



## “A STUDY ON IMPACT OF AI ON DIGITAL MARKETING”

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### ABSTRACT:

In this era of digital evolution, many sectors are using (Artificial Intelligence) AI technologies for enhancing their outcomes and to increase productivity. These AI tools and technology is used in marketing field too. This study explores the impact of AI on digital marketing strategies, focusing on customer engagement, content creation, predictive analytics, and targeted advertising. AI-powered tools, such as chatbots, recommendation systems, and programmatic advertising, have improved customer experiences while increasing efficiency and ROI for businesses. The research highlights how AI has enabled brands to analyse vast datasets, predict consumers behaviour and optimize marketing campaigns in real-time.

**Keywords:** Artificial Intelligence, marketing, digital marketing, businesses

### INTRODUCTION

As the world is growing rapidly in every field, the field of marketing has also been evolved across many years. It has been observed that there is drastic change in marketing phenomenon and effectiveness after the involvement of Artificial Intelligence (AI) in it. Artificial Intelligence (AI) is the simulation of human intelligence in machines, enabling learning, problem-solving, decision-making, and automation of tasks efficiently.

In the current scenario where the world of marketing shifted to the digital media and new innovative concept of Digital Marketing has been introduced. Artificial Intelligence (AI) is transforming the landscape of digital marketing, enabling businesses to deliver more personalized, efficient, and data-driven strategies. With the rapid advancement of AI technologies, including machine learning, and predictive analytics, digital marketing has evolved from traditional methods to highly sophisticated, automated processes that enhance customer engagement and business growth.

AI-driven tools such as chatbots, recommendation engines, programmatic advertising, and automated content generation have become essential components of modern marketing strategies.

The blend of integration of AI in digital marketing allows businesses to analyse vast amounts of data, gain deep insights into consumer behaviour, and make real-time decisions to optimize marketing campaigns.

It helps marketers to create personalized content target specific audiences, and improve customer experiences through automation and predictive analytics. Despite having numerous benefits, the adoption of AI in digital marketing also presents with some challenges which should have appropriate consideration. Ethical concerns such as data privacy, security, and algorithmic bias may exist.

This research paper aims to explore the impact of AI on digital marketing, analysing its benefits, challenges, and future implications. Through an in-depth review of AI applications in digital marketing, and industry trends, this study will provide valuable insights into how AI is reshaping marketing strategies. Furthermore, it will examine the ethical and practical considerations that businesses must address to ensure responsible and effective AI integration in their marketing efforts.

### LITERATURE REVIEW

**1) Ahuja, K. “AI and Advertising; Unravelling the dynamic of Consumer Behaviour and Brand Engagement”, Ambala, India, 2024**

In their study, they have explained the benefits of Artificial Intelligence in digital marketing. They have shown how it is beneficial for Brand engagement with customers and in understanding customer behaviour towards certain products or services.

They have also explained that how AI can help in Data- driven insights, personalization and real time decision making for effective advertising experience. They show in their study how AI can be used for predicting future trends, delivering personalized content that aligns with individual’s preferences.

**2) Tanwar, P. Antonyraj, M. Shrivastav, R. A Study of “Rise of AI in Digital Marketing”, Jaipur, India, 2024**

In the study conducted by them, they have explained that how AI has revolutionized digital marketing by using empowering marketers with advanced analytics system, gaining knowledge of algorithms and automation equipment They further elaborated that AI-driven personalization has established a great tremendous effect on patron engagement.

### 3) Efendioglu, I. “The change of Digital Marketing with Artificial Intelligence” Turkey, 2023

In the research paper, they have explained how AI tool like machine learning can accurately analyse consumer behaviour when using in Digital Marketing. They have shown how AI can be used to examine users’ data to create personalized adverting campaigns leading to higher conversion rate. They further shared the details that how machine learning algorithms can automate customer services processes by creating Chatbots that answer the questions instantly and resolve issues.

### 4) Maheswari, B. “Impact of Artificial Intelligence on Digital Marketing”, U.P, India, 2023

In this paper, they conclude that how AI is impacting the marketing processes such as automations, customization, predictive analytics and marketing tactics.

### 5) Gupta, A. Mandal, P. “Digital Marketing in the Era of Artificial Intelligence: A study on Trends and Transformations”

In the report, they explained that how approaches of companies for marketing point of view are shifting towards digital marketing and for digital marketing use of AI is increasing for better outcomes and for fast results.

Using Ai tools task are performed more precisely and quickly than human in marketing operations.

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## RESEARCH METHODOLOGY

The research conducted is quantitative descriptive research.

**Rationale of study:** This research project has been carried out to understand the marketing concepts in the era of digitalization and how Artificial Intelligence is use to carried out the marketing operations in the industries. In the paper, it is explained how Ai tools and technology is beneficial for the marketing operations that are done digitally on online platforms for a particular products or services. And which factors are responsible to put an impact on Digital Marketing due AI involvement in it. The researcher also intended to understand the challenges arises while using AI in Digital Marketing.

### Objectives of Study

- ✓ To study the impact of AI involvement in Digital Marketing.
- ✓ To understand application of AI in Digital Marketing.
- ✓ To observe the challenges that arises while using Artificial Intelligence in marketing operations.
- ✓ To study the various industries and sectors that are adopting AI for marketing purpose.
- ✓ To identify the technologies being utilized in Digital Marketing.
- ✓ To assess the impact of AI tools and techniques on customer engagement, conversion rate and overall marketing effectiveness.
- ✓ To analyse the difficulties that may arise due to AI for marketers.

### Data Collection Methods:

- Primary and Secondary data has been collected for the study.
- Sources of primary data: Primary data was collected by the researcher in form of a survey. In this survey data was collected with help of questionnaire floated in google form. In sampling design “snowball sampling” method was used to collect the data from targeted audience.
- Source of secondary data: online journals and articles.

**SAMPLING METHOD:** Convenience Sampling method, Snowball Sampling method

**SOURCES OF DATA:** Internet

**SAMPLE SIZE:** 200 people

**INSTRUMENTS:** Questionnaires

### Limitations:

- Sample size was limited to 200 people only
- People may or may not be genuine while responding
- Geographical area restricted to Nagpur region only

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## Digital Marketing

Digital marketing refers to the use of digital channels, platforms, and technologies to promote products or services to consumers and businesses. Unlike traditional marketing, which relies on offline strategies such as print ads, billboards, and television commercials, digital marketing leverages online mediums like search engines, social media, email, websites, and mobile apps to reach and engage target audiences.

### Key Components of Digital Marketing

#### 1. Search Engine Optimization (SEO)

SEO is the process of optimizing a website to improve its visibility on search engines like Google, Bing, and Yahoo. It involves:

## 2. Pay-Per-Click Advertising (PPC)

PPC is a model where advertisers pay a fee each time their ad is clicked. Google Ads and social media ads (like Facebook and Instagram ads) are popular PPC platforms. This method helps businesses gain immediate traffic and leads.

## 3. Content Marketing

Content marketing focuses on creating valuable and relevant content to attract and engage the target audience.

## 4. Social Media Marketing (SMM)

SMM involves using social media platforms like Facebook, Instagram, LinkedIn, Twitter, and TikTok to promote brands and engage audiences

## 5. Email Marketing

Email marketing involves sending targeted emails to potential and existing customers to build relationships, promote products, and increase sales.

## 6. Affiliate Marketing

Affiliate marketing is a performance-based strategy where businesses reward third-party affiliates (bloggers, influencers, or websites) for driving traffic or sales to their products through unique referral links.

## 7. Influencer Marketing

Brands collaborate with social media influencers, industry experts, or content creators to promote their products or services. This strategy is effective for brand awareness and credibility.

## 8. Mobile Marketing

Mobile marketing targets users through smartphones via:

- SMS & MMS marketing
- In-app advertising
- Mobile-friendly websites
- Location-based marketing

## 9. Marketing Automation

Marketing automation uses software to automate repetitive marketing tasks like email campaigns, social media posting, and ad management. Popular tools include HubSpot, Marketo, and Mailchimp.

## 10. Conversion Rate Optimization (CRO)

CRO involves optimizing a website or landing page to improve the percentage of visitors who take desired actions (e.g., making a purchase, signing up, or downloading an eBook).

### *Benefits of Digital Marketing*

1. **Wider Reach:** Connect with global audiences.
2. **Cost-Effective:** Lower cost compared to traditional marketing.
3. **Targeted Advertising:** Use data and AI to personalize campaigns.
4. **Measurable Results:** Track performance through analytics tools.
5. **Better Engagement:** Engage with customers via social media, email, and interactive content.

Digital marketing is a powerful strategy that helps businesses connect with customers in the digital world. With the integration of AI and automation, digital marketing is evolving rapidly, making it essential for businesses to stay updated with the latest trends and technologies.

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## Artificial Intelligence (AI)

Artificial Intelligence (AI) is a branch of computer science that enables machines to simulate human intelligence. AI systems can learn, reason, perceive, and make decisions based on data, improving their performance over time. It involves technologies such as machine learning (ML), natural language processing (NLP), computer vision, and robotics.

### Key Components of AI:

1. **Machine Learning (ML):** AI systems learn patterns from data to make predictions and decisions without being explicitly programmed.
2. **Natural Language Processing (NLP):** Enables machines to understand, interpret, and generate human language (e.g., chatbots, voice assistants).
3. **Computer Vision:** Allows AI to process and analyse images and videos (e.g., facial recognition, object detection).

### Applications of AI:

- **Business:** Chatbots, automated customer support, and data analytics.
- **Healthcare:** Disease detection, medical imaging, and drug discovery.
- **Finance:** Fraud detection and algorithmic trading.
- **Marketing:** Personalized ads and content recommendations.

AI is transforming industries by automating processes, enhancing decision-making, and improving efficiency. As AI technology advances, it will continue to shape the future of businesses and everyday life.

### ***AI in Digital Marketing: Revolutionizing Strategies and Engagement***

Artificial Intelligence (AI) is transforming digital marketing by automating tasks, analysing vast amounts of data, and improving customer interactions. AI-powered tools help businesses create personalized marketing strategies, optimize campaigns, and enhance user experiences.

#### **Key AI Applications in Digital Marketing**

##### **1. Personalized Marketing & Customer Experience**

AI analyses user behaviour, preferences, and past interactions to deliver personalized content, product recommendations, and targeted ads

##### **2. AI-Powered Chatbots & Virtual Assistants**

Chatbots and AI-driven virtual assistants enhance customer service by providing instant responses and personalized assistance

##### **3. Predictive Analytics & Data Insights**

AI helps marketers predict future trends, customer behaviour, and sales patterns by analysing historical data. This allows businesses to optimize marketing strategies and allocate budgets effectively.

##### **4. AI-Driven Content Creation & Optimization**

AI-powered tools like **ChatGPT, Jasper AI, and Copy.ai** generate high-quality content, including blog posts, ad copies, and email marketing campaigns. AI also optimizes content for SEO, improving search rankings.

##### **5. Programmatic Advertising & Automated Bidding**

AI automates ad buying and placement using real-time data to target the right audience.

##### **6. Visual & Voice Search Optimization**

AI-powered image recognition and voice search tools help brands optimize content for platforms like **Google Lens, Siri, and Alexa**, improving search visibility.

##### **7. Social Media Monitoring & Sentiment Analysis**

AI tools analyse social media trends, audience sentiments, and engagement metrics to help brands refine their strategies.

##### **8. AI in Email Marketing**

AI improves email marketing by segmenting audiences, personalizing subject lines, and optimizing send times for better open rates. **Mailchimp and HubSpot** use AI to enhance email campaign effectiveness.

#### ***Benefits of AI in Digital Marketing***

- ✓ **Increases Efficiency:** Automates repetitive tasks like content creation, email campaigns, and ad placements.
- ✓ **Enhances Customer Experience:** Provides personalized recommendations and 24/7 chatbot support.
- ✓ **Optimizes Marketing Spend:** AI-driven insights help allocate budgets efficiently.
- ✓ **Improves Decision-Making:** Predictive analytics refine marketing strategies.

AI is revolutionizing digital marketing by making it more data-driven, automated, and customer-centric. As AI technology advances, businesses must embrace AI-powered tools to stay ahead in the competitive digital landscape.

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## **4.DATA ANALYSIS AND DATA INTERPRETATION**

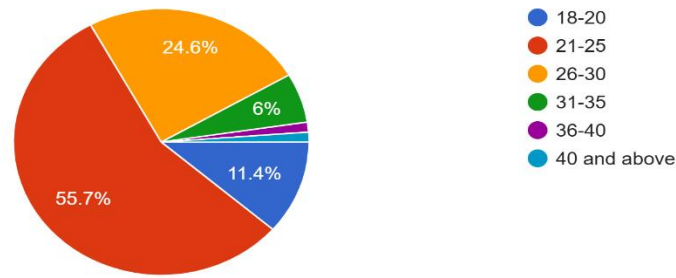
E-questionnaire in google form was circulated through different social media. Sample size was 200 people. From this sample of 200 people, 167 have responded. In our survey, some questions which were circulated and analysis of collected data are as follows:

#### **DEMOGRAPHIC FACTORS:**

##### **Age distribution of survey**

SR NO.	OPTIONS	NO. OF PEOPLE RESPOND	PERCENTAGE
1	18-20	19	11.4%
2	21-25	93	55.7%
3	26-30	41	24.5%
4	31-35	10	6%
5	36-40	2	1.2%
6	40 ABOVE	2	1.2%
	TOTAL -	167	100%

Your Age  
167 responses

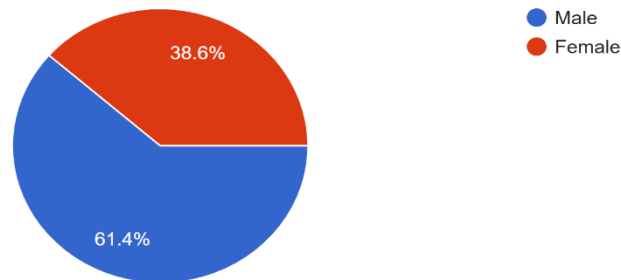


In the conducted survey, Majority of respondent are from age group 21-25, which is approximately 55.7% of whole population. 24.6% are from age group of 26-30. Remaining is from 31-40 which 7.2% of population. Rest is above 40 years of age.

Gender distribution of survey respondents

SR NO.	OPTIONS	NO. OF PEOPLE RESPOND	PERCENTAGE
1	MALE	102	61.4%
2	FEMALE	64	38.6%
	TOTAL -	166	100%

Gender  
166 responses



In the study conducted, respondent 61.4 % are male while females are 38.6% approximately.

1) Are you familiar about AI tools?

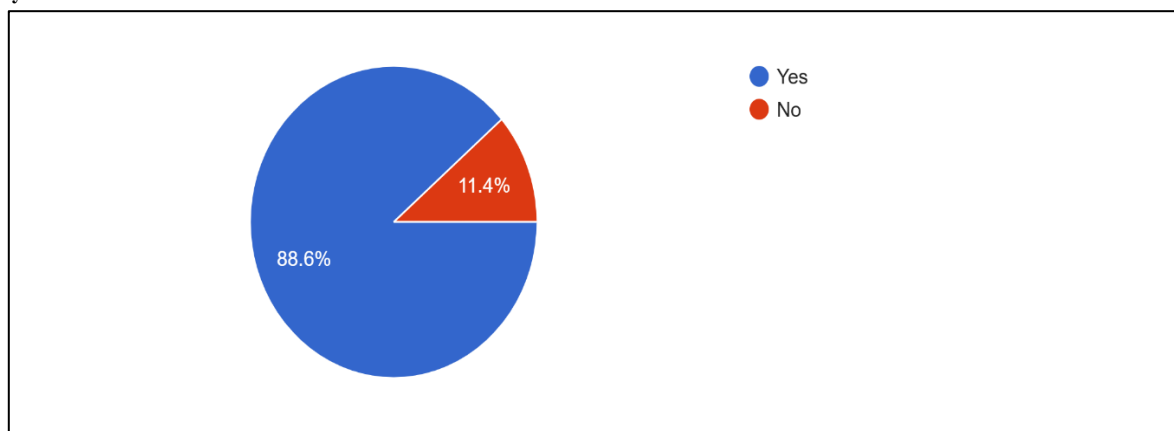


Figure 1.1

In the research conducted, we come to know that about 88.6% of our sample population know about Artificial Intelligence technology, about certain tools for the use of AI and its application across various things. On the other hand, about 11.4% of people don't have any idea about AI and its tool. Most of

the respondent are using some of AI tools such as ChatGPT, Grammarly GO, Jasper etc. for their work. It shows that AI tools are useful for making tasks easy and faster.

### 2) Which digital Marketing technique you are aware about?

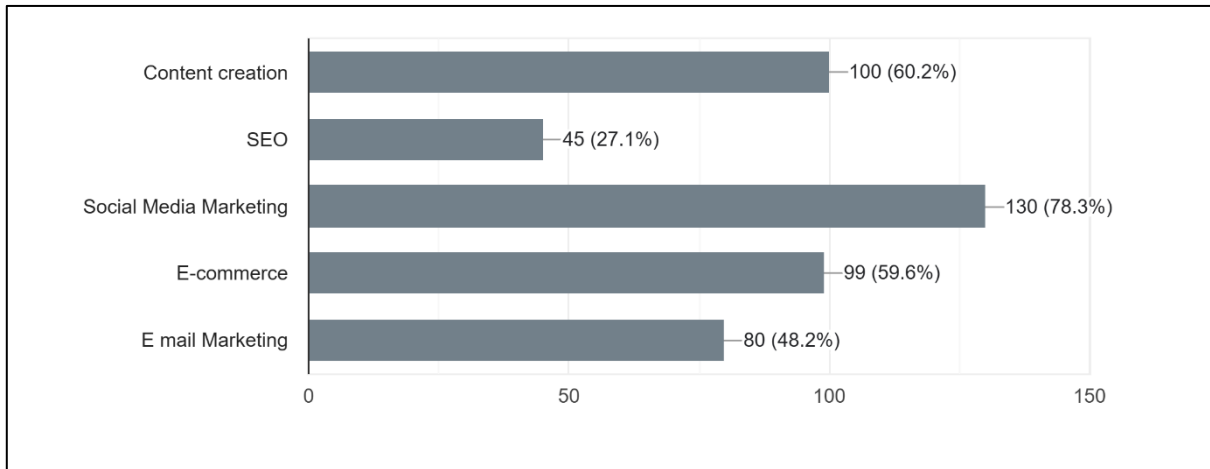


Figure 1.2

In the research survey, we observe that people are very much aware about the concept of Digital Marketing. This is because the sample size has the greatest number of students and teachers included. Social Media Marketing one of the vastly use digital marketing concept is known by many. Most of them are aware about it and came across to it as an engaged customer. About 78.3% of population are aware about the Social Media Marketing. while 60.2% of total sample population are aware about the concept of Content Creation used in Digital Marketing. Other Digital Marketing concept such as SEO (Search Engine Optimization), E-commerce and Email Marketing also holds the good number of knowledges between the people. Many reputed e-commerce companies such as Amazon, Myntra, Flipkart etc. use e-mail marketing for brand promotions, and for customer engagement etc. Hence it is known by many people. About 59.6% and 48.2% of total population knows about E-commerce marketing and e-mail marketing concept.

### 3) Do you think AI has great impact on digital marketing?

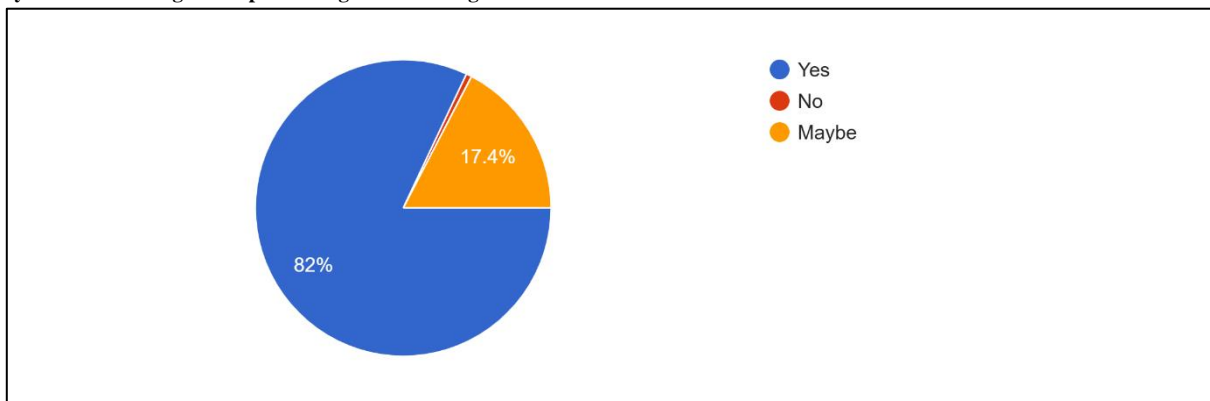
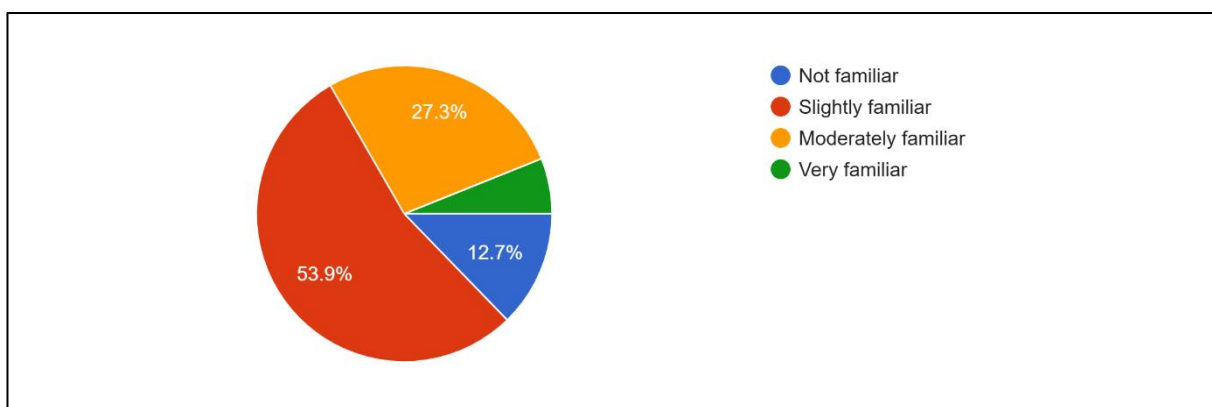


Figure 1.3

Artificial Intelligence (AI) is the talk of the town in today's era of digitalization. It has been used in many works and project to easy the human efforts and for faster and effective results. In the conducted survey, we have found that digital marketing has also great impact of AI tools and technology. In the collected sample population, about 82% of people agree with the fact that AI has influenced the digital marketing processes and procedure. While there are very few who says that it "may" has impacted the Digital Marketing.

### 4) How familiar are you with the application of AI in Digital Marketing?

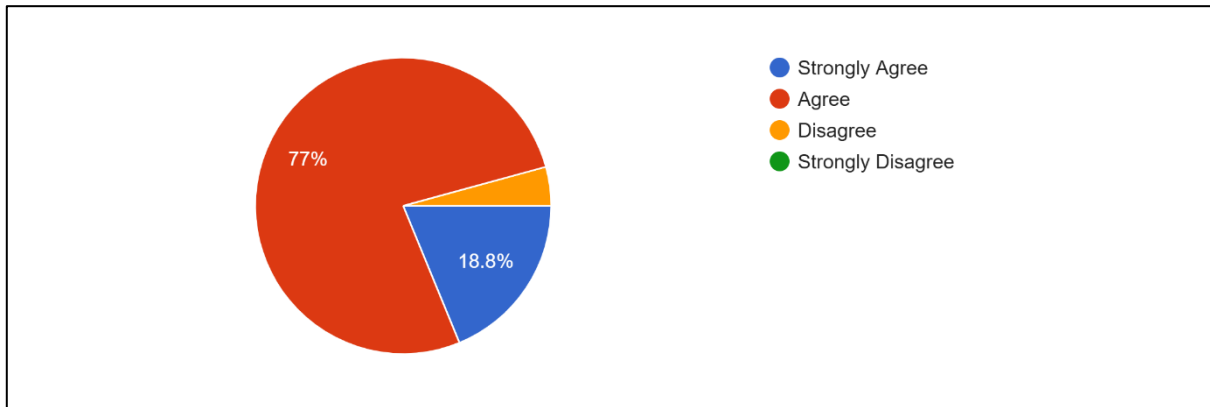
Figure 1.4



In the survey conducted, we have observed that there are very few people who are familiar with the application of AI in Digital Marketing. They use AI powered tools but they didn't have idea that how it can be applicable for marketing purpose!

12.7% of population are not at all aware about it while 81.2% are moderately familiar about it. They have slight idea about it but don't know the exact application of it.

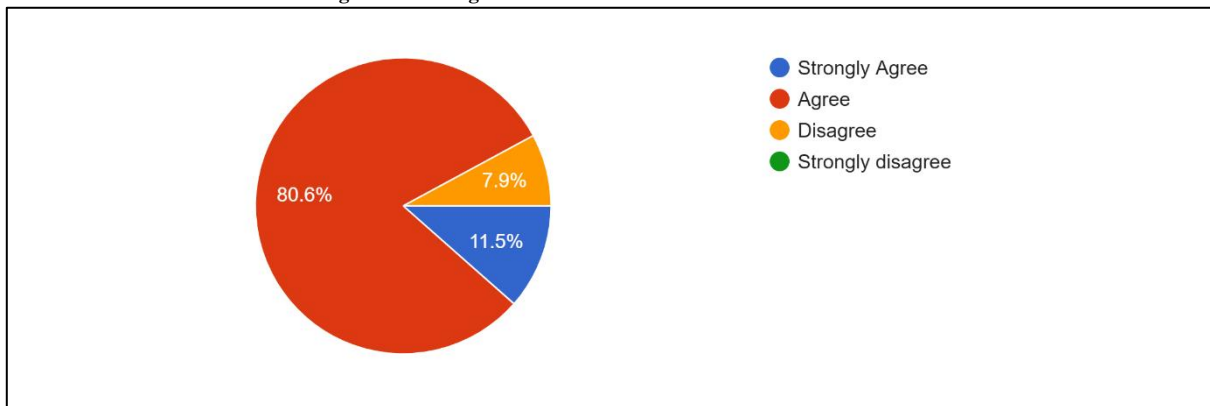
**5) I feel that the use of AI tools increased the return on investment (ROI) in digital marketing campaigns?**



**Figure 1.5**

In digital marketing campaigns, return on investment while using AI tools is good. Marketing projects can rely on the AI tools for their work and it hold good return back to the investments. Approximately 95.8% of population agree with the fact that it has good idea to invest in AI tools for the marketing campaigns and projects.

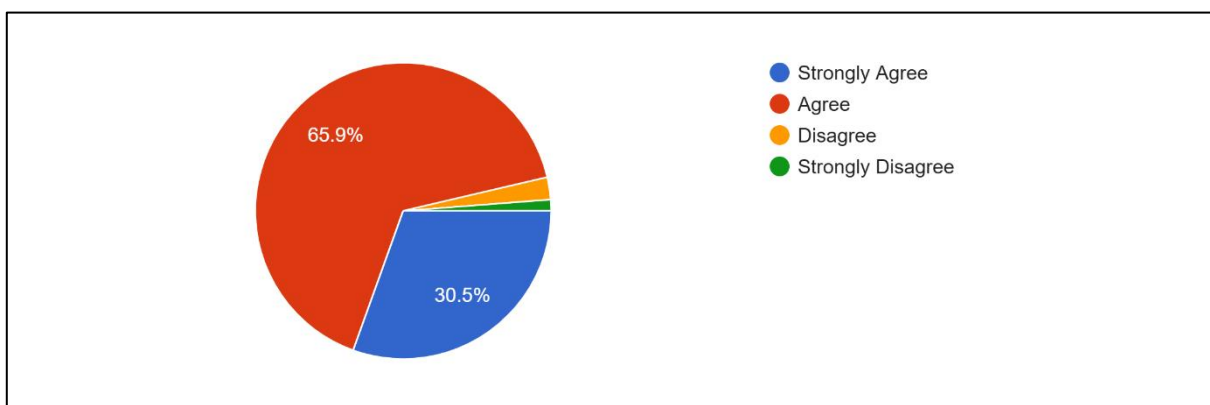
**6) I feel that AI tools are affordable for digital marketing.**



**Figure 1.6**

From the collected data, we have observed that people believe AI tools for digital marketing campaigns and projects are affordable. Around 92.1% of total population agree with this. Depending upon the type of campaigns it varies from projects to projects, whether it is affordable for them or not!

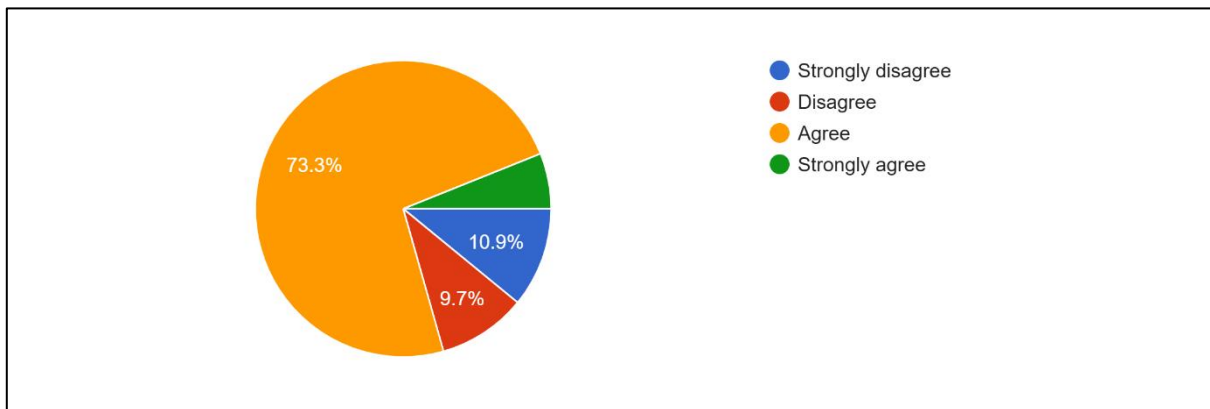
**7) I believe AI tools are effective for content creation (e.g. generating text, image, videos etc.)**



**Figure 1.7**

AI tools are widely used for the digital marketing campaigns. It is very much useful for the content creation such generating text, images, video etc. Appropriate content can be generated within a fraction of seconds using AI tools. This reduces the human efforts and it is cost effective too. In the conducted survey, around 96.4% of people believe that AI tools and technology is very much effective for the purpose of content creation.

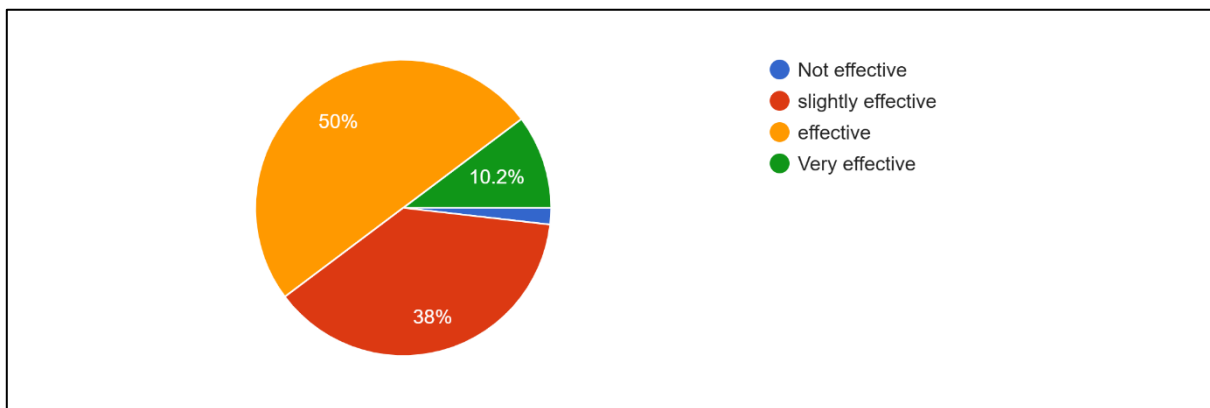
**8) AI has improved customer engagement in digital marketing campaign.**



**Figure 1.8**

After the use of AI tools in digital marketing, the campaigns have improved a lot. It has also improved the customer engagement across various platforms. In the research, we have seen that approximately 84.2% of people from total population agrees that AI has improved customer engagement. While very few 9.7% disagree with this.

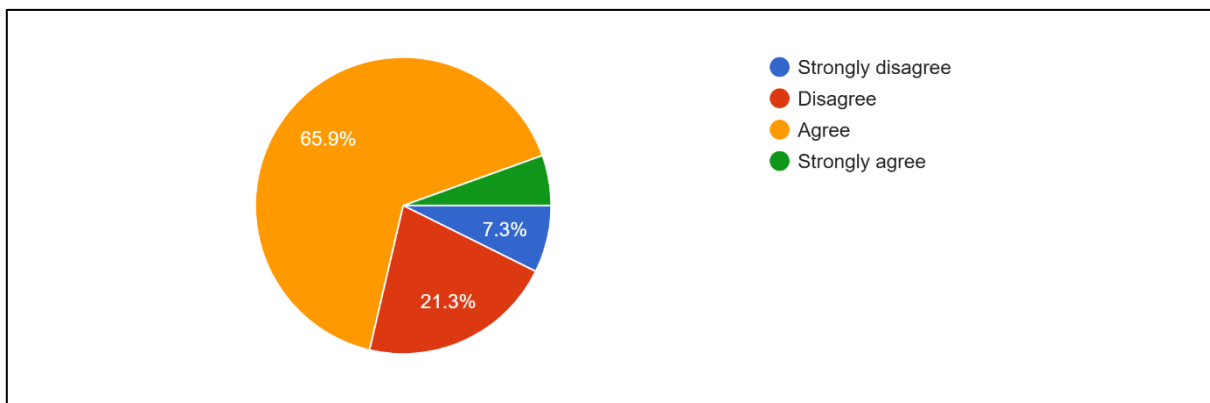
**9) How effectively has helped in automating repetitive tasks in digital marketing?**



**Figure 1.9**

Automated tasks are carried out by using AI tools, it made very easy and effective to do that. While engage with the large network of customer it became easier to address them at given time due to AI tools. Around 62.2% found it effective for automated tasks but here large number of people also say that it lagging behind for certain things of automated tasks.

**10) I believe AI has less cons and more pros the field of digital marketing.**



**Figure 1.10**



As AI has impacted digital marketing, it carries advantages and disadvantages too. Many people do believe that it has more benefits and less disadvantages. Approximately 71.5% of population say that it has more advantages and less disadvantages. But around 28.6% of people also say that it has less benefits and more disadvantages!

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## 5. FINDING AND CONCLUSION

In the study conducted, we have observed that Artificial Intelligence has been used by many people for certain tasks. The concept of digital marketing is widely spreading in the market and it has been proven one of the best marketing phenomena, in this era of digitalization. Brand are becoming more conscious about the marketing of their products or service on online platforms. Hence, they are also using this concept of digital marketing for promoting their established brands. Due to the rise in using of this marketing concept task and projects are increasing in digital marketing. Generating custom audience, automations, ads promotions etc become the need of the hour. Due to this Artificial Intelligence is involved in marketing specially in digital marketing concept like SMM (Social Media Marketing), e-commerce, e-mail, SEO (Search Engine Optimization), Ad making, Content Creation, poster making etc. It became easier to execute marketing projects by using AI tools like ChatGPT.

Repetitive tasks are getting easier to perform due to AI tools. Predictive analysis, Data driven decision making, social media monitoring, programmatic advertisement are easily executed because AI tools.

According to conducted research, we can conclude that AI involvement in digital marketing is very much beneficial. While there are few drawbacks of It which may be the reason for some project failure. Lack of Human Creativity, Over-Reliance on Data, sometime high Implementation costs this could be the reasons of failure sometime. However, it can be improved accordingly.

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