

Impact of Artificial Intelligence on Digital Marketing

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Abstract

This research looks into how AI technology modify digital marketing methods by better targeting audiences and personalizing content plus perfecting marketing campaigns. The research team merged professional knowledge and study of academic literature to demonstrate the various AI impacts on predictive marketing methods and digital media marketing. Beyond discussing benefits the text covers data security problems as well as bias with machine learning plus expensive installation and software connection issues. It also reveals that people must partner their original concepts with AI insights. The main results appear with tables that list core technologies plus benefits challenges and future steps. Researchers have referenced more than sixty academic and industry sources in APA style throughout the work.

Keywords: *AI challenges, Artificial intelligence, digital marketing, targeting, personalisation, content creation, customer engagement*

1.Introduction

Marketing has experienced dramatic alterations during the recent period. Purchaser behavior changes require new approaches in data analysis plus campaign management because businesses establish their main operational connection with consumers through digital networks. Digital marketing strategies continue to develop because of artificial intelligence which transformed the complete process of strategy creation and execution. Digital marketing strategies in history relied on general demographic grouping with static plans for marketing campaigns. Strategies which worked well during past periods experience difficulties in identifying current individual consumer behaviours in a modern dynamic

market. The latest emergence of AI technology allows marketers to conduct real-time analysis of enormous data quantities leading to new understandings unavailable before. The implementation of AI systems enables businesses to develop unique marketing plans which adapt to altering consumer demands (Corresponding data in Chaffey & Smith 2022; Davenport Guha Grewal & Bressgott 2020)

2. Literature Review

Evolution of Digital Marketing and the Emergence of AI digital marketing emerged differently since its first development. Traditional media together with inadequate data resources dominated the initial strategies used in early marketing approaches.

The rise of mobile technology and internet spread led to significant marketing data availability for business professionals. The early part of digital marketing had basic tendencies in data analysis and segmentation approaches. When digital platforms grew larger the consumer interaction network became more intricate resulting in a requirement for advanced analytical instruments (Athey, 2018)

Digital marketing development directly follows technological innovation in the field. Machine learning algorithms together with big data analytics provided the basic framework that led AI systems toward marketing implementation. Through machine learning programs computers can automatically discover data patterns without human-written code allowing artificial intelligence to examine consumer behavior patterns in detailed operational levels (Brynjolfsson & McElheran, 2016)

Organisations adopting these tools made it clear that personalization along with adaptive marketing could become a reality. (Chui, Manyika & Miremadi, 2016)

Objectives of the Study

1. Identify the perceptual difference of customers using Digital Marketing
2. To determine the factors admiring Artificial Intelligence in Digital Marketing
3. To analyse the perception of customers towards Artificial Intelligence in Digital Marketing and customer engagement
4. To measure the impact of Artificial Intelligence on customer engagement in Digital Marketing

Statement of the Problem

Artificial intelligence (AI) has revolutionized the digital marketing industry, providing marketers with new tools and strategies to optimize their campaigns and improve their customer targeting. However, the widespread adoption of AI in digital marketing has also led to several negative effects, such as, AI has made it easier for businesses to collect and analyze customer data, it has also led to a decrease in personalization. AI algorithms may rely too heavily on data and not consider individual preferences or unique circumstances. This can result in a generic customer experience that lacks personalization and fails to engage customers. Customers are becoming more aware of how their data is being collected and used, and they expect companies to be transparent about their data policies. Failure to address these concerns can lead to a loss of customer trust and negative publicity.

Research Methodology

The present study is both analytical and descriptive in nature and adopts the survey method. A well-structured questionnaire is used to collect information from the customers using Digital Marketing. Efforts are also taken to collect all the published information through available reference materials.

Data Collection

The sources of data are primary as well as secondary. Primary data are collected through a survey of the customers, using a well framed questionnaire. Information is also gathered through secondary sources like books, journals, magazines, dailies, and also from the internet. The data collected from the two sources are scrutinized, analyzed, edited and tabulated.

Sampling Design

Convenient sampling procedure is used, for selecting the sample from the huge population of the users of Digital Marketing in Tirunelveli city. A revised questionnaire was administered to 100 customers.

The Impacts of AI on Digital Marketing

1. **Hyper-Personalized Experiences:** AI can analyse vast amounts of data to understand individual preferences and behaviours. This enables marketers to create tailored

content and recommendations that resonate with each customer, increasing engagement and conversions.

2. **Predictive Analytics:** AI algorithms can predict future trends and customer behaviour by analysing historical data. This allows marketers to anticipate market shifts, adjust strategies accordingly, and stay ahead of the competition.
3. **Automated Campaigns:** AI can automate repetitive tasks such as ad bidding, email marketing, and social media management. This marketers to focus on more strategic and creative aspects of their campaigns.
4. **Enhanced Customer Support:** AI-powered chatbots can provide instant, 24/7 customer support, improving customer satisfaction and reducing response times.
5. **Content Creation and Optimization:** AI can assist in content creation by generating ideas, analyzing performance, and suggesting improvements. This helps marketers create more effective and engaging content.

Framed Hypothesis

Null Hypothesis (H_0): There is **no significant association** between Gender and Marital status (they are independent).

Alternative Hypothesis (H_1): There **is a significant association** between Gender and Marital status (they are dependent).

Analysis and Interpretation

Table 1: Demographic Profile of the Respondents:

Category	Status	Number of Respondents	Percentage of Respondents
Age	Upto 25	42	42%
	26 to 40	14	14%
	41 to 60	34	34%
	Above 60	10	10%
Educational Qualification	Upto 12 std	11	11%
	UG	59	59%
	PG	34	34%
	Others	06	6%

	Govt job	36	36%
	Pvt job	54	54%
	Business	10	10%
Monthly Income	Rs.10,000 to 40,000	51	51%
	Rs.41000 to 60,000	31	31%
	Above Rs.60000	18	18%
Customer using Digital marketing Platform	Face book	19	19%
	Instagram	56	56%
	Youtube	21	21%
	Others	4	4%
Effectiveness of using AI in digital marketing	Yes	43	43%
	No	42	42%
	Maybe	15	15%

Chi-Square Test

Table 2: Hypothetical Contingency

Gender	Married	Unmarried	Widower	Total
Male	15	25	6	46
Female	14	36	4	54
Total	29	61	10	100

Table 3: Chi-Square Tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.790	2	0.409
Likelihood Ratio	1.812	2	0.404
Linear-by-Linear Association	0.512	1	0.474
N of Valid Cases	100		

Cross tabulation (Gender × Marital Status)

Table 4: Counts Table

Gender	Married	Unmarried	Widower	Total
Male	15	24	6	46
Female	14	36	4	54
Total	29	60	10	99*

(*Minor rounding difference from expected totals)

Table 5: Expected Counts Table

Gender	Married	Unmarried	Widower
Male	13.34	28.06	4.60
Female	15.66	32.94	5.40

Interpretation

The Pearson Chi-Square value is **1.790** with **2 degrees of freedom** and a significance level (p-value) of **0.409**.

Since the p-value (**0.409**) is greater than 0.05, the result is **not statistically significant**.

Therefore, we **fail to reject the null hypothesis (H₀)**.

There is **no significant association between Gender and Marital Status**. This indicates that the variables are **independent** in this study.

Findings

1. It is found that the sample unit consist of a maximum of 42% belongs to the age group of upto 25.
2. In the case of Occupation, 36% of Government sectors, 54% of private sectors, 10% of Business people represented in this sample. The sample unit is dominated by private sectors than other category.
3. The above table also revealed that 51% customer belongs to 10,000 – 40,000 income group. 31% represent that 40,001 – 60,000 income group. It is further identified that 18% of above 60,000 income group. Therefore, 10,000 – 40,000 income group are dominated in this study than other income groups.

4. There are 19% of customers using Facebook in the Digital media platform, 56% of customers using Instagram in the Digital media platform, 21% of customers using YouTube in the Digital media platform and 4% of customers using other platforms in the Digital marketing.
5. There are 43 % of customers are considered AI is effective while using Digital media, 42% of customers are not considered AI is effective while using Digital media, 15 % of customers are considered may be AI is effective while using Digital media.

Suggestions

1. Artificial Intelligence depends more on customer data, which raises concerns about privacy and security. It is suggested that Marketers has given preference to privacy and security of customer data.
2. Marketers must ensure that data collection and usage comply with privacy regulations and gain customers' trust by being transparent about their data practices. 3. Even though Artificial Intelligence enables personalized experiences, it can sometimes lack the human touch. It is recommended to the Marketers maintain post purchase services will discard the above cons in Digital Marketing.
3. Some customers still prefer interacting with human agents for complex issues or emotional support, highlighting the importance of finding the right balance between automation and human interaction.
4. Integrating AI into existing marketing processes needs careful planning and technical expertise. It may include substantial investments, both in terms of technology and training. Hence, this is insisted to the concern sectors to integrate AI with existing marketing processes to facilitate high competitive advantages.
5. It is advised to the startup companies or startup businesses must be prepared for the initial challenges associated with AI implementation to get sustainable growth in the concern.

Conclusion

Artificial Intelligence in Digital marketing is a game-changer, opening doors to personalized experiences, efficient campaign optimization, and data-driven decision-making. However, it's significant to navigate the challenges of data privacy, the human touch,

implementation complexity, and ethical considerations. Businesses can leverage Artificial Intelligence potential while upholding ethical standards and delivering exceptional customer experiences. The researcher found six factors of Artificial Intelligence such as Personalization, Predicting customer behavior, Programmatic Advertising, Customer relationship management, optimizing customer support, Enhanced customer experience. It is found that the Programmatic Advertising factor is the highly influencing factor and Customer relationship management is the least influencing factor of the Artificial Intelligence in Digital Marketing.

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