

Manuscript ID:
IJRSEAS-2026-030118



Quick Response Code:



Website: <https://eesrd.us>



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DOI: 10.5281/zenodo.21552980

DOI Link:
<https://doi.org/10.5281/zenodo.21552980>

Volume: 3

Issue: 1

Pp. 92-95

Month: February

Year: 2026

E-ISSN: 3066-0637

Submitted: 15 Jan. 2026

Revised: 25 Jan. 2026

Accepted: 05 Feb. 2026

Published: 28 Feb. 2026

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How to cite this article:

Survase, A. P. (2026). *Impact of Digital Marketing Strategies on Public Engagement with Space Programs: A Marketing Study*. *International Journal of Research Studies on Environment, Earth, and Allied Sciences*, 3(1), 92–95.
<https://doi.org/10.5281/zenodo.21552980>

Impact of Digital Marketing Strategies on Public Engagement with Space Programs: A Marketing Study

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Abstract

Digital marketing has become an essential tool for organizations to communicate with their audiences in an interactive and cost-effective manner. Space organizations increasingly use digital platforms to disseminate information, create awareness, and enhance public engagement with space programs. This study investigates the impact of digital marketing strategies on public engagement with space programs from a marketing perspective. The study adopts a descriptive and analytical research design and is based on primary data collected through a structured questionnaire from 200 respondents. Statistical tools such as percentage analysis, correlation, and regression were used to analyze the data. The findings indicate that social media marketing, video content and interactive digital campaigns significantly influence public awareness, interest, and engagement with space programs. The study concludes that digital marketing strategies play a crucial role in strengthening the relationship between space organizations and the public and recommends the adoption of innovative digital communication practices for effective public outreach.

Keywords: Digital Marketing, Public Engagement, Space Programs, Social Media Marketing, Consumer Perception, Science Communication

Introduction

The rapid development of digital technologies has transformed the way organizations communicate with their stakeholders. Digital marketing enables organizations to reach a large audience, encourage interaction, and measure engagement through various online platforms such as social media, websites, and video-sharing channels. These platforms have become powerful tools for shaping public perception and enhancing awareness. Space programs, traditionally associated with scientific research and technological development, have increasingly recognized the importance of public engagement. Public support is essential for the sustainability of space missions and for promoting scientific literacy among citizens. In the digital age, space organizations use digital marketing strategies such as live streaming of launches, social media updates, educational videos, and interactive campaigns to connect with the public. Public engagement with space programs includes awareness, interest, trust, and participation in space-related discussions and activities. Digital marketing facilitates two-way communication, allowing the public to not only receive information but also interact with space organizations. Despite this growing practice, limited research has examined the effectiveness of digital marketing strategies in influencing public engagement from a marketing perspective. Therefore, this study seeks to analyze the impact of digital marketing strategies on public engagement with space programs.

Review of Literature

Previous studies have highlighted the role of digital marketing in enhancing consumer engagement and brand awareness. Kaplan and Haenlein (2019) emphasized that social media platforms create opportunities for interactive communication and emotional connection with audiences. Smith and Anderson (2020) found that digital content marketing significantly influences public awareness and participation.

Studies in science communication suggest that digital media helps simplify complex scientific concepts and makes them accessible to the general public (Brossard, 2018). Johnson (2021) reported that visual content and live mission broadcasts increase audience interest and trust in space agencies.

However, most existing studies focus on communication or technological perspectives rather than marketing-oriented frameworks. Limited empirical research integrates marketing concepts such as consumer perception, engagement, and branding with space programs. This gap highlights the need for a focused marketing study on digital strategies used by space organizations.

Objectives of the Study

1. To identify the digital marketing strategies used by space organizations.
2. To analyze the level of public awareness of space programs through digital platforms.
3. To examine the impact of digital marketing strategies on public engagement.
4. To determine the most effective digital platforms for promoting space programs.
5. To provide suggestions for improving digital marketing strategies for public engagement.

Limitations of the Study

1. The study was limited to a specific sample size and region.
2. Time constraints restricted broader data collection.
3. Responses may be influenced by personal bias.
4. Rapid changes in digital technology may affect the long-term relevance of findings.

Hypotheses

H1: Digital marketing strategies have a significant impact on public engagement with space programs.

H2: Social media marketing significantly influences public awareness of space missions.

H3: There is a positive relationship between quality of digital content and public interest.

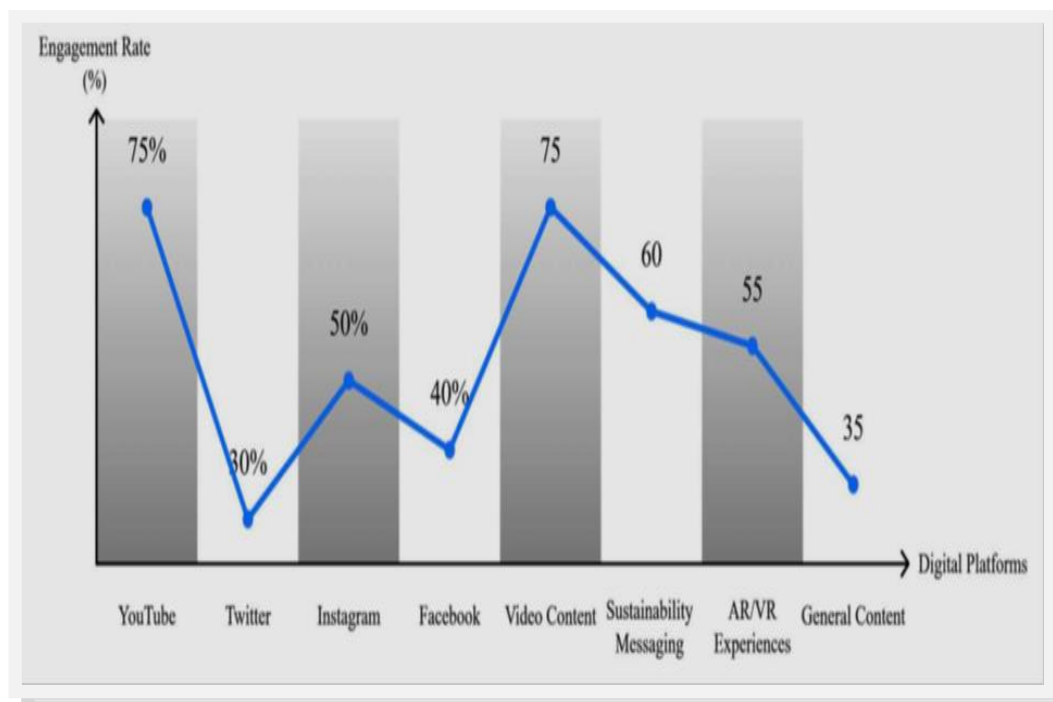
H4: Demographic variables significantly influence public engagement with space-related digital content.

Research Methodology

1. **Research Design:** The study adopted a descriptive and analytical research design.
2. **Data Collection:** Primary data were collected using a structured questionnaire administered to respondents. Secondary data were collected from journals, books, reports, and official websites of space organizations.
3. **Sample Design:** A sample of 200 respondents was selected using convenience sampling technique. The respondents included students, professionals, and members of the general public who actively use digital platforms.
4. **Tools of Analysis:** The data were analyzed using:
 - Percentage analysis
 - Mean and standard deviation
 - Correlation analysis
 - Regression analysis

Results

The analysis revealed that digital platforms are the primary source of information about space programs for the majority of respondents. Social media platforms such as YouTube and Instagram were identified as the most effective channels for generating interest and awareness. Correlation analysis indicated a positive relationship between exposure to digital marketing content and level of public engagement. Regression analysis showed that social media marketing and video content significantly predict public engagement levels. The results also demonstrated that younger respondents exhibited higher engagement compared to older age groups. Interactive content such as live launch broadcasts and educational videos had a stronger influence on trust and interest in space programs. The involved quantitative analysis using data analytics tools to evaluate the reach and impact of digital marketing campaigns from aerospace companies. Campaign performance data was obtained from publicly available sources and proprietary analytics platforms, focusing on metrics such as social media engagement rates, website traffic, and customer sentiment (Robson & Ezzamel, 2023). Using Python programming and data visualization libraries, the research team analyzed patterns in campaign performance, examining how digital marketing tools—such as targeted advertising, virtual simulations, and immersive content—affect audience engagement and brand perception. Regression analysis was used to assess the correlation between campaign strategies and audience responses, while sentiment analysis algorithms were applied to social media comments and reviews to gauge public sentiment regarding various aerospace brands. The results were visualized in below Figure, which shows the audience engagement levels across different digital platforms and highlights the impact of each campaign strategy.



Audience Engagement across Digital Platforms in Aerospace Marketing

Discussion

The findings confirm the effectiveness of digital marketing strategies in enhancing public engagement with space programs. The results support earlier research on digital communication and consumer engagement. The study highlights that visually appealing and interactive content strengthens emotional attachment and trust among audiences. From a marketing perspective, the study shows that space organizations function as brands and require structured communication strategies to maintain public interest. Digital marketing enables these organizations to create a positive image and build long-term relationships with the public.

Conclusion

The study concludes that digital marketing strategies play a significant role in influencing public engagement with space programs. Social media marketing, video content, and interactive digital campaigns effectively increase awareness, interest, and trust among the public. The research contributes to marketing literature by extending digital marketing concepts to the space and science communication sector. Space organizations should adopt innovative and audience-focused digital marketing strategies to strengthen public engagement.

Future Scope of Research

Future research may focus on:

- Comparative studies across different countries
- Longitudinal studies on digital marketing impact
- Role of artificial intelligence and virtual reality in space communication
- Behavioral analysis of different audience segments

Acknowledgment

The author expresses sincere gratitude to all individuals and organizations who contributed to the successful completion of this research paper titled “*Impact of Digital Marketing Strategies on Public Engagement with Space Programs: A Marketing Study.*”

Special thanks are extended to the management and faculty members of C.B. Khedgi's College, Akkalkot, for their continuous encouragement, academic support, and valuable guidance throughout the study.

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

References (Sample)

1. Kaplan, A. M., & Haenlein, M. (2019). Social media: Back to the roots and back to the future. *Journal of Systems and Information Technology*.
2. Brossard, D. (2018). New media landscapes and the science information consumer. *Proceedings of the National Academy of Sciences*.
3. Smith, J., & Anderson, K. (2020). Digital marketing and public engagement. *Journal of Marketing Communications*.

4. Johnson, R. (2021). Space communication in the digital age. *Space Policy Journal*.
5. Kozinets, R. V. (2021). Reprint: YouTube utopianism: Social media profanation and the clicktivism of capitalist critique. *Journal of Business Research*, 131, 349–365.
6. Latino, M. E., De Lorenzi, M. C., Corallo, A., & Petruzzelli, A. M. (2024). The impact of metaverse for business model innovation: A review, novel insights and research directions. *Technological Forecasting and Social Change*, 206.
7. Mahdikhani, M., & Meena, P. (2024). Metaverse applications and supply chain innovation: insights from text mining.
8. Padual, S. R. M., Ong, A. K. S., German, J. D., & Gumasing, M. J. J. (2024). The need for individualization: An open innovation perspective on the case for customized products. *Acta Psychologica*, 249.
9. Robson, K., & Ezzamel, M. (2023). The cultural fields of accounting practices: Institutionalization and accounting changes beyond the organization. *Accounting, Organizations and Society*, 104.
<https://doi.org/10.1016/j.aos.2022.101379>