



## **A Study on Artificial Intelligence in Marketing Mix-Conceptual Framework.**

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### **ABSTRACT:**

Artificial intelligence (AI) in marketing is an emerging trend that can improve both the customer experience and the effectiveness of marketing campaigns. AI is a key part of the fourth industrial revolution. Today, the majority of marketers have started using AI to collect and utilize customer information. This paper focuses on literature reviews regarding the awareness and application of Artificial Intelligence (AI) in the marketing mix, specifically investigating the efforts of the marketing mix 4Ps (product, price, promotion, and place).

**Keywords:** Marketing, Marketing mix, Artificial Intelligence (AI), Artificial Intelligence (AI) in marketing

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### **INTRODUCTION:**

“Marketing has undergone significant changes over the years, with traditional advertising methods like television, radio, and newspaper being replaced by digital techniques such as video, display, pay-per-click, and social media. The growing popularity of artificial intelligence (AI) has led to an increased focus on AI in marketing research. By leveraging multiple technologies, AI enables computers to perform a range of tasks, including advertising, image recognition, and translation, which can provide customers with personalized digital experiences. The use of AI is becoming increasingly common in our daily lives, from chatbots to self-driving cars.

As advertising technology continues to advance, marketers are turning to AI to enhance their marketing and advertising efforts and effectively reach their target audience. Examples of AI marketing include chatbots (like ChatGPT), image recognition, voice assistants (such as Google Assistant, Amazon Alexa, Microsoft's Cortana, and Apple's Siri), recommendation engines, targeted advertising based on search, and dynamic pricing on e-commerce sites.”

The marketing mix is a tool that companies use to promote their brands and products, which includes the four Ps: Product, Place, Price, and Promotion.

#### **Marketing mix (4ps):**

##### **Product:**

It means what a company offers, like goods or services, and it must be made to fit what customers want.

##### **Price:**

It means how much the product or service costs, and it should be priced so that people will pay for it while also making the company money.

##### **Place:**

It means where the product is sold, like in stores or online.

##### **Promotion:**

It means how the company communicates with customers and promotes its brand, like with ads, Public relation, or personal selling, sales promotion, direct marketing. By thinking about each part of the marketing mix, companies can create a good marketing plan and be successful.

#### **Artificial intelligence (AI) in the marketing mix:**

It refers to the use of AI in various aspects of the traditional marketing mix called the 4 Ps: Product, Price, Place, and Promotion. With AI in the marketing mix, these four elements can be improved using AI technology.

#### **Artificial intelligence (AI) in product mix:**

AI can help with product recommendations based on customer data and preferences, product design, and customization. Examples of brands that use AI in product mix (Amazon, Google, Tesla, Netflix)

#### **Artificial intelligence (AI) in price mix:**

AI can help with adjust the price of a product or service based on market demand and other factors. Examples of brands that use AI in price mix (Uber, walmart, Philips)

#### **Artificial intelligence (AI) in place mix:**

AI can also help with supply chain optimization, inventory management, and personalized distribution channels for place. Examples of brands that use AI in place mix (Amazon, Walmart, DHL, Domino's Pizza, and Starbucks)

#### **Artificial intelligence (AI) in promotion mix:**

AI can help with targeted advertising, content optimization, and chatbots for customer service with promotion. Examples of brands that use AI in promotion mix (Coca-Cola, Adidas, Amazon, Netflix and Starbucks)

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## **CONCEPT OF ARTIFICIAL INTELLIGENCE IN MARKETING:**

### **DEFINITION:**

#### **Marketing & Marketing mix:**

“Marketing refers to all activities a company does to promote and sell products or services to consumers”.

“Marketing makes use of the "marketing mix," also known as the four Ps—product, price, place, and promotion”.

“Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large”.

#### **Artificial intelligence (AI):**

“Artificial intelligence is a scientific field that focuses on developing computers and machines that can reason, learn, and perform tasks that typically require human intelligence, or that involve data that surpasses human capacity for analysis. It is a broad discipline that encompasses various fields, such as computer science, data analytics, statistics, hardware and software engineering, linguistics, neuroscience, philosophy, and psychology. In terms of business use, AI comprises technologies primarily based on machine learning and deep learning, which support data analytics, predictions, object categorization, natural language processing, recommendations, intelligent data retrieval, and other applications”.

#### **Artificial intelligence (AI) marketing:**

“Artificial intelligence (AI) marketing refers to the use of AI techniques and tools, such as data models, algorithms, and machine learning, to generate customer insights that can be utilized by marketers to enhance spending optimization, content customization, and personalized customer experiences. AI marketing solutions include chatbots, image recognition, personal assistants (such as Google Assistant, Amazon Alexa, Microsoft's Cortana, and Apple's Siri), recommendation engines, targeted advertising based on search, and dynamic pricing on e-commerce websites”.

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## **REVIEW OF LITERATURE**

- **Norbert wirth (2018)**, AI applications are being used in many different fields, including medicine, production, logistics, mobility, and marketing. People are talking about these solutions and wondering what they can do. Market researchers are interested in AI but unsure how to use it. The author of this article explains the different types of AI, including narrow, hybrid, and strong, and wonders if AI can help with marketing insights. Ultimately, the author recommends that we should start using AI.
- **Kristina Kaličanin\*, Milica Člović, Angelina Njeguš, Vladimir Mitić (2019)** AI is used in smart devices and applications to understand and deliver customized experiences based on consumer behavior, needs, and preferences. It is a primary driver of innovation in marketing, allowing marketers to gain valuable insights into customers, competitors, and markets. AI can also automate tasks, reduce costs, and improve workflows. This paper provides an overview of existing academic research on the current and potential applications of AI in marketing.
- **Mrs. Jamuna K M (2022)** AI helps smart devices and applications deliver personalized experiences based on consumer behavior, needs, and preferences. This drives innovation in marketing, offering valuable insights into customers, competitors, and markets while automating tasks, cutting costs, and improving workflows. The paper gives an overview of academic research on AI's current and potential use in marketing.
- **Fazla Rabby, Dr. Ranga Chihundu, Dr. Rumman Hassan (2021)**, the marketing environment is changing, making it more challenging to track the customer journey. The digital market is growing, and customers have countless new shopping options. They share their desires,

attitudes, and beliefs through various avenues, and exceptional customer experience is essential across digital platforms. AI can enhance the digital experience by delivering personalized content. Marketers use AI to extract customer data and develop customized digital marketing experiences. AI empowers businesses to collect and act on real-time customer insights. This literature review examines AI-based digital marketing applications that can enhance the online customer experience during the buying process. It investigates how AI integrated digital marketing influences consumer buying behavior. While businesses have a long way to go before adopting AI-based applications, many see the critical benefits of integrating AI into digital marketing practices to build an exceptional customer experience.

- **Vinchhi DEVANG, Shroff CHINTAN, Tanna GUNJAN ,Rai KRUPA(2019)** Artificial intelligence refers to machines that simulate human intelligence processes, including voice and image recognition, decision making, machine learning, and semantic search. This paper aims to educate marketers on the potential of AI by providing real- world examples of early-adopting firms and connecting them with AI-powered technologies that can improve marketing performance and transform businesses. It also studies the impact of AI on the overall marketing landscape through primary research. Finally, the paper identifies sectors that have shown good acceptability for AI in marketing and those that will benefit the most.
- **Nanayakkara, N. W. O. K. D. S. P. (2020)**, Incorporating (AI) technology into businesses has always been crucial for process improvements and innovation. Recently, Artificial Intelligence (AI) has emerged as a trend in various fields, including marketing. Companies are redefining their marketing mix to include AI, which leverages extensive data to make decisions about future business processes, consumer behavior, and market trends. This leads to a competitive advantage for businesses over their rivals.
- **Ming-Hui Huang & Roland T. Rust (2020)** , The authors create a framework for strategic marketing planning in three stages that involves the use of artificial intelligence (AI) for automation of repetitive marketing functions, processing data for decision- making and analyzing interactions and emotions. This framework suggests using AI for marketing research, strategy, and actions. AI can be used for data collection, market analysis, customer understanding, segmentation, targeting, positioning, and personalization. This framework is applied to different marketing areas to demonstrate the strategic use of AI.

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### Objective of the study:

1. To study the awareness and applications of Artificial Intelligence (AI) in marketing mix.
2. To study the effectiveness of advertisement with the use of Artificial Intelligence (AI) in marketing mix.
3. To analyze the impact of Artificial Intelligence (AI) in marketing mix .

### Scope of the study:

This study focuses on improving customer experience through using Artificial Intelligence (AI). The scope of this study is to find out whether consumers are aware of the use artificial intelligence (AI) in marketing mix.

### Research methodology:

Research methodology is a systematic approach used to address research problems. Essentially, it is the study of how research is scientifically conducted. This involves examining the various steps that researchers typically take when studying a problem, as well as the reasoning behind those steps. Understanding methodology is crucial for researchers, as it encompasses not only research techniques and methods, but also the broader framework in which research is conducted. This chapter provides an overview of the different approaches that have been used to collect necessary information for successful research studies. Specifically, the current study is of a descriptive nature.

### Research Design:

Research design is a critical topic that is central to research studies in science, social science, and many other disciplines. After identifying the research topic and formulating questions, selecting the appropriate design is perhaps the most important decision a researcher makes.

### Descriptive research:

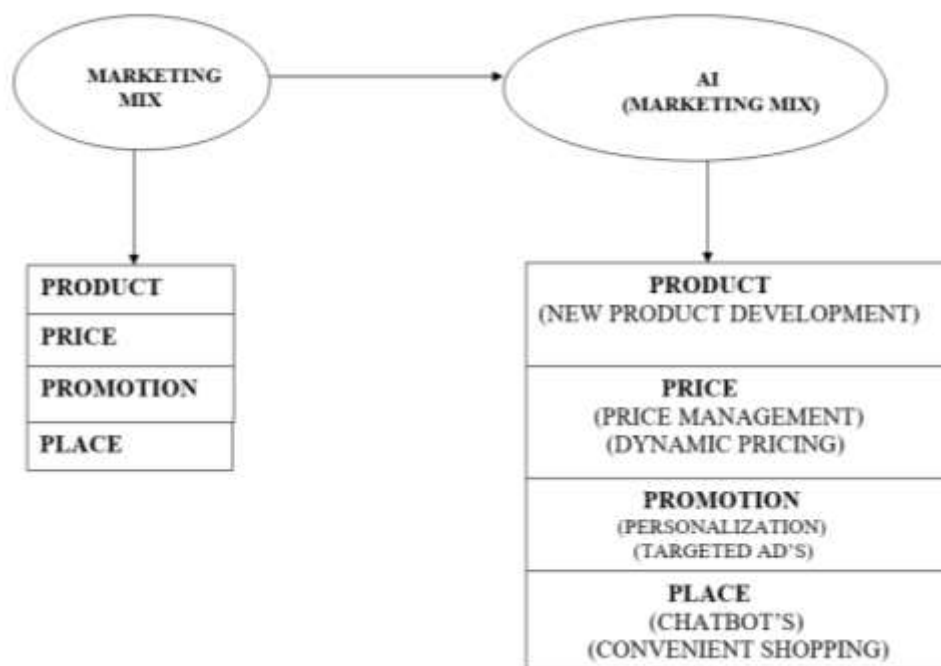
Descriptive research design is used to detect the awareness and purchase behavior towards the green products and to analyze their factor influencing the consumer buying behavior. Survey research method using a well-structured questionnaire for selected consumer for collecting data.

### Area of the study:

Villupuram city is located in the Indian state of Tamil Nadu.

### Methods of data collection:

For this study the data were collected in the form of both primary and secondary sources of information. The primary data is collected through questionnaire the secondary data has been collected to get an insight into the field of the study.

**CONCEPTUAL FRAMEWORK:****Conclusion:**

The popularity of AI is growing rapidly and marketers are investing heavily in this technology. AI has become an increasingly essential element of the marketing mix, offering valuable insights into consumer behavior and preferences. It allows marketers to deliver personalized and targeted marketing advertisement, thereby improving customer engagement and sales. By leveraging AI algorithms, businesses can optimize their marketing campaigns, automate many tasks, and enable their marketing teams to concentrate on higher-level activities such as strategy and creativity. As AI technology advances, it is likely to play a more significant role in marketing, leading to industry-wide transformation and innovation.

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