

A Study on Role of Business Analytics in Enhancing Digital Marketing: A Case Study on Divisional Office Amravati

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ABSTRACT: In the present digital era, business analytics has emerged as a vital tool for improving the effectiveness of digital marketing strategies. This study aims to examine the role of business analytics in enhancing the efficiency and performance of digital marketing activities. The research focuses on understanding how data-driven insights support better customer engagement, improved targeting, and informed decision-making in marketing campaigns. Primary data was collected from respondents involved in digital marketing activities using a structured questionnaire, while secondary data was gathered from reports, journals, and online sources. The study analyzes the usage of analytics tools, the benefits gained from analytics, and the challenges faced by organizations in adopting analytics-based marketing practices. The findings indicate that business analytics helps organizations better understand customer behavior, improve campaign performance, and optimize marketing efforts. However, challenges such as lack of skilled staff, high tool costs, and difficulties in data interpretation were also identified. The study concludes that effective integration of business analytics can significantly improve digital marketing outcomes. It suggests that organizations should focus on training, affordable tools, and strong management support to fully utilize analytics in digital marketing decision-making.

KEYWORDS: Business Analytics, Digital Marketing, Data-Driven Decision Making, Customer Engagement, Marketing Performance

I. INTRODUCTION

In today's highly competitive business environment, organizations are constantly trying to increase profits and improve return on investment (ROI). One of the most effective tools used to achieve these goals is business analytics. Business analytics helps companies analyze data, understand market trends, and make informed decisions. The impact of business analytics is especially strong in the field of digital marketing, where data plays a central role. Studies show that data-driven marketing organizations achieve 10–20% higher revenue growth compared to their competitors. By using analytics, digital marketing strategies become more accurate, efficient, and result-oriented.

Power of Data in Digital Marketing

Data is the foundation of modern digital marketing. Almost every digital activity generates data, including website visits, social media interactions, and online purchases. This data helps businesses understand customer behavior, preferences, and buying patterns. By analyzing browsing history, demographics, and online activity, marketers can identify trends and predict customer needs. However, for analytics to be effective, data must be accurate, updated, and of high quality. Good data leads to better insights, improved campaigns, and stronger customer relationships.

Understanding Digital Marketing

Digital marketing refers to the promotion of products and services using online platforms such as search engines, social media, websites, and email. Common methods include Search Engine Optimization (SEO), social media marketing, email marketing, and paid advertising. Digital marketing is continuously evolving due to technological advancements and changing

consumer behavior, making analytics essential for success.

Business Analytics and Its Importance

Business analytics involves studying historical and current data to identify patterns, trends, and relationships. It helps businesses make data-driven decisions rather than relying on guesswork. In digital marketing, analytics helps optimize marketing budgets, improve customer engagement, and measure campaign performance. Although many companies recognize the importance of analytics, only a few have a clear data strategy, highlighting the need for better implementation.

Reasons to Implement Business Analytics in Digital Marketing

Business analytics plays a crucial role in improving digital marketing performance. It helps in better customer understanding by analyzing buying behavior and preferences. Analytics also supports audience segmentation, allowing marketers to create personalized campaigns. Competitor analysis becomes easier by comparing strategies, content, and performance. Market spend optimization helps businesses reduce wasteful spending and improve ROI. Additionally, analytics improves strategic planning, e-commerce performance, and accurate measurement of returns on marketing investments.

Steps in Analyzing Digital Marketing Data

The first step in data analysis is defining clear Key Performance Indicators (KPIs) based on marketing goals. Next, analytics tools such as Google Analytics, Google Ads, and social media insights are used to collect data. This data is then analyzed to understand customer behavior and campaign performance. Regular monitoring ensures data accuracy and helps detect errors early. Audience segmentation, A/B testing, attribution modeling, competitor analysis, and data visualization further enhance decision-making. Continuous optimization based on insights ensures better marketing outcomes.

Emerging Trends and Challenges

Emerging trends in marketing analytics include real-time analytics, artificial intelligence, machine learning, voice search analytics, and cross-channel analytics. These trends help marketers respond faster and create more personalized experiences. However, challenges such as poor data quality, data integration issues, ethical concerns, and difficulty in data interpretation still exist.

These challenges can be overcome through data cleaning, advanced visualization tools, ethical data practices, and expert analysis.

II. LITERATURE REVIEW

(Kabiraj conference paper, 2024) A conference piece (IMC 2024) by Kabiraj and colleagues provides short case studies demonstrating predictive analytics for timing of offers and channel allocation for Indian retail marketers, emphasizing measurable ROI uplift when analytics and creative teams collaborate.

(Aravindhan, 2023) Aravindhan's study reviews examples of business analytics use in digital campaigns and maps analytics metrics (engagement, reach, conversion) to marketing objectives. The paper offers a practical measurement framework for campaign managers and emphasizes integrating offline and online datasets for full-funnel attribution.

(Dhore et al., 2024) An empirical paper looking at digital-marketing effects in Indian firms; the authors analyze which digital practices (SEO, analytics dashboards, CRM integration) most strongly predict perceived campaign success among practitioners. They find analytics integration with CRM yields better lead quality.

(Mahida, 2023 additional analysis) Another study by Mahida highlights growth of analytics roles within Indian digital agencies and argues for curriculum alignment (industry-academia) to address the skills gap that limits analytics impact recommendations that echo in policy and training program literature.

(Kabiraj & Joghee, 2023) In the same body of Indian conference literature, Shanmugan Joghee's contribution focuses on channel-mix optimization using analytics, showing how multi-armed bandit and A/B frameworks (implemented with marketing analytics tools) improve budget allocation across channels. Practical implementation challenges (data integration, experimentation culture) are discussed.

III METHODOLOGY

Research Design

In this study titled "Role of Business Analytics in Enhancing Digital Marketing: A Case Study on Divisional Office Amravati", a descriptive research design has been used.

Objectives of the Study

- To examine the role of business analytics in improving the efficiency and effectiveness of digital marketing campaigns.
- To analyze how data-driven insights influence consumer engagement, conversion rates, and brand loyalty.
- To identify the tools and techniques of business analytics commonly used in digital marketing practices in India.
- To evaluate the challenges faced by organizations in implementing analytics-based digital marketing.
- To provide suggestions for improving the integration of business analytics in digital marketing decision-making.

Hypotheses

Null Hypothesis (H₀):

There is no significant relationship between the use of business analytics and the effectiveness of digital marketing strategies.

Alternative Hypothesis (H₁):

There is a significant positive relationship between the use of business analytics and the effectiveness of digital marketing strategies.

Sources of Data

Primary Data: Primary data was collected directly from employees working at the Divisional Office, Amravati. A structured questionnaire and brief interviews were conducted with marketing staff involved in digital promotions, customer interaction, and analytics. The questions focused on awareness of analytics tools, decision-making, and challenges in data interpretation. Convenience sampling was used to collect data from easily accessible respondents.

Secondary Data: Secondary data was collected from company records, marketing reports, previous research studies, journals, online articles, and official websites. Annual reports and marketing dashboards were also reviewed to support the study and compare findings with existing industry practices.

Sample Design

Sampling Technique: A Simple Random Sampling Technique was used. Each marketing staff member working with analytics tools had an equal chance of being selected to eliminate bias.

Sample Size: The study includes a sample of 50 marketing-related employees from the Divisional Office, Amravati.

Sample Area: Amravati city

Sample Universe: marketing-related employees from the Divisional Office, Amravati.

Tools and Techniques

Percentage analysis, tables, bar graphs, and Chi-square test were used for data analysis and hypothesis testing.

Scope and Limitations

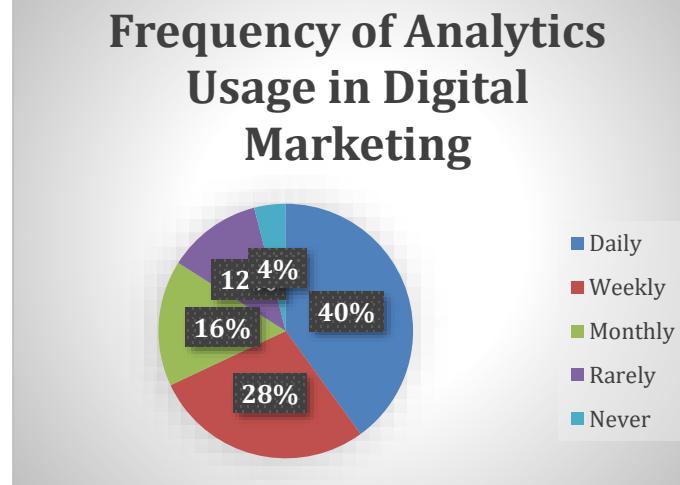
The scope of the study is limited to analyzing the role of business analytics in improving digital marketing activities at the Divisional Office, Amravati, with a focus on the marketing team's use of analytics tools for campaign performance and customer insights. The findings are applicable only to the selected office and may not represent other organizations. The study is further limited by a small sample size, possible respondent bias, time constraints, and the rapidly changing nature of digital marketing trends.

III. INTERPRETATIONS

Table 1 Frequency of Analytics Usage in Digital Marketing

Response	No. of Respondents	Percentage (%)
Daily	20	40
Weekly	14	28
Monthly	8	16
Rarely	6	12
Never	2	4
Total	50	100

Graph 1 Frequency of Analytics Usage in Digital Marketing



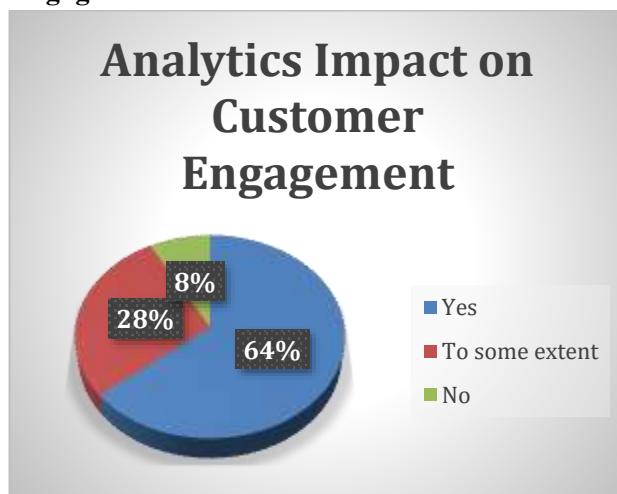
Interpretation :-

From the above table, it is interpreted that 40% respondents use analytics daily, while 28% use it weekly. Further, 16% use analytics monthly, 12% rarely, and only 4% never use analytics, indicating high adoption of analytics in digital marketing activities.

Table 2 Analytics Impact on Customer Engagement

Response	No. of Respondents	Percentage (%)
Yes	32	64
To some extent	14	28
No	4	8
Total	50	100

Graph no. 2 - Analytics Impact on Customer Engagement.



Interpretation:-From the above table, it is interpreted that 64% respondents believe analytics improves customer engagement, while 28% feel it improves engagement to some extent. Only 8% respondents feel analytics does not improve customer engagement.

Table 3 Outcomes Achieved After Using Analytics

Response	No. of Respondents	Percentage (%)
Better customer targeting	18	36
Increased sales	14	28
Increased brand visibility	10	20
Better decision making	8	16
Total	50	100

Graph 3 analytics tools help in better customer segmentation and targeted marketing



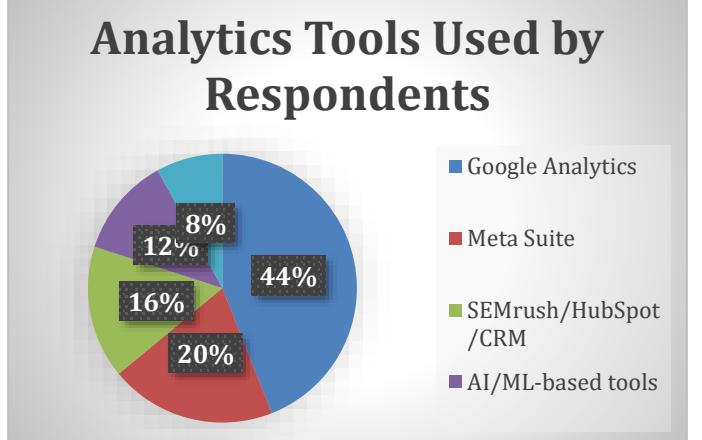
Interpretation :-

From the above table, it is interpreted that 36% respondents achieved better customer targeting, followed by 28% who experienced increased sales. Further, 20% observed increased brand visibility, and 16% reported better decision-making after using analytics.

Table 4 Analytics Tools Used by Respondents

Response	No. of Respondents	Percentage (%)
Google Analytics	22	44
Meta Suite	10	20
SEMrush/HubSpot/CRM	8	16
AI/ML-based tools	6	12
None	4	8
Total	50	100

Graph 4.4 Analytics Tools Used by Respondents



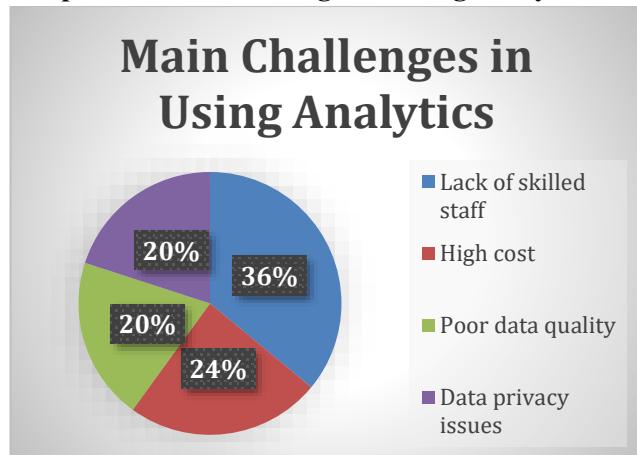
Interpretation :-From the above table, it is interpreted that 44% respondents use Google Analytics, while 20% use Meta Suite. Further, 16% use SEMrush/HubSpot/CRM tools, 12% use AI/ML-based tools, and 8% respondents do not use any analytics tools.

tools.

Table 5 Main Challenges in Using Analytics

Response	No. of Respondents	Percentage (%)
Lack of skilled staff	18	36
High cost	12	24
Poor data quality	10	20
Data privacy issues	10	20
Total	50	100

Graph 4.5 Main Challenges in Using Analytics



Interpretation :-From the above table, it is interpreted that 36% respondents face lack of skilled staff as the main challenge, followed by 24% who feel analytics is costly. Additionally, 20% respondents reported poor data quality, and 20% highlighted data privacy issues as major challenges.

IV. CONCLUSION

The study concludes that business analytics has become an essential part of modern digital marketing. It helps organizations make informed decisions, improve customer targeting, and enhance the effectiveness of marketing campaigns. By using data-driven insights, businesses can reduce uncertainty and improve marketing outcomes. Analytics also supports better planning, monitoring, and evaluation of digital marketing activities. Overall, the study confirms that effective use of business analytics leads to improved marketing performance and stronger customer relationships.

FINDINGS

The study reveals that a large number of respondents actively use business analytics in their digital marketing activities. Analytics is mainly applied for customer segmentation, campaign performance analysis, and improving content effectiveness. Most respondents feel that the use of analytics helps in better understanding customer needs, increasing engagement, and improving overall marketing efficiency. Commonly used tools include Google Analytics, social media insights, and

CRM-based tools. However, some respondents reported challenges such as lack of skilled manpower, difficulty in interpreting data, and the high cost of advanced analytics tools, which affect effective usage.

SUGGESTIONS

Organizations should focus on providing regular training and skill development programs to employees to improve their understanding of analytics. The use of simple, affordable, and user-friendly analytics tools should be encouraged, especially for small and medium-sized businesses. Management should actively support data-driven decision-making and promote the use of analytics across departments. Companies should also work on improving data quality and ensure proper data security measures. Continuous evaluation and updating of analytics practices will help businesses adapt to changing digital marketing trends and achieve better results.

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