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The Role of Artificial Intelligence in Marketing Innovation

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ABSTRACT

Artificial Intelligence (AI) capabilities have become very important in the modern marketing world due to its expertise in analyzing data in depth, predicting consumer behavior, and improving the efficiency of marketing campaigns. The use of artificial intelligence (AI) allows companies to achieve better results in digital marketing by means of content personalization and ad optimization. The purpose of this research is to identify and analyze the role of artificial intelligence in marketing innovation, especially in developing new marketing strategies and improving the effectiveness and efficiency of marketing campaigns. This research uses a qualitative method with a case study approach technique. Data were obtained through semi-structured interviews, focus group discussions (FGDs), and direct observation of five companies that use AI in their marketing strategies. Thematic analysis was used to identify key themes from the collected data. The study shows that artificial intelligence (AI) improves customer personalization and segmentation, operational efficiency, and customer sentiment analysis. AI can also predict sales more precisely and optimize digital advertising, which helps improve overall marketing performance. The application of artificial intelligence (AI) in marketing has a major positive impact on the effectiveness and efficiency of marketing campaigns. These results can provide useful advice for marketers in utilizing artificial intelligence more effectively, as well as contribute to research on the role of artificial intelligence in marketing innovation

INTRODUCTION

Marketing is an effort to communicate, create, barter, and present services that are beneficial to customers, as well as customer partners. In an increasingly sophisticated and digitally connected age like now, the success of a company's marketing is one of the most vital things to pay attention to. The influence of marketing in online purchasing decisions is enormous because it covers a wide range. Effective and innovative marketing strategies are needed to achieve success. One way to achieve this goal is to innovate in the field of digital marketing. Digital marketing is a process of marketing a company's products or services by utilizing digital technology on the internet, such as mobile phones, image ads, and other digital media such as Google ads, Facebook, Instagram, Marketplace, and others. There are various strategies for implementing digital marketing such as Search Engine Optimization (SEO), Search Engine Marketing (SEM), Social Media Marketing (SMM), Content Marketing, Email Marketing, Online Advertising, websites, Affiliate Marketing, Viral Marketing, and others (Taufik & Kurniawan, 2023).

Artificial Intelligence (AI) is a technology that allows computers or machines to think like humans, capable of performing activities similar to the human brain. Currently, the development of AI technology is utilized in various aspects of life, including in the field of digital marketing. This aims to make it easier for businesses to reach consumers quickly and in a timely manner (Thilagavathy & Praveen Kumar, 2021). One of the biggest consequences of artificial intelligence in digital marketing is its ability to predict consumer behavior. By analyzing data from social media, search engines, and other online sources, AI can recognize patterns and make predictions about consumers' future needs. This indicates that entrepreneurs can target the interests and needs of their intended market.

Research Objectives

1. Recognize the role of artificial intelligence in marketing innovation.
Explains how AI is used to develop new marketing strategies and improve the efficiency and effectiveness of marketing campaigns.
2. Evaluating the effect of AI implementation on marketing performance
Assess the effect of using artificial intelligence (AI) technology on several marketing performance indicators, such as sales increase, customer engagement, and customer satisfaction.
3. Identify barriers and potentials in utilizing AI in marketing.
Discover the key barriers that companies face when implementing AI technologies in their marketing strategies, and also identify opportunities to improve marketing innovation.
4. Exploring case studies of AI implementation in marketing
Explore real-life examples of companies that have successfully implemented AI in their marketing strategies and analyze the key factors that contributed to their success.
5. Develop recommendations for marketing practitioners
Develop practical recommendations based on the research findings to help marketing practitioners utilize AI technologies more effectively in their marketing activities.
6. Contribute to the academic literature on AI and marketing:
Provides new insights that can enrich the academic literature on the role of AI in marketing innovation, and offers future research directions on this topic.
7. Assess the link between marketing innovation and customer satisfaction:
Analyze how AI-driven marketing innovations relate to customer satisfaction and loyalty levels.

Research Significance

This research has importance both in terms of theory and marketing practice as follows:

1. Contribution to marketing theory

- Development of literature on AI and marketing

This research will add to the academic literature on the role of artificial intelligence in marketing, particularly in the context of innovation. The results of this research will provide new insights into how AI can be used to create more innovative and effective marketing strategies.

- Deepen understanding of marketing innovation

With a focus on the use of AI, this research will help deepen the understanding of the concept of innovation in marketing and how technology can be a key driver in creating competitive advantage.

- Model and conceptual framework

This research has the potential to develop new models and conceptual frameworks that can be used by other researchers in their studies of AI and marketing innovation.

2. Practical application for marketing practitioners

- AI-based marketing strategy

The findings from this research will provide practical guidance for marketers on how to integrate AI into their marketing strategies to improve performance and efficiency.

- More informed decision-making

This research will provide information and understanding that can help practitioners make better decisions about the adoption and implementation of AI technology in their marketing strategies.

- Identify opportunities and challenges

By identifying the opportunities and challenges faced in the use of AI, this research will help marketing practitioners overcome barriers and maximize the benefits of AI technology.

3. Implications for policy and management

- Technology policy development

These findings can be used by companies to develop internal policies related to the use of AI in marketing, including policies related to employee training, AI ethics, and technology investment.

- Innovation management

This research will reveal ways for managers to manage innovation processes involving AI technologies, including strategies for managing change and integrating new technologies into existing marketing practices.

4. Contribution to society and economy

- Improving customer experience

By understanding how AI can be used to improve customer interactions, this research will contribute to the development of more responsive and personalized marketing strategies.

- Economic growth

Through improved marketing efficiency and effectiveness, the use of AI can contribute to economic growth by helping companies increase their sales and competitiveness.

In general, it is hoped that this research can make a great contribution, both theoretically and practically, in shaping a smarter and more innovative marketing future using artificial intelligence.

METHODOLOGY

Qualitative Approach Used

This research uses a qualitative approach to explore the role of artificial intelligence (AI) in marketing innovation. A qualitative approach was chosen because it can provide a thorough and in-depth understanding of the phenomenon being studied. Below are the main elements of the qualitative research design used in this study :

1. Research Methods: Case Study

- o A case study is a qualitative research approach that involves an in-depth investigation of one or more cases in a real-life context. This method is suitable for research that wants to

explore complex phenomena in a context-rich environment.

- o Reason : The case study method was chosen because it allowed the researcher to understand in detail how AI is being used in various aspects of marketing in several leading companies (Yin, 2016).

2. Data Collection Technique

- o Semi-structured interviews were conducted to gain in-depth insights into participants' experiences and perspectives regarding the use of AI in marketing. These interviews allowed flexibility for the researcher to explore topics that arose during the discussion.
- o Focus Group Discussions (FGDs) were conducted to get a range of views and a more dynamic discussion on the research topic. Group discussions allow interaction between participants which can lead to richer insights.
- o Direct observations were conducted at several companies to see how AI is applied in day-to-day marketing activities. These observations helped the researcher understand the operational context and practical challenges faced.

3. Research Procedure

- o Preparation stage: identifying companies and participants that fit the research criteria, and designing interview and group discussion guides.
- o Data collection: conducted in-depth interviews, FGDs, and observations over a six-month period. Each interview and discussion session was recorded and transcribed for further analysis.
- o The collected data was analyzed using the thematic analysis method, which involved grouping the data to identify the main themes that emerged. With this approach, the researcher was able to organize the data in a systematic way and draw relevant conclusions in accordance with the research objectives.

4. Data Analysis Technique

- o Coding: interview, FGD and observation data was done manually and using qualitative analysis software. This coding helped in identifying key themes and patterns relevant to the research.
- o The thematic analysis method is used to identify, analyze, and report themes in the data. This method is called thematic analysis. The process involves several steps, such as getting to know the data, creating initial codes, searching for themes, reviewing themes, and defining and naming themes.

The qualitative method used in this study allowed the researcher to gain a deeper understanding of the application of artificial intelligence in marketing innovation, recognize the barriers and opportunities faced by the company, and provide suggestions based on the empirical findings.

RESEARCH RESULT

The role of artificial intelligence (AI) in marketing innovation is to maximize the use of technology to improve customer experience. Today, it is vital for companies to identify and understand the needs and needs of their customers. Customer expectations regarding products and services. With the support of AI, marketers can process large amounts of data, make personalized sales, and meet customer expectations. Artificial intelligence is the ability of machines to perform intellectual tasks similar to those that humans can do, such as solving problems, learning, developing creativity, thinking, understanding, and interacting with the environment. The advent of AI-powered marketing solutions reduces the workload of marketers and shifts tasks to machines. In addition, customers can be more confident of having their needs met in a faster and shorter time. In this article, the author has discussed all the concepts in the use of artificial intelligence in marketing. It provides complete details about the benefits of implementing AI in marketing, how AI is changing the way marketing is done, and the need for AI in marketing explained through real-life examples from various businesses. Technically, the use of

artificial intelligence (AI) technology can be implemented and there will be many things that can be done automatically and more efficiently, including in the field of digital marketing. Marketing has the ability to process large amounts of data from various platforms such as web, social media, and email quickly. In addition, the understanding they have of customers and their needs in less time helps them improve performance. Another reason why AI needs to be applied in marketing is because it is increasingly important for companies to recognize and understand customers' needs and expectations for products and services. This can help marketers to identify who their target audience is so as to create a more personalized experience for users. By using artificial intelligence (AI), marketers can better understand customer behavior and generate customer insights that can improve all four important factors in marketing, namely: customer targeting and lifetime value, customer engagement, customer experience, and customer loyalty.

Later, deep learning was used in Natural Language Processor (NLP). In principle, NLP refers to the elements that allow a chatbot to have a conversation that is almost exactly the same as a conversation between humans. In the field of NLP, deep learning is used to learn from human input and generate human responses, rather than just learning human input (Taufik & Kurniawan, 2023). As with artificial neural networks, the use of deep learning in marketing can help companies to improve understanding of customers, improve personalization, optimize advertising, and provide a better overall experience.

One example of the application of deep learning in marketing is :

1. Image recognition, which helps sellers understand the images and videos that people share on social networks and "display" consumer behavior. Then, buyers identify details about the offerings shown in the images, and sellers benefit from consumption details (Maihani et al., 2023). In this context, image recognition can be used to automatically identify brands or products. For example, companies can leverage image

recognition to recognize their logo or products in images posted by users on social media.

2. Sentiment analysis is often used by many parties such as buyers or marketers to gain an understanding of products or market trends (Yadav et al., 2020). Deep learning can be used to analyze customer feelings from product reviews, social media comments, or user feedback. By automatically understanding customer feelings, companies can respond more confidently and take appropriate actions.
3. Personalization powered by deep learning enables the development of a more robust recommendation system. By analyzing customer behavior data and preferences, deep learning can provide personalized recommendations for suitable products or content. This can increase customer engagement and boost sales.
4. The development of visual search engines allows users to be more confident in searching images based on visual content, such as searching for similar products or seeking inspiration based on a particular style or look. In digital marketing, visual search can increase user confidence and help in product discovery.
5. Big Data has become very important for companies in maintaining their success as they move towards the digitalization process. With the rapid advancement of technology, consumers generate various types of data in large quantities. This is the result of rapid technological advancements. Data compiled in various volumes, speeds, and variations allow companies to gain a better understanding of consumer behavior (Maihani et al., 2023). Running an accurate analysis of big data can help businesses to identify consumer needs and gain a competitive advantage in the market (Cavlak & Cop, 2021). By understanding the complex patterns in big data, deep learning is able to help companies better understand market trends, forecast product demand, and optimize marketing strategies. Big Data has had a significant impact on several industries such as healthcare, industry, and retail (Grishikashvili et al., 2021).

6. Speech Recognition is the process of converting a voice signal into a collection of words. Speech recognition converts spoken words into machine-readable input. Also known as speech recognition (Dinata et al., 2018). This tool has the ability to convert user speech into text. It can also be applied in voice marketing, for example voice search or voice assistants, which are increasingly in demand.
7. Ad optimization through deep learning can be used to optimize digital advertising. By analyzing user behavior data and responses to ads, deep learning can recognize successful patterns and improve ad targeting, placement, and display. At the same time, the online advertising market is also growing and attracting increasing interest from websites, social networks, and mobile apps (Akande & Haq, 2021). Therefore, ad optimization in deep learning will definitely have a very positive impact.

The Role of Artificial Intelligence in Marketing Innovation

This research states that artificial intelligence (AI) has a crucial role to play in advancing marketing innovation through optimal utilization of technology to improve customer experience. In modern marketing, AI helps companies to be more confident in recognizing and understanding customer needs and expectations regarding products and services. By using artificial intelligence (AI), marketers can analyze large amounts of data in real-time, thereby improving the personalization of individual sales and meeting customer expectations more accurately and quickly.

Artificial intelligence (AI) has the ability to perform intellectual tasks that are often related to human thinking activities, such as solving problems, learning, creating, thinking, understanding, and interacting with the surrounding environment.

The adoption of AI-based marketing solutions has reduced the workload typically carried out by marketers, thereby providing higher efficiency in meeting customer needs in less time.

Benefits of AI Implementation in Marketing

This article thoroughly discusses the concept of using AI in marketing and its benefits, and illustrates how AI is changing the marketing landscape and meeting needs with real-life examples from various businesses. With the use of AI technology, various parts of marketing can be automated to improve efficiency, including digital marketing that is able to process large amounts of data from various platforms such as web, social media, and email quickly. This allows companies to have a better understanding of consumers and their needs, thereby improving marketing performance.

Application of AI in Enhancing Customer Experience

AI enables marketers to more confidently understand customer behavior and generate insights that improve four key aspects: customer targeting, customer lifetime value, customer engagement, customer experience, and customer loyalty. By using artificial intelligence (AI), companies can create more personalized and responsive user experiences, identify target audiences, and respond more precisely to their needs and expectations.

Deep Learning Technology in Marketing

The study also emphasized the use of deep learning in the Natural Language Processing (NLP) section that enables chatbots and virtual assistants to have conversations that almost exactly match human conversations. Applying deep learning in marketing can help companies gain a better understanding of customers, improve personalization, optimize ads, and provide a better overall experience. Some examples of using deep learning in marketing include:

- a. Image recognition helps in understanding images and videos on social media, identifying consumer behavior, and automatically recognizing brands or products.
- b. The use of deep learning in analyzing customer sentiment from product reviews and social media comments allows companies to respond more confidently and quickly.

- c. Deep learning-based recommendation systems increase confidence by providing relevant product recommendations based on customer behavior and preference data, thereby increasing engagement and conversion.
- d. Visual search engines allow users to search images based on visual content, enhancing the user experience and aiding in product discovery.
- e. Big data analysis using deep learning provides a deeper understanding of consumer behavior, helping companies understand market trends and make product demand predictions.
- f. Speech recognition technology converts words spoken by users into text and is often used in voice marketing applications such as voice search or voice assistants.
- g. Deep learning improves the effectiveness of digital ad targeting and placement by analyzing user behavior data and responses to ads.

In general, this research shows that AI and deep learning have become invaluable tools in marketing innovation, providing opportunities for companies to understand and serve customers better, optimize marketing operations, and achieve competitive advantage.

DISCUSSION

Alignment with Previous Research

1. Personalized marketing
 - ✓ Previous study: Smith, R., et al. (2019) shows AI enables deep personalization, increasing customer engagement.
 - ✓ Alignment: recent findings support that AI processes big data in real time for more accurate personalization.
2. Sentiment analysis and customer feedback
 - ✓ Previous study: Xu et al., (2022) demonstrated AI analyzing customer sentiment from social media and online reviews.
 - ✓ Alignment: recent findings confirm the importance of AI-based sentiment analysis in understanding and responding to customers.
3. Market trend prediction

- ✓ Previous study: Vaid, S., et al. (2023) highlighted AI predicts market trends and consumer behavior.
 - ✓ Alignment: recent findings support the role of AI in understanding market trends and forecasting product demand.
4. Ad campaign optimization
 - ✓ Previous study: Krishna et al., (2018), showed AI optimizes digital advertising campaigns.
 - ✓ Alignment: recent findings show AI improves ad effectiveness through targeting and optimization.

Difference with Previous Research

1. Deep learning and NLP technologies:
 - ✓ Previous studies: focus on AI's basic capabilities in data analysis and personalization.
 - ✓ Difference: recent findings show deep learning and NLP promote more natural customer interactions through chatbots and virtual assistants.
2. Practical application in various aspects of marketing:
 - ✓ Previous studies: focus on one or two aspects of AI implementation.
 - ✓ Difference: recent research provides a holistic view of the application of AI in various aspects of marketing such as image recognition, big data, and voice recognition.
3. Operational benefits and efficiency
 - ✓ Previous studies: lack of highlighting the operational benefits of AI.
 - ✓ Difference: recent findings emphasize automation and operational efficiency enhanced by AI, reducing human workload and enabling focus on creative strategies.

This research extends the insights of previous studies, showing that AI continues to evolve and make a significant impact in various aspects of marketing, supporting innovation and greater efficiency.

Implications of Findings

Practical Implications : Impact for marketing practitioners

- Increased personalization : AI enables more personalized and relevant marketing, increasing customer engagement and satisfaction.
- Operational efficiency : automation of marketing tasks by AI reduces workload and increases productivity.
- Sentiment analysis : AI helps companies respond quickly to customer feedback, improving customer relationships and satisfaction.
- Advertising Optimization : AI optimizes ad targeting and placement, improving campaign effectiveness and return on investment.
- Market trend prediction : AI helps forecast product demand, enabling better planning and risk reduction.

Theoretical Implications : Contribution to marketing theory and AI

- AI integration in marketing: these findings add to the literature on how AI can be integrated in marketing strategies to increase effectiveness.
- New personalization model: proposed an AI-based personalization model that can be tested and further developed.
- Improving consumer understanding: showing how AI can provide a deeper understanding of consumer behavior and preferences.
- Operational efficiency framework: provides a framework for understanding how AI improves efficiency in marketing operations.
- Customer interaction theory: developing theories on how AI and deep learning affect customer interactions and experiences.

CONCLUSION

Summary of Key Findings

This research shows that artificial intelligence (AI) plays an important role in marketing innovation by improving personalization, operational efficiency, and data analysis. AI helps companies recognize and understand customer needs and expectations, enables marketers to process large amounts of data in real-time, and provides a better customer experience through the use of technologies such as deep learning

and NLP. Artificial Intelligence (AI) also plays an important role in improving advertising efficiency, forecasting market trends, and increasing customer engagement and loyalty.

Recommendation

1. For marketing practitioners
 - Implement AI for more effective marketing personalization and responsiveness to customer needs.
 - Utilize AI-based sentiment analysis to gain better insights into customer feedback.
 - Use AI to optimize ad campaigns and improve operational efficiency.
 - Continue to explore the latest AI technologies to stay competitive and innovative.
2. For future researchers
 - Conduct further research on the integration of AI in various marketing strategies.
 - A more in-depth exploration of the use of deep learning and NLP technologies in improving customer interactions.
 - Research the long-term impact of AI usage on customer loyalty and brand image.

Research Limitations

This study has several limitations, including :

- a. Sample limitations: limited number of participants and focus on leading companies only, which may not be representative of the entire industry.
- b. Geographical scope: the research may be limited to a specific geographical area and not cover cultural variations and the global market.
- c. Evolving technology: the rapid development of AI technology may make some findings soon obsolete.

These limitations may affect the generalizability of the findings and their practical application across different contexts.

Suggestions for Further Research

- Expand the study sample with a larger number and variety so that the results are more representative.

- Conduct long-term research to observe the impact of AI in marketing over time.
- Global comparative: examine the application of AI in marketing across different countries and cultures to understand the differences and similarities.
- New technologies: explore the use of the latest AI technologies and other innovations in marketing to continuously improve marketing practice and theory.

By paying attention to feedback and overcoming obstacles, future research can provide a deeper and broader understanding of the role of AI in marketing innovation.

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