Knight, G. (2021). COVID-19 and digitalization: the Great Acceleration. Journal of Business Research, 136(136), 602–611. https://doi.org/10.1016/j.jbusres.2021.08.011

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), 411–423.

Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The Future of Social Media in Marketing. Journal of the Academy of Marketing Science, 48(1), 79–95. Springer. https://doi.org/10.1007/s11747-019-00695-1

Appio, F. P., Frattini, F., Petruzzelli, A. M., & Neirotti, P. (2021). Digital Transformation and Innovation Management: A Synthesis of Existing Research and an Agenda for Future Studies. Journal of Product Innovation Management, 38(1), 4–20. https://doi.org/10.1111/jpim.12562

Ardito, L., Raby, S., Albino, V., & Bertoldi, B. (2021). The Duality of Digital and Environmental Orientations in the Context of SMEs: Implications for Innovation Performance. Journal of Business Research, 123, 44–56. https://doi.org/10.1016/j.jbusres.2020.09.022

Ardolino, M., Rapaccini, M., Saccani, N., Gaiardelli, P., Crespi, G., & Ruggeri, C. (2017). The role of digital technologies for the service transformation of industrial companies. International Journal of Production Research, 56(6), 2116–2132. https://doi.org/10.1080/00207543.2017.1324224

Arellano, M., & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. The Review of Economic Studies, 58(2), 277–297. https://doi.org/10.2307/2297968

Aria, M., & Cuccurullo, C. (2017). bibliometri: An R-tool for comprehensive science mapping analysis. Journal of Informetrics, 11(4),

959–975. https://doi.org/10.1016/j.joi.2017.08.007

Ashley, C., & Tuten, T. (2014). Creative Strategies in Social Media Marketing: an Exploratory Study of Branded Social Content and Consumer Engagement. Psychology & Marketing, 32(1), 15–27. https://doi.org/10.1002/mar.20761

Audrezet, A., de Kerviler, G., & Guidry Moulard, J. (2020). Authenticity under Threat: When Social Media Influencers Need to Go beyond self-presentation. Journal of Business Research, 117(1), 557–569. https://doi.org/10.1016/j.jbusres.2018.07.008

Bagozzi, R. P., & Yi, Y. (1988). On the Evaluation of Structural Equation Models. Journal of the Academy of Marketing Science, 16(1), 74–94. https://doi.org/10.1007/bf02723327

Bagozzi, R. P., & Yi, Y. (2011). Specification, evaluation, and interpretation of structural equation models. Journal of the Academy of Marketing Science, 40(1), 8–34. https://doi.org/10.1007/s11747-011-0278-x

Bandura, A. (1977). Self-efficacy: toward a Unifying Theory of Behavioral Change. Psychological Review, 84(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99–120. https://doi.org/10.1177/014920639101700108

Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental Premises and Implications for Research. Journal of the Academy of Marketing Science, 48(4), 630–648. https://link.springer.com/article/10.1007/s11747-019-00718-x

Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. Information & Management, 57(2), 103168. https://doi.org/10.1016/j.im.2019.05.003

Berger, J., & Milkman, K. L. (2012). What Makes Online Content Viral? Journal of Marketing Research, 49(2), 192–205. https://doi.org/10.1509/jmr.10.0353

Beyari, H., & Hashem, T. (2025). The Role of Artificial Intelligence in Personalizing Social Media Marketing Strategies for Enhanced Customer Experience. Behavioral Sciences, 15(5), 700–700. https://doi.org/10.3390/bs15050700

Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. MIS Quarterly, 37(2), 471–482. https://www.jstor.org/stable/43825919

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent Dirichlet Allocation. Journal of Machine Learning Research, 3, 993–1022. https://doi.org/10.5555/944919.944937

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. Journal of Service Research, 14(3), 252–271. https://doi.org/10.1177/1094670511411703

Cool, K., & Dierickx, I. (1993). Rivalry, Strategic Groups and Firm Profitability. Strategic Management Journal, 14(1), 47–59. JSTOR. https://doi.org/10.2307/2486549

Davis, F. D. (1989). Perceived usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. Journal of Risk and Uncertainty, 18(3), 321–325. https://doi.org/10.1023/a:1011156710779

Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., & Carlson, J. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. International Journal of Information Management, 59(1), 1–37. https://doi.org/10.1016/j.ijinfomgt.2020.102168

Dutt, A., Kasilingam, D., Angell, R., & Singh, J. (2024). The future of marketing and communications in a digital era: data, analytics, and narratives. Journal of Strategic Marketing, 32(8), 1–9. https://doi.org/10.1080/0965254x.2024.2386002

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical Power Analyses Using G*Power 3.1: Tests for Correlation and Regression Analyses. Behavior Research Methods, 41(4), 1149–1160. https://doi.org/10.3758/brm.41.4.1149

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: a Flexible Statistical Power Analysis Program for the social, behavioral, and Biomedical Sciences. Behavior Research Methods, 39(2), 175–191. https://doi.org/10.3758/bf03193146

Felipa, P. (2017). Marketing + internet = e-commerce: oportunidades y desafíos. Revista Finanzas Y Política Económica, 41–56. https://doi.org/10.14718/revfinanzpolitecon.2017.9.1.3

Gungunawat, A., Khandelwal, N., & Gupta, N. (2024). AI-Powered Personalization in Digital Marketing: Transforming Consumer Engagement and Strategy. RESEARCH REVIEW International Journal of Multidisciplinary, 9(11), 183–191.

https://doi.org/10.31305/rrijm.2024.v09.n11.026

Hayes, A. F., Montoya, A. K., & Rockwood, N. J. (2017). The analysis of mechanisms and their contingencies: PROCESS versus structural equation modeling. Australasian Marketing Journal (AMJ), 25(1), 76–81. https://doi.org/10.1016/j.ausmj.2017.02.001

Kenny, D. A., & Judd, C. M. (1986). Consequences of violating the independence assumption in analysis of variance. Psychological Bulletin, 99(3), 422–431. https://doi.org/10.1037/0033-2909.99.3.422

Kumar, V., Ashraf, A. R., & Nadeem, W. (2024). AI-powered marketing: What, where, and how? International Journal of Information Management, 77(1), 102783–102783. Sciencedirect. https://doi.org/10.1016/j.ijinfomgt.2024.102783

Ma, Y., & Welsh, A. (2010). Transformation and Smoothing in Sample Survey Data. Scandinavian Journal of Statistics, 37(3), 496–513. https://doi.org/10.1111/j.1467-9469.2010.00691.x

Mocanu, A., & Szakal, A. C. (2024). Digital Marketing Strategies: A Comprehensive Literature Review. Digital Marketing Strategies: A Comprehensive Literature Review, 16(65), 37–44. https://doi.org/10.31926/but.es.2023.16.65.2.4

Myers, C. A. (2003). Managing brand equity: a look at the impact of attributes. Journal of Product & Brand Management, 12(1), 39–51. https://doi.org/10.1108/10610420310463126

Ölander, F., & Sepstrup, P. (1987). The use of electronic media for advertising and selling: A consumer policy outline. Journal of Consumer Policy, 10(3), 283–305. https://doi.org/10.1007/bf00411535

Rosário, A. T., & Dias, J. C. (2025). The Role of Digital Marketing in Shaping Sustainable Consumption: Insights from a Systematic Literature Review. Sustainability, 17(17), 7784–7784. https://doi.org/10.3390/su17177784

Sharabati, A.-A. A., Ali, A., Allahham, M. I., Hussein, A. A., Alheet, A. F., & Mohammad, A. S. (2024). The Impact of Digital Marketing on the Performance of SMEs: An Analytical Study in Light of Modern Digital Transformations. Sustainability, 16(19). MDPI. https://doi.org/10.3390/su16198667

Wirtz, B. W. (2019). Digital Business Models. In Progress in IS. Springer International Publishing. https://doi.org/10.1007/978-3-030-13005-3

Yannopoulos, P. (2011). The Impact of the Internet on Formulating Marketing Strategies. International Journal of Business and Social Science, 2(18). https://ijbss.thebrpi.org/journals/Vol_2_No_18_October_2011/1.pdf

Zott, C., Amit, R., & Massa, L. (2011). The Business Model: Recent Developments and Future Research. Journal of Management, 37(4), 1019–1042. https://doi.org/10.1177/0149206311406265.

Affiliations and Corresponding Information

Mary Ann P. Carranza
Bulacan State University – Philippines

Allen Grace M. Sarmiento
Bulacan State University – Philippines