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Code: 001**DIGITAL FRONTIERS: UNVEILING THE POWER OF AI, AR, VR, AND BLOCKCHAIN IN SHAPING SOCIAL MEDIA FOR THE 12-25 GENERATION****Dr. Shumaila Patrawala Saif Siddiqui***I/C Principal, Aishabai College of Education, S.N.D.T. Women's University**Email- drshumaila.sid27@gmail.com Mob- 9987877122*

Abstract

The integration of Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), and Blockchain technologies has significantly transformed the landscape of social media, especially for younger users aged 12-25. These technologies have reshaped user engagement, content consumption, and interaction patterns, while introducing both positive and negative implications. AI drives personalized content and recommendations, AR enhances user experience through immersive filters, VR offers fully interactive environments, and Blockchain ensures secure, decentralized interactions. While these innovations enable more immersive, interactive, and personalized experiences, they also pose risks such as privacy issues, addiction, and the spread of misinformation. This paper explores the profound impacts of these technologies on social media, with a focus on how they affect younger users, and offers strategies for mitigating their negative effects through responsible usage. The role of educators, parents, and peers in guiding this age group toward healthier digital engagement is also discussed, with an emphasis on teaching responsible use, digital literacy, and critical thinking. The paper highlights the need for balance, ethical consideration, and the fostering of digital well-being in the digital age.

Keywords: Artificial Intelligence, Augmented Reality, Virtual Reality, Blockchain, Social Media, Youth, Digital Well-being, Technology Integration

INTRODUCTION

Social media has become an essential part of modern life, offering platforms for interaction, self-expression, and knowledge sharing. The rapid evolution of technologies like Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), and Blockchain has amplified its impact, especially among younger audiences. These technologies enable personalized, immersive, and secure experiences but also introduce new challenges such as privacy concerns, mental health issues, and misinformation. This paper examines how AI, AR, VR, and Blockchain influence social media, particularly for users aged 12-25. As early adopters, this age group is especially affected by the positive and negative impacts of these innovations. The paper also provides practical advice for navigating these technologies responsibly, for users, parents, educators, and peers.

Social Media Overview

Social media refers to online platforms that allow users to create, share, and engage with content in real-time. Platforms like Facebook, Instagram, Twitter, TikTok, and Snapchat have revolutionized communication and are popular among younger generations. Social media fosters personal expression, community building, and global connectivity.

Key Features

- User-Generated Content: Text, images, videos, and more are shared by users.
- Interactivity: Users can comment, like, share, and message.
- Community Building: Groups and forums based on shared interests.
- Global Connectivity: Connecting people across geographical boundaries.

Popular Platforms

- Facebook: Personal connections and business marketing.
- Instagram: Photo and video sharing, popular for influencers.
- Twitter (X): Microblogging for real-time updates and opinions.
- TikTok: Short-form videos and viral challenges.
- Snapchat: Disappearing messages and multimedia content.
- LinkedIn: Professional networking and business content.
- YouTube: Video sharing for education, entertainment, and vlogging.
- Reddit: Communities (subreddits) centered around specific interests.
- Pinterest: Visual discovery for inspiration in various areas.
- Threads: Text-based discussions linked to Instagram.

Applications of Social Media

- Socializing: Connecting with friends, family, and like-minded individuals.
- Marketing & Branding: Businesses engage through advertising and influencers.
- Education: Platforms supporting learning and professional development.
- Entertainment: Reels, challenges, and videos for fun.
- Activism: Social movements gaining traction through social media.

Impact on Society

Social media has influenced communication, commerce, and politics. It offers benefits like fostering connections but also presents challenges such as misinformation, privacy risks, and mental health concerns. With the integration of AI, AR, and other technologies, social media continues to evolve, becoming an even more powerful tool for users, businesses, and communities worldwide.

AI, AR, VR, AND VI: BLOCKCHAIN IN SOCIAL MEDIA

In today's digital era, emerging technologies like Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), and Blockchain are reshaping the way we engage with social media platforms. For the demographic aged 12-25, these innovations are not just enhancing their online experience, they are transforming it in profound ways. Whether it's through personalized content recommendations, immersive virtual experiences, or new forms of digital ownership, these technologies are creating a more interactive, personalized, and decentralized online world. However, as these technologies redefine how young users connect, create, and consume content, they also raise important questions around privacy, mental health, and the impact on real-world relationships. This evolving digital landscape presents both

exciting opportunities and potential risks, making it crucial to understand how these technologies are influencing the behavior and development of today's youth.

1. ARTIFICIAL INTELLIGENCE (AI): THE PERSONALIZATION PARADOX

AI in social media utilizes advanced algorithms to process vast amounts of data, predict user behavior, and tailor content recommendations. Platforms like Instagram, Facebook, and YouTube rely on AI to customize user experiences by suggesting posts, videos, and ads based on factors such as interests, location, and previous interactions. For example, YouTube's recommendation engine analyzes watch history to present videos that align with a user's preferences.

Positive Impact:

1. Enhanced User Experience: AI makes social media more engaging by delivering content that resonates with users' interests.
2. Automation & Moderation: Chatbots powered by AI provide quick responses to queries, while content moderation tools help detect and reduce harmful or inappropriate content.

Negative Impact:

1. Echo Chambers: AI algorithms often reinforce existing beliefs by repeatedly suggesting similar content, limiting exposure to diverse perspectives.
2. Addictive Usage Patterns: Personalized recommendations, especially on video-based platforms, can lead to excessive screen time, particularly among teenagers and young adults.

AI in Action: Real-World Examples

TikTok's For You Page (FYP): The algorithm suggests videos based on a user's viewing habits, making the platform highly engaging and potentially addictive.

Instagram Reels: By tracking interactions such as likes, comments, and watch time, AI continuously refines content suggestions, encouraging prolonged scrolling.

Impact on Teens:

1. Increased Screen Time: Personalized content keeps users hooked, often resulting in extended usage and reduced offline interactions.
2. Social Comparison: Algorithms tend to promote idealized lifestyles, leading to feelings of inadequacy and increased social comparison.
3. Narrowed Worldview: Filter bubbles restrict exposure to diverse viewpoints, impacting critical thinking and broad-mindedness.

2. AUGMENTED REALITY (AR): THE BLENDED EXPERIENCE

Augmented Reality (AR) seamlessly integrates digital elements into the real world, enhancing users' experiences through interactive visuals, sounds, and effects. Social media platforms like Snapchat and Instagram have popularized AR through features like filters, lenses, and interactive stickers.

Positive Impact:

1. Creative Expression: AR empowers users to experiment with fun, creative filters and effects, allowing for self-expression and personalized content creation.
2. Interactive Marketing: Brands leverage AR to engage younger audiences through immersive advertisements, such as virtual product try-ons or interactive promotional campaigns.

Negative Impact:

1. Self-Image Distortion: Frequent use of beauty-enhancing filters can contribute to body image issues, especially among impressionable teens.
2. Reduced Authenticity: The widespread use of AR filters often promotes unrealistic beauty standards, influencing users' self-esteem and perceptions of reality.

Examples of AR in Social Media:

Snapchat Filters: From playful dog ears to advanced facial-morphing effects, AR filters alter appearances and provide interactive, engaging experiences.

Instagram AR Effects: Users engage with dynamic filters that respond to facial movements, such as makeup simulations and background changes.

3. VIRTUAL REALITY (VR): THE IMMERSIVE ESCAPE

Virtual Reality (VR) creates a fully immersive, computer-generated environment that transports users to virtual spaces. While less mainstream in social media, VR is gaining traction with platforms like Meta's Horizon Worlds, where users can socialize, attend events, and explore digital landscapes.

Positive Impact:

1. Global Connectivity: VR breaks geographical barriers, allowing people from different locations to interact as if they were physically present.
2. Immersive Experiences: Users can participate in virtual concerts, conferences, and social meetups, enhancing the sense of community.

Negative Impact:

1. Social Isolation: Prolonged VR usage may cause users to withdraw from real-world relationships, preferring the immersive virtual environment.
2. Reality Detachment: Continuous exposure to virtual spaces can lead to challenges in distinguishing between virtual and real-world experiences.

Examples of VR in Social Media:

1. Meta's Horizon Worlds: A virtual platform where users create avatars, socialize, and explore various interactive environments.
2. VR Chat: An online community that fosters real-time interaction through customizable avatars in 3D virtual spaces.

4. VIRTUAL INTELLIGENCE (VI): HYPER-REALISTIC ENGAGEMENT

Virtual Intelligence (VI) refers to systems that use advanced algorithms and machine learning techniques to simulate human-like interactions. Unlike Artificial Intelligence, which focuses on decision-making and learning from data, VI emphasizes creating more natural, engaging, and relatable interactions for users. In the realm of social media, VI is transforming the way individuals, especially teenagers, communicate, engage with content, and experience the digital world.

VI Reshaping Social Media:

1. Conversational Agents: VI powers chatbots and virtual assistants that mimic human conversations, providing companionship and information.
2. Immersive Avatars: Interactive avatars represent users in digital spaces, creating hyper-realistic engagement.
3. Emotional AI: VI analyzes text, voice tone, and facial expressions to tailor responses, making interactions feel more authentic.

Positive Impact:

1. 24/7 Accessibility: Chatbots provide instant responses, helping users with queries or offering mental health support when needed.
2. Personalized Engagement: VI enhances customer service and social interactions by adapting to users' communication styles.
3. Educational Assistance: VI-based tutoring platforms offer personalized learning experiences for students.

Negative Impact:

1. Emotional Attachment: Teens may form emotional bonds with virtual personas, leading to a reduced interest in real-world relationships.

2. Social Isolation: Increased interaction with virtual companions can diminish face-to-face communication skills.
3. Misinformation Risks: VI-driven content can be manipulated to spread misinformation through hyper-realistic bots.

Examples of VI in Social Media:

1. Snapchat's My AI Chatbot: Snapchat introduced a VI-powered chatbot that interacts with users like a friend, using natural language processing (NLP).

Impact: Many teens report engaging conversations with the chatbot, sometimes using it as an emotional outlet. However, concerns have been raised about excessive dependency and data privacy.

2. Meta's AI Avatars: Meta's social platforms offer AI-driven avatars that can interact in virtual environments like Horizon Worlds.

Impact: Users can socialize in these digital spaces through personalized avatars, but the hyper-realistic interactions blur the distinction between the virtual and real world, sometimes causing confusion or detachment.

Key Differences: AI vs. VI vs. AR

Aspect	Artificial Intelligence (AI)	Virtual Intelligence (VI)	Augmented Reality (AR)
Definition	AI involves machines learning from data to make decisions and solving problems without human intervention.	VI focuses on simulating human-like interactions and behaviors, often using AI as a foundation.	AR overlays digital Content (images, sounds, text) onto the real world to create an interactive experience.
Core Function	Decision-making, pattern recognition, and predictive analytics.	Emotional engagement and human-like interactions.	Blending the digital and Physical worlds through real-time overlays.
Examples	YouTube recommendations (AI algorithms) ChatGPT (text-based AI) Netflix content suggestions	Snapchat's My AI chatbot Replika (AI companion) Meta's virtual avatars	Instagram & Snapchat filters Google Lens AR-based educational apps like Quiver Vision
Applications	Content curation, predictive analytics, autonomous systems, chatbots.	Social interaction, customer support, virtual companions.	Interactive marketing, gaming, education, and virtual try-ons.
Technology Focus	Machine learning, deep Learning Natural Language processing (NLP).	Human-centric interaction and emotional intelligence.	Computer vision, 3D mapping, and sensor-based technologies.

User Experience	Provides personalized, efficient, and automated services.	Provides relatable, human-like engagement through digital interactions.	Provides immersive and interactive real- world experiences.
Impact on Teens	Can create echo chambers and addictive scrolling patterns.	Can lead to emotional attachment to virtual people and reduce real- world interaction.	Can cause self-esteem issues due to beautifying filters and distorted reality.
Real-World Example	TikTok's AI suggests videos based on user behavior.	A chatbot providing emotional support or virtual avatars in gaming.	Pokémon GO uses AR to superimpose characters into real environments.

Simple Analogy:

- AI: The brain that learns, thinks, and makes decisions.
- VI: The personality that makes the brain feel human.
- AR: The lens that mixes the real and virtual worlds.

AI enhances social media with personalized content, it also brings challenges like addiction and limited exposure to diverse viewpoints. Emerging technologies like AR, VR, and Blockchain offer immersive experiences but raise concerns about social and emotional impacts. The focus should be on digital literacy and mindful usage, helping young users navigate these platforms responsibly. By promoting responsible consumption, we can mitigate negative effects and empower teens and young adults to make informed decisions. Balancing innovation with mental and emotional well-being will be crucial as social media continues to shape youth culture.

POSITIVE POINTS OF AI, AR, VR, AND BLOCKCHAIN ON SOCIAL MEDIA

AI, AR, and VR provide users with engaging, personalized, and immersive experiences that keep them connected to social media platforms longer, increasing user satisfaction.

VR allows users to attend virtual meetings, conferences, or social events, thus broadening social possibilities beyond physical limitations.

Blockchain provides a decentralized and secure way to handle personal data, reducing the risk of hacking and unauthorized access to information.

Blockchain allows creators to monetize their content securely, providing them with more control over their intellectual property.

NEGATIVE POINTS OF AI, AR, VR, AND BLOCKCHAIN ON SOCIAL MEDIA

AI-driven content can be highly addictive, with algorithms designed to keep users engaged by serving them content tailored to their interests.

Despite Blockchain's promise of privacy, the data collected by AI and AR technologies often raises concerns about how personal information is stored and used.

AR filters can contribute to body image issues, and VR can foster social isolation and lead to detachment from real-world interactions.

AI-generated content and deepfakes can be used to spread misinformation, with potential consequences on political, social, and personal levels.

RIGHT WAYS TO USE AI, AR, VR, AND BLOCKCHAIN ON SOCIAL MEDIA

1. To maximize the benefits and minimize the risks, users, especially those in the 12-25 age group,

must:

2. Limit time spent on immersive platforms like VR to avoid addiction and isolation.
3. Be aware that content is often personalized to influence engagement and take steps to ensure exposure to diverse perspectives.
4. Engage with AR content creatively without falling into unrealistic beauty standards or harmful trends.
5. Use platforms with strong privacy policies and be cautious about sharing personal information online.

ROLE OF TEACHERS, PARENTS, AND PEERS

- A) Teachers:** Should incorporate digital literacy programs that educate students about the ethical use of technology, recognizing biased AI, and navigating virtual environments responsibly.
- B) Parents:** Must monitor their children's social media use, set limits on screen time, and discuss the importance of privacy and online security.
- C) Peers:** Can provide positive reinforcement by encouraging responsible social media behavior, promoting balanced content consumption, and supporting each other's mental health in online spaces.

CONCLUSION

A Double-Edged Sword, integration of AI, AR, VR, and Blockchain is revolutionizing social media, providing users with innovative ways to connect, create, and engage with the digital world. These technologies enhance communication, entertainment, and learning experiences, especially for younger audiences. However, their growing influence also brings potential risks, including mental health challenges, identity concerns, and diminished critical thinking abilities. While these advancements open doors to endless possibilities, they also present significant challenges. Prolonged exposure can lead to addictive behaviors, unrealistic self-perceptions, and social isolation. Therefore, fostering digital literacy, promoting responsible usage, and encouraging open conversations about online habits are essential. Parents, educators, and peers must work together to ensure these tools serve as instruments of growth and development rather than sources of harm. Balancing curiosity with caution is key to navigating this evolving digital landscape and safeguarding the well-being of the next generation.

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TRUST DEFICIT: HOW LACK OF TRANSPARENCY AFFECTS USER ENGAGEMENT AND PLATFORM LOYALTY OF SOCIAL MEDIA

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Abstract

Trust is the foundation of any relationship, including the one between social media platforms and their users. Transparency is a critical factor which promotes trust among the users and social media platforms. However, when companies make decisions behind closed doors whether it's how content is moderated, how algorithms prioritize posts, or how user data is handled based on that people will start to lose faith. This lack of transparency creates a trust deficit, leading users to question the fairness and integrity of these platforms. This paper explores how the absence of clear and open communication from social media companies affects user engagement and long-term loyalty. By analysing case studies and existing research, this paper will highlight how diminished trust can drive users away, pushing them toward alternative platforms or demanding stronger regulations. The findings suggest that greater transparency especially in areas like content moderation, data privacy, and algorithmic decision-making can help rebuild trust, keep users engaged, and strengthen platform loyalty.

Keywords: Trust deficit, social media transparency, user engagement, platform loyalty, India, data privacy, algorithmic governance.

INTRODUCTION:

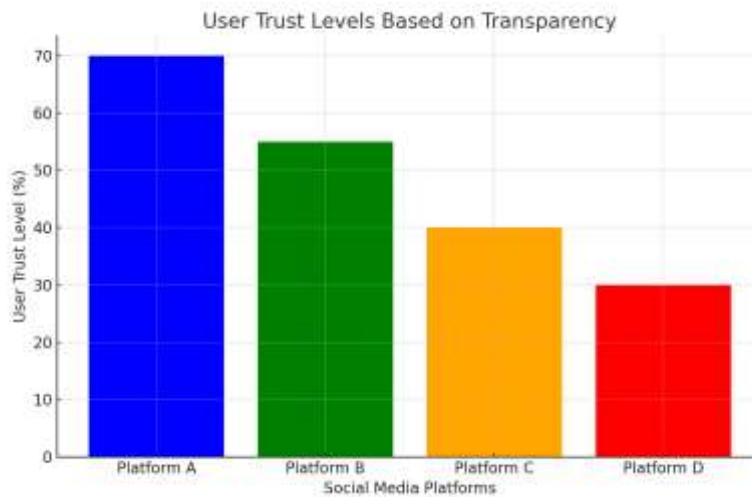
Social media platforms have revolutionized communication, networking, and information dissemination. However, growing concerns about transparency ranging from opaque algorithms to data privacy issues have led to declining trust among users. Trust deficit occurs when users feel manipulated, uninformed, or exploited by platform policies. India is one of the largest social media markets in the world, with platforms like Facebook, Instagram, Twitter (X), and WhatsApp playing a significant role in digital interactions. However, concerns over transparency, data privacy, and algorithmic manipulation have led to a growing trust deficit among Indian users. This section examines how these issues impact user engagement and platform loyalty in India. With over 800 million internet users, India is a key market for social media platforms. However, increasing concerns about data privacy, content moderation, and opaque algorithms have eroded trust. Government regulations like the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 aim to improve transparency, but challenges persist. This study explores how the lack of transparency affects user engagement and platform loyalty in India.

Trust in digital platforms is crucial for sustained engagement. Indian users, particularly Gen Z and millennials, demand greater transparency regarding how their data is collected, how algorithms function, and how content moderation policies are enforced. The Personal Data Protection Bill (PDPB), now replaced by the Digital Personal Data Protection (DPDP) Act, 2023, has attempted to address some concerns but remains a work in progress.

India, with over 800 million internet users, represents one of the largest digital economies globally. Social media platforms such as Facebook, Instagram, X (formerly Twitter), and WhatsApp play a critical role in shaping public discourse and digital interactions. However, concerns over data privacy,

algorithmic bias, and inconsistent content regulation have resulted in a growing trust deficit. Users often question how their personal data is managed, how content visibility is determined, and whether these platforms operate independently of external influences.

User Trust Levels Based on Transparency



(This diagram is taken from google via source: Printrest)

This chart represents direct relationship between transparency and trust level of consumers. It indicates if a platform offers high transparency will result in more trust by the consumers and trust will diminishes frequently as how transparency decreased by the social media platforms.

LITERATURE REVIEW

1. Goswami, A., Bharathi, S. V., Raman, R., Kulkarni, A., Joseph, S., & Kelkar, B. (2015). Synergies between social media features and user engagement to enhance online brand visibility: A conceptual model. *International Journal of Marketing and Technology*, 5(12), 123-136.

This study presents a conceptual model integrating social media characteristics—content, relationship, value, and structure—with user engagement parameters: involvement, interaction, intimacy, and influence. The authors develop a social media-user engagement matrix to identify synergies that enhance online brand visibility. They also propose metrics for measuring brand visibility, contributing to the understanding of how social media features can be leveraged to boost user engagement and brand presence.

2. Grover, P., & Kar, A. K. (2018). Public engagement on Twitter: Analysis of #government and #gov hashtags. *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age*, 1-10.

Grover and Kar explore the use of Twitter for public administration by analysing tweets tagged with #government and #gov. Their study examines how social media platforms facilitate information dissemination, transparency, open participation, collaboration, and ubiquitous engagement in public administration. The findings suggest that Twitter serves as a significant tool for governments to engage with citizens, enhancing transparency and fostering public trust through active communication.

3. Mishra, S., & Rath, C. (2020). Media manipulation in the Indian context: An analysis of Kashmir coverage in Indian media. *Harvard Kennedy School Misinformation Review*, 1(1), 1-12.

This analysis delves into media manipulation within India, focusing on the portrayal of Kashmir in Indian media. Mishra and Rath highlight how biased reporting and lack of transparency can lead to misinformation, affecting public perception and trust. They advocate for increased transparency from social media platforms and the release of datasets related to information operations in India to combat media bias and manipulation.

4. Kumar, A., & Singh, M. (2021). Impact of social media brand engagement and brand trust on brand loyalty in India. *Journal of Business Research*, 131, 1-11.

Kumar and Singh investigate how social media brand engagement influences brand trust and loyalty among Indian consumers. Their research indicates that interactive and transparent communication on social media platforms fosters stronger brand trust, which in turn enhances brand loyalty. The study emphasizes the need for brands to maintain transparency in their social media interactions to build and sustain consumer trust and loyalty.

5. Sharma, R., & Verma, S. (2019). Corporate social responsibility engagement through social media: Implications for Indian consumers. *Journal of Creative Communications*, 14(2), 1-15.

Sharma and Verma explore how Indian consumers perceive corporate social responsibility (CSR) activities communicated through social media. Their findings suggest that transparent and consistent CSR communication enhances consumer-brand identification and trust. The study underscores the importance of leveraging social media platforms to effectively communicate CSR efforts, thereby strengthening consumer engagement and loyalty.

6. Patel, V., & Joshi, A. (2022). Social media platforms and user engagement: A multi-platform study on one-way firm sustainability communication. *Sustainability*, 14(5), 1-20.

Patel and Joshi analyse how different social media platforms impact user engagement concerning firms' sustainability communications. Their study reveals that platforms facilitating two-way communication and transparency, such as Twitter and Facebook, see higher user engagement compared to one-way communication channels. The research highlights the necessity for firms to adopt transparent and interactive approaches in their sustainability messaging to enhance user engagement across various social media platforms.

METHODOLOGY

This study is based on primary and secondary research as well utilizing online survey by circulating questionnaire, study of existing literature, reports, and prior academic studies to analyse the impact of transparency on user engagement and platform loyalty. Data has been sourced from peer-reviewed journals, industry reports, and previous research findings to form a comprehensive understanding of the trust deficit in social media platforms across the world. In this study primary data represents quantitative data representation user engagement and experience of different social media platforms and secondary data represents past trends of social media or existing research.

RESEARCH OBJECTIVES

- To analyse the impact of transparency provided by social media platform on user engagement.
- To explore user expectations related to transparency in social media.
- To analyze the relationship between transparency and user trust in social media.
- To assess how algorithmic opacity influences engagement levels.
- To examine the impact of data privacy concerns on platform loyalty.
- To identify strategies to rebuild user trust in social media platforms.

QUESTIONNAIRE FOR DATA COLLECTION

- How often you use social media?
- How much you trust information shared on social media?
- Which social media platform do you trust the most ?
- Which social media platform you trust least?
- What factors contribute to your level of trust in social media platform?
- How often your fact-check information found on social media?
- Have you ever encountered misinformation or fake news on social media?
- How concerned are you about data privacy on social media?
- Do you believe social media platforms are doing enough to combat misinformation?

SAMPLE SELECTION

This research focused on the specific target groups to ensure wide range of concentrated audience across different demographic groups as a general social media users.

DATA COLLECTION METHOD

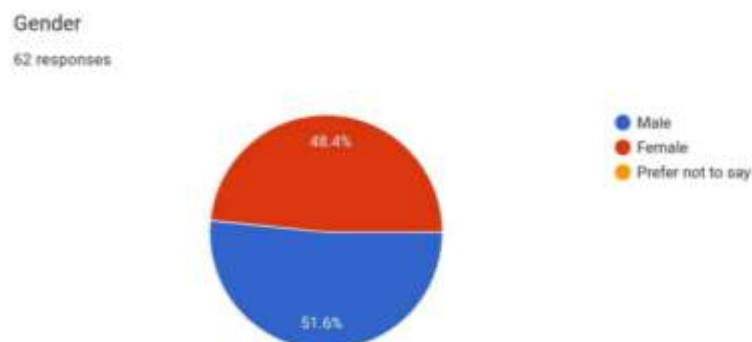
The primary data was collected through online google forms survey by sharing link of questions set with multiple answers to the targeted sample of individual social media users with aim to gather quantitative data for evaluation of outcomes.

SAMPLE SIZE

The survey receive responses of 62 individual social media platform users providing a diverse dataset.

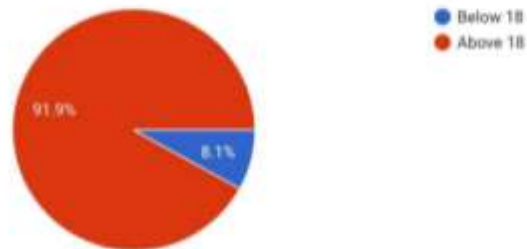
TOOLS USED FOR DATA COLLECTION

- Google Forms: This application used for preparation of questionnaire and data collection.
- For Interpretation of data same tool “Google Forms” use to evaluation and presentation of data as a pie charts which includes information of demographics, usage, patterns and behaviours.

Responses from Questionnaire (Google Form)**Demographic Information**

Age

62 responses



Occupation?

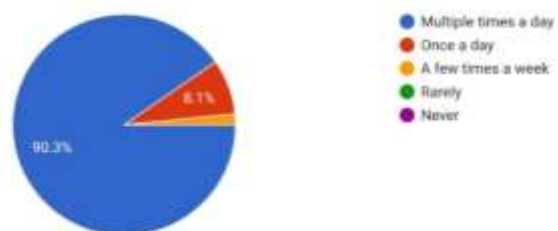
62 responses



Information of Trust in Social Media Platforms

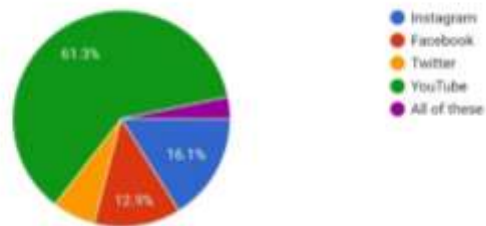
How often do you use social media?

62 responses



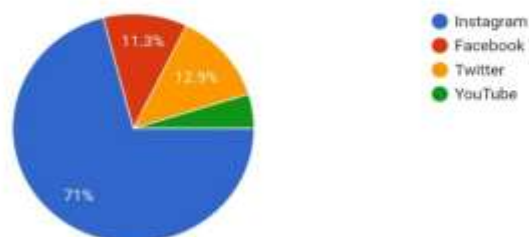
Which social media platform do you trust the least?

62 responses



Which social media platform do you trust the most?

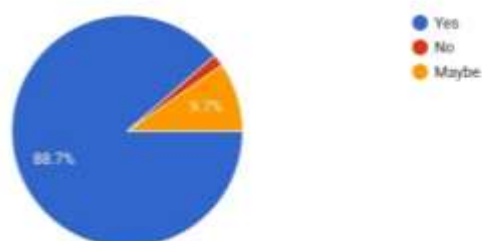
62 responses



Information Related to Issues Contributing to Trust Deficit

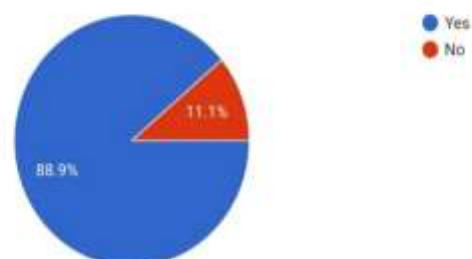
Have you ever encountered misinformation or fake news on social media?

62 responses



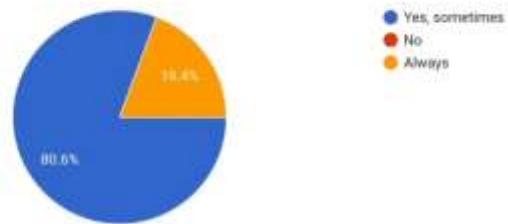
How concerned are you about data privacy on social media?

63 responses



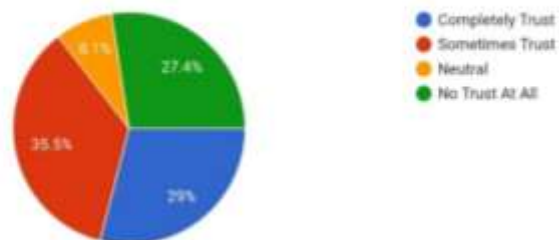
How often do you fact-check information found on social media?

62 responses



How much do you trust information shared on social media?

62 responses

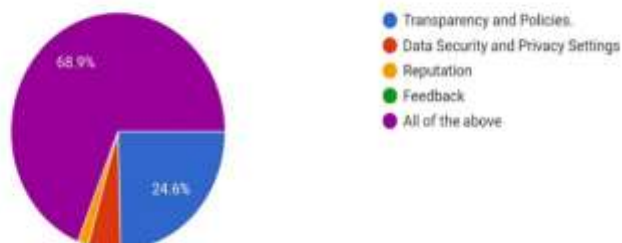


Information About Rebuilding Trust

What factors contribute to your level of trust in a social media platform?

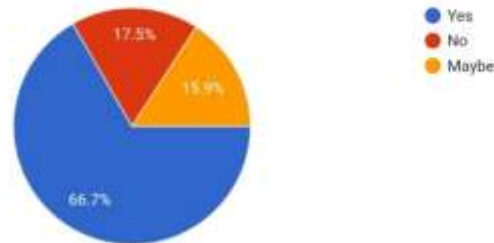
61 responses

 Copy chart



Do you believe social media platforms are doing enough to combat misinformation?

63 responses



DATA INTERPRETATION & FINDINGS

Outcome of Online Survey

1. Question	2. Outcome
3. Gender	4. 51.6% are male & 48.4% are female respondents.
5. Age	6. 91.9% are above age of 18 years.
7. Occupation	8. 40.3% are students, 22.6% are having job, 14.5% are self-employed, 11.3% are unemployed and 11.3% are professionals.
9. How often you use social media?	<ul style="list-style-type: none"> • 90.3% respondents use social media multiple times in a day. • 8.1% respondents use once in a day. • 1.6% respondents use rarely.
10. How much you trust information shared on social media?	<ul style="list-style-type: none"> • 33.5% trusts sometimes. • 29% trusts completely. • 27.4% trusts not at all. • 8.1% are neutral.
11. Which social media platform do you trust the most ?	12. Among all respondents Instagram is the most trusted/used social media platform with 71%, 12.9% trusts Twitter, 11.3% trusts Facebook and least with 3.8% trusts YouTube.
13. Which social media platform you trust least?	14. YouTube among the rest of the platforms with 61.3% respondents is the least trusted social media platform, Instagram with 16.1%, Facebook with 12.9% and rest 9.7% respondents feels all social media platforms.
15. What factors contribute to your level of trust in social media platform?	16. 66.9% respondents feels that in contribution of building trust in social media platform transparency and policies, Data security and privacy settings, Reputation, Feedback are very important factors which plays important role.
17. How often your fact-check information found on social media?	18. 80.6% respondents feel like sometimes they have to fact-check or re-check the information found on social media and

	19.4% feels always they have to verify information because of lack of trust.
19. Have you ever encountered misinformation or fake news on social media?	20. 88.7% respondents feels like they have encountered with the problem of misinformation and fake news.
21. How concerned are you about data privacy on social media?	22. Approx. 88% respondents feels like they are concerned about data privacy on social media.
23. Do you believe social media platforms are doing enough to combat misinformation?	24. 66.7% respondents feel like social media platforms are still combating misinformation.

Results:

Based on the above findings the primary data suggest that users who perceive a lack of transparency are more likely to disengage from platforms. Key concerns include algorithmic bias, misinformation, and unauthorized data sharing. Most of the social media users are still concerned about data privacy and they feel like most of the social media platforms are still combating with all of these problems which becomes the actual reason behind turnover of users trust from social media platforms.

The secondary data taken from journals, earlier publications and articles suggest that how a lack of transparency in social media platforms impacts user engagement and platform loyalty. It explores key areas such as algorithm opacity, data privacy concerns, misinformation, and perceived platform biases. Findings indicate that users are more likely to disengage from platforms perceived as manipulative or non-transparent. There are some strategies needs to be built for social media companies to rebuild trust, such as enhanced disclosure policies, improved content moderation, and user empowerment tools. Earlier study suggest that transparent and consistent CSR communication enhances consumer-brand identification and trust.

IMPLICATIONS

- For Social Media Companies platforms must improve transparency through clear policies and user-friendly disclosure mechanisms.
- For Users increased digital literacy can help users make informed choices about platform usage.
- For Policymakers regulations should mandate greater transparency in algorithmic decision-making and data usage.
- For platforms it requires to manage information with its validation and greater transparency which will lead to develop trust again among users.

CONCLUSION

The study highlights the importance of transparency in fostering trust, engagement, and long-term platform loyalty. Addressing user concerns about algorithmic fairness, data security, and content governance can help social media platforms maintain a loyal user base. In India most of the users are facing the issues related to misinformation and fake data which will lead to devalue their trust among the users related to different social media platforms. Nowadays if social media platforms want to develop trust among general audience (users) than they have to have imply control on the sharing of information and access across social media platforms. If there is a strict validation of data or some kind of data algorithm will set by the social media platforms to control on excessive sharing of fake or false

data will lead to maintain data transparency among users and contribute in the rebuilding of trust. If social media platforms will deal or overcome all of these issues will automatically help them to encourage audience and create new userbase with full of trust across the entire population.

LIMITATIONS

- This survey participants may not represents the entire population.
- With only 62 respondents this research may not fully represents exact overview of userbase.
- This research may have bias because of self-interpretation of data and reports which introduced based only on limited sample.
- This data only represents specific analysis of social media platforms with limited concentration on current popular social media platforms like Instagram, Facebook, YouTube and Twitter. Rest of other social media platforms which are less popular are ignored in this study.
- This data is taken from Online Survey by circulation of questionnaire in which only Indian respondents are taken as sample. So, this can be applicable for only Indian region and it may have chances of gap if we take data from other nations apart from India will lead to have differences in outcomes.

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A STUDY ON THE POTENTIAL OF METAVERSE IN EXTENDING THE PHYSICAL WORLD USING EXTENDED, AUGMENTED AND VIRTUAL REALITIES.

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Abstract

The term 'Metaverse' was coined by Neal Stephenson in 1992, an American sci-fi writer in his novel Snow Crash, meaning, a virtual place where people can work, play and socialize using virtual and augmented realities. Today virtual reality is already used across various industries like education, design, marketing, healthcare, etc., while augmented reality is used for navigation with directions on real-world surface views, visual assistance in furniture placements by e-commerce platforms such as amazon, etc., in healthcare with 3D anatomical model, virtual try-ons for better shopping experiences, social media filters that can alter appearance of a subject. Encompassing games with their virtual environments are considered as the predecessor of Metaverse. They offer insights on how Metaverse has the potential to become a fully functional cross platform with socio-economic impact. Big giants like Apple Inc., Microsoft and Meta (formerly Facebook) have already started investing in metaverse. The increasing use of technologies like NFTs, and cryptocurrencies is one of the proofs of a developing virtual world. This study will examine these topics in detail by combining the narrative of consumers with varied backgrounds on many aspects of the metaverse in the current times and its potential transformation.

Keywords - Metaverse, innovation, virtual reality, augmented reality.

INTRODUCTION

The ability of Metaverse to transcend us from the real world to a virtual world which has features of our real societies and socio-economic impact is noteworthy. The term 'Metaverse' is derived from the Greek words 'Meta' which means 'beyond' and 'Verse' which means universe. It was first coined by Neal Stephenson in 1992, an American sci-fi writer in his novel Snow Crash and referred to a virtual place where real people, in the form of avatars or digital characters could work, play, interact and socialize.

Metaverse works by using Artificial Intelligence (AI) and 3D Technologies. It uses digital twins technology, a virtual copy of the physical environment, a process that looks and acts identically to its real-world correspondent. For instance, Virtual labs at universities, allow students to perform experiments and collaborate from anywhere globally, using digital twin technology.

Most of the companies have recognised the importance of Web3, "tokenomics", AR/VR, NFTs and cryptocurrencies have started integrating it in their ongoing business practices, to offer immersive experience to their customers.

Examples include Memoji (offered by Apple Inc.), Bitmoji (offered by Snapchat), wherein users can make their digital avatars, style them, play games with and collaborate with other users called as 'friends'.

Extended Reality is an immersive technology which allows users to access virtual world environments with the use of augmented and virtual reality. The experience is made possible by use of VR Lenses, smartphones, etc. Popular gaming applications such as Pokemon Go, Fortnite are examples of XR experience delivered through smartphones. Researches have shown that a Fortnite player spends 6 to 10 hours on average immersed in playing the game.

One of the prominent examples of Metaverse in Education can be Google Expeditions VR (Now Tour Creator) which takes students on virtual trips to places like the International Space Station (ISS) and Mars.

Within the spectrum of cryptocurrencies, a distinct category of Metaverse tokens has emerged. These tokens are digital assets which are used within the Metaverse virtual world to buy and sell virtual goods, access premium content/services, or represent ownership of virtual real estate. There are more than 200 different Metaverse tokens that are actively traded currently in the crypto market.

Metaverse tokens work on Blockchain Technology. Blockchains are decentralized, public digital ledgers that are used to securely record and verify ownership of virtual assets (land, avatars, etc.) They perform the same function in Metaverse acting as a system to manage ownership and trade within a virtual world, often utilizing non-fungible tokens (NFTs) to represent unique digital items. Investment practitioners are purchasing land in the Metaverse and call it “meta-estates”. Decentraland, allows users to purchase virtual land plots, build 3D scenes, explore user creations, play games, attend events, and more in a shared virtual world.

REVIEW OF LITERATURE

Faiza Khalid , Dr. Misbah ul Islam , Saima Kousar (2022) studied the usage and importance of metaverse in various fields by using augmented and virtual realities. They reviewed a total of 38 studies which were published between 2019-2022. Results indicated that the metaverse has a significant role in different areas of human life. This study also revealed the challenges or problems which people may face in the future.

Muhammad Zahid Iqbal *ORCID and Abraham G. Campbell (2023) studied the potential use cases and benefits of the Metaverse as a tech for good. The research paper outlines the potential areas where a positive impact could occur, highlights recent progress, and discusses the issues around trust, ethics, and cognitive load.

Hui Gao, Alain Yee Loong Chong & Haijun Bao (2023) studied various definitions of Metaverse, what theories and the underlying technologies are needed for the metaverse, how and where metaverse is employed in specific areas, and challenges faced in the use of metaverse.

Huikeli & Bo Li (2024) studied the current status of research in the field of metaverse, and to analyze the research progress and trends around Metaverse. The study revealed that Ireland had the highest research impact while China had the most publications in this field.

Georg David Ritterbusch & Malte Rolf Teichmann (2023) studied the outlook on the social, economic, and technical implications

, and the preconditions that are necessary for a successful implementation of elements in the metaverse.

Lik-Hang Lee¹, Tristan Braud², Pengyuan Zhou^{3,4}, Lin Wang¹, Dianlei Xu⁶, Zijun Lin⁵, Abhishek Kumar⁶, Carlos Bermejo², and Pan Hui (2021) studied the technologies that drive current internet to the metaverse. examine eight enabling technologies rigorously - Extended Reality, User Interactivity (Human-Computer Interaction), Artificial Intelligence, Blockchain, Computer Vision, IoT and Robotics, Edge and Cloud computing, and Future Mobile Networks.

OBJECTIVES OF THE STUDY

1. To assess the level of awareness amongst users about Metaverse, Extended Reality, Virtual Reality and Augmented Reality.
2. To understand how users interact with virtual spaces, avatars, and digital economies.
3. To understand and identify issues such as privacy concerns, security risks, market volatility, and

ethical considerations in digital interactions amongst users..

4. To study the emergence of metaverse real-estate, digital asset ownership, metaverse tokens.

5. To assess the potential of Metaverse in influencing business models, consumer behavior, and digital interactions.

RESEARCH METHODOLOGY

The study used both qualitative and quantitative methodological approaches to know the awareness level among users majorly in the age group of 18-34. It covers the literature on Metaverse, augmented reality and virtual reality. Research journals and previously published articles are examined in addition to the main survey. In addition, some statistical data is considered in order to reach the conclusion.

Target Population

The target population of this research study consists of students, working professionals and homemakers majorly from India and a few internationally.

Sample Technique

The study employed convenience sampling technique as well as judgemental sampling which is a non-probability sampling technique.

Sample Size

For the purposes of the study, a sample of 100 respondents from India and abroad were chosen.

HYPOTHESIS

Hypothesis 1

H0: Users have no significant awareness of Metaverse

H1: Users have a significant level of awareness of Metaverse

Hypothesis 2

H0: The usage of avatar-based platforms is evenly distributed across all categories.

H1: The usage of avatar-based platforms is not evenly distributed across all categories. Hypothesis 3

H0: Privacy concerns do not affect the willingness to adopt the Metaverse.

H1: Privacy concerns will affect the willingness to adopt Metaverse-related technologies.

SIGNIFICANCE OF THE STUDY

This study will help us to understand the level of awareness about Metaverse and its features among the young population. It will also help us to understand the influence, future expectations and concerns regarding Metaverse among the youth.

LIMITATION OF THE STUDY

The primary objective of the study is to analyse awareness level, which can vary as time passes. It is possible that the respondents of the study may not have honestly answered the survey questions. The application of the results of the present investigation cannot be validated across the globe as it is restricted to just India and a few countries abroad. It was challenging to make significant inferences and conclusions because the sample size was small in comparison to the population and was based on a convenient sampling method.

ANALYSIS AND INTERPRETATION

Distribution of the respondents based on their age is depicted in the table below

Table 1

Age Wise classification of the Respondent		
Age	Frequency	Percentage
18-24	63	63
25-34	37	37
Total	100	100

Source: Compiled from Primary Data

The age distribution of the respondents indicates that the majority of participants fall within the 18-24 age group, accounting for 63.00% of the total sample. A significant portion, 37.00%, belongs to the older 25-34 age group. Overall, the data highlights that the primary demographic of the study consists of individuals aged 18-24, with a smaller representation from a slightly older age group. The total number of respondents is 100, ensuring a well-rounded perspective within this age spectrum.

Table 2

Awareness level of Respondents about Metaverse		
Awareness Level	Frequency	Percentage
Yes	89	89%
No	11	11%
Total	100	100

Source: Compiled from Primary Data

The awareness level of the respondents reveals that a majority of 89%, are aware of Metaverse, indicating fair familiarity with the Metaverse. Meanwhile, 11% of the respondents are unaware, showing little to no knowledge. The total number of respondents surveyed 100.

Table 3

Understanding level of Respondents with respect to Metaverse		
Understanding Level	Frequency	Percentage
Beginner	46	51.69%
Intermediate	36	40.44%
Advanced	7	7.87%
Total	89	100

Source: Compiled from Primary Data

The understanding level of respondents regarding Metaverse shows that 51.69% are at the beginner level while 40.44% of the respondents are at intermediate level revealing that these sets of respondents possess better levels of understanding. A small portion of respondents, covering 7% population among the respondents demonstrates an advanced level of understanding with respect to Metaverse. Overall, the data shows fairly strong understanding around Metaverse among the respondents.

Table 5

Distribution of usage of Avatar based platforms		
Platforms	Frequency	Percentage
Bitmoji (Snapchat)	37	41.57
Zoom	33	37.08
Memoji (Apple)	13	14.61
Insta Avatar (Instagram)	3	3.37
VRChat	3	3.37
Total	89	100

Source: Compiled from Primary Data

As per the data on the platforms usage of respondents, Bitmoji by Snapchat is the most used, leading at 41.57%, followed by Zoom, a virtual meeting app which is used by 37.08% of the respondents. Memoji an avatar based platform, only available for Apple's customers still showed 14.61% of usage while VRChat and Insta Avatar by Instagram had the least users, both being at 3.37%.

Table 6

Concern about using Metaverse		
Concern	Frequency	Percentage
Security risks (fraud, cybercrime)	64	32.48
Data Privacy	63	31.97
Ethical concerns (identity theft, harassment)	40	20.32
Addiction and		
Screen time		
Total	197	100

Source: Compiled from Primary Data

The above data is a result of checkbox option wherein respondents chose more than one option, hence the number of responses have increased due to multiple selections by the same respondent. The data reveals that 32.48% respondents perceive security risk is the major concern of users regarding

Metaverse followed by Data privacy at 31.97%. 20.32% of users have expressed concern regarding ethical concerns while the least concerns were expressed regarding addition and excessive screen time.

Table 7 - Hypothesis Testing

Chi-square (χ^2) test		
Chi2	df	p
6.16	2	0.046

The p-value (0.046) is below the standard significance threshold of 0.05, revealing that the observed association between prior awareness and understanding of the Metaverse is statistically significant. This indicates that individuals who had already heard of the Metaverse are more likely to rate their understanding as higher compared to those who have not.

Table 8- Hypothesis Testing

Chi-square (χ^2) test		
Chi2	df	p
123.68	11	0

Since, the p-value is less than 0.05, the null hypothesis is rejected, confirming that avatar-based platform usage is not uniformly distributed. Some platforms (e.g., Bitmoji (Snapchat) and Zoom) are significantly more popular than others.

Table 9- Hypothesis Testing

Chi-square (χ^2) test		
Chi2	df	p
57.08	6	1.76×10^{-10} (\approx 0.000000000176)

The p-value is significantly less than 0.05, hence we reject the null hypothesis (H_0). This means that Privacy concerns that do not affect the willingness to adopt the Metaverse are rejected. (e.g., security risks and market volatility) are considered significantly more critical by respondents.

SCOPE FOR FURTHER RESEARCH

This study could serve as a foundation for further research projects in the future. The following can be proposed as the scope of the next study:

1. To generalize the findings, the awareness research might be expanded to include more countries.
2. Additional demographic information may be included in future studies, and the investigation may be expanded to include all age groups.
3. Further research regarding more features of Metaverse by users of all age groups can also be carried on by the researcher.

CONCLUSION

According to the study, 89% of respondents are fully aware about Metaverse out of which 51.69% possessed beginner level of knowledge, 40.44% intermediate level knowledge while a small portion of

7.87% possessed advanced knowledge. Bitmoji (41.57%) and Zoom app (31.08%) are the most used AR and VR platforms. The top concerns of the respondents were Security Concerns relating to fraud and cybercrime and Data Privacy with 32.48% and 31.97% respondents respectively. The analysis also indicates that there is a significant relationship between awareness level and understanding level of Metaverse among the respondents. The study also confirmed that avatar-based platform usage is not uniformly distributed as platforms like Bitmoji and Zoom are used more significantly than others. Security concerns and Data Privacy are the most popular reasons that concern respondents in using Metaverse technology. If the above concern is addressed, users might be open to using Metaverse Technology. The welcoming response that consumers in general have shown to VR and AR technologies in gaming, shopping, education and healthcare industries is overwhelmingly positive. One of the things that can hinder/resist people from using Metaverse is consumers' concerns for their safety. If companies can take care of these issues, Metaverse has a huge potential to grow and benefit not just for the consumers but for companies as well.

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SOCIAL MEDIA'S INFLUENCE ON PRINT MEDIA NEWS COVERAGE**Mr. Vitthal Biru Edake***Ph.D. student, Dep. Mass communication and journalism, Shivaji University, Kolhapur. Maharashtra.**Email- vbedake@gmail.com, 8329839451*

Abstract

Social media and other online news sources, also known as the "new media", have become an integral part of modern society. The presence of such new media, social media in particular, has threatened the existence of printed newspaper. The effect of this threat is felt on the circulation of print newspapers, especially in the India. This qualitative research case study aimed to explore how traditional print media influence social media operations in graphic communication groups (how journalists gather news information, how editorial teams are established and function, and how news is distributed) and journalistic ethics. The purpose of the proposed study was achieved through semi-structured interviews with participating journalists and editorial staff of offline and online editions of graphic newspapers. Data analysis included content analysis of interview data to generate topics for discussion using graphic software. The study showed that social media is highly integrated into the work of graphic newspapers and is having a positive impact on its work, both in terms of the opportunity to reach news and stories to a wider audience and in terms of the speed of its work. Negative in terms of ethical challenges, plagiarism of the text, credibility of the text and authenticity, and focusing on specific and broad texts. The company considers social media sources as unverified sources that need to be verified, to ensure that stories and news are only sourced from verified social media sources, and finally, to ensure that standards and codes of conduct are followed, the company has implemented a social media policy. The Graphic should continue the process of retraining its journalists in the art of using more social media platforms to further expand their reach and reap the benefits of social media.

Key words: *Social media, print media, influence, graphic, journalists, ethical challenges*

Introduction:

The early 21st century saw major changes in the media landscape, driven primarily by the growing popularity of the Internet and in particular the emergence of social media platforms. Initially perceived as a separate entity, a space for personal interaction and easy sharing, social media has gradually become entangled in the structure of news consumption and production. For traditional print media, long accustomed to a unidirectional model of information dissemination, this integration has presented both unprecedented opportunities and daunting challenges.

The aim of this paper is to conduct a complex analysis of how social media has affected print media news coverage. This book goes beyond the simple approach of understanding social media as a mere distribution medium and delves deeper into its impact on the very core of journalism. From the initial stage of identifying breaking news to the final stage of stories, social media has become an undeniable force that determines what newspaper journalists will cover, how they will cover it, and at what pace they will work. Understanding this impact is important to understand the current state and future direction of print journalism in the age of digital connectivity and instant information.

The Rise of Social Media and its Initial Impact on News Consumption:

The early 2000s saw the rise of social media, with platforms such as Friendster, MySpace, and later Facebook and Twitter gradually gaining popularity. Initially, these platforms were used primarily for personal networking and social interaction. However, their inherent ability to rapidly exchange information soon began to influence the way people consumed news. Eyewitness reports, citizen

journalism, and the immediate dissemination of information during breaking events began to weaken the gatekeepers of traditional media.

This change posed both threats and opportunities for print media. On the one hand, they faced increased competition for audience attention and, on the other hand, pressure to adapt to the real-time nature of social media updates. On the other hand, these platforms have emerged as potential sources of information, guidance and tools that directly connect to public sentiment. The initial response of many print publications was cautious, often viewing social media with suspicion and maintaining a degree of separation between their established journalistic practices and the chaos of online discourse.

Social Media as a Source and Catalyst of News:

Over time, the relationship between print media and social media has evolved from cautious observation to active participation. Social media platforms have become indispensable tools for news gathering in several key ways:

Breaking News and Firsthand Accounts: Social media often serves as an early source of information during breaking news events. Citizen journalists armed with smartphones can receive and share real-time updates, photos and videos even before official reports. Print journalists now actively monitor these platforms to identify potential news stories, verify early reports and find eyewitnesses. This requires quick verification and a keen understanding of the credibility of user-generated content.

Identifying trends and public sentiment: Social media provides a vast and dynamic repository of public opinion, trending topics and emerging stories. Print journalists use this platform to assess public interest in various issues, identify potential angles to stories and understand the prevailing sentiments around events. This helps them to customize coverage and provide more relevant and engaging content for their readers.

Finding sources and expertise: Social media platforms attract a variety of individuals, including experts, academics, activists and people directly affected by events. Journalists can use this platform to identify and contact potential sources, gather diverse perspectives and enrich their reporting with first-hand experience and specialized knowledge.

Keeping track of competitors and the broader media landscape: Social media gives print journalists the opportunity to gain insight into the coverage provided by their competitors and other news organizations. This constant monitoring can influence their editorial decisions, prompting them to think of unique perspectives, conduct in-depth analysis or correct errors in existing reporting.

Impact on news reporting and narrative structure:

The influence of social media goes beyond news gathering and significantly affects how print media create and structure their stories:

Responding to online discussions: Immediate and often unfiltered reactions on social media can pressure print media to address specific aspects of a story or respond to public criticism. This can lead to adjustments in framing, inclusion or withdrawal of different perspectives, and even corrections.

Resonating online stories: While aiming for objectivity, print media can inadvertently echo influential stories circulating on social media. This can be especially evident in highly polarized events, where emotionally charged content and biased viewpoints often gain significant momentum online. Journalists must be careful to critically evaluate these stories and avoid perpetuating misinformation or biased framing.

Adopting social media language and style: In order to connect with digitally native audiences, some print publications have adopted a more informal and conversational tone in their online presence and,

to some extent, in their print editions. This may include using more direct language, incorporating social media slang, and structuring content in a way that is easily digestible by online readers.

Visual storytelling and multimedia integration: The visual nature of many social media platforms has influenced print media to place greater emphasis on photography, infographics, and multimedia elements in their online and even print versions. This reflects recognition of the power of visual storytelling to capture the attention of audiences and effectively convey information in a visually rich environment.

Challenges and ethical considerations:

The increasing integration of social media into print journalism is not without its challenges and ethical considerations: **Verification and dissemination of misinformation:** The rapid and often uncontrolled nature of information dissemination on social media is a significant challenge for print journalists. Verifying the truth and accuracy of user-generated content is important, but it takes time. The pressure to deliver on time can sometimes lead to inadvertently ingesting misinformation or unverified claims.

Bias and echo chambers: Social media algorithms often create echo chambers, which feed users information that primarily aligns with their existing beliefs. Print journalists should be aware of this phenomenon and strive to present balanced and diverse perspectives even when reporting on issues that are polarized online.

Privacy and consent: Using social media content, especially personal posts and images, raises ethical concerns about privacy and consent. Journalists should adhere to strict ethical guidelines when using publicly available social media content and ensure that they do not violate individuals' privacy rights.

Maintaining journalistic standards: The pressure to generate online engagement and keep up with the pace of social media can sometimes compromise traditional journalistic standards of accuracy, fairness, and in-depth analysis. Print media should avoid the temptation to prioritize sensationalism or clickbait over original reporting. **Blurred Lines Between Journalism and Advocacy:** The immediacy and interactive nature of social media can blur the lines between objective reporting and personal opinion or advocacy. Journalists must maintain their professional integrity and clearly distinguish between factual reporting and their own views, especially when they interact with audiences on social media.

The Future of Print Media in the Age of Social Media:

Despite the challenges, social media also presents significant opportunities for the future of print media: **Increasing Audience Reach and Engagement:** Social media platforms offer print publications a powerful tool to reach new audiences, promote their content, and interact directly with their readers. This can create a sense of community and build brand loyalty.

Increasing Storytelling and Interactivity: Social media allows print media to experiment with new forms of storytelling, including multimedia elements, interactive features, and opportunities for audience participation. This can enrich the reading experience and make news more engaging.

Building Brand Identity and Trust: By actively engaging with their audiences on social media and demonstrating a commitment to accuracy and ethical reporting, print publications can build a strong brand identity and build trust in a digitally noisy environment.

Developing New Revenue Streams: Social media can be a valuable tool for print media in the digital age to drive traffic to online platforms, encourage subscriptions, and explore new revenue models.

Conclusion:

The relationship between social media and print media news coverage is dynamic and evolving. Social media is no longer a peripheral phenomenon but has become an integral part of the news ecosystem,

profoundly impacting how print journalists gather information, present stories, and communicate with their audiences. This integration offers numerous opportunities for increased reach, faster reporting, and greater audience engagement, but it also poses significant challenges related to verification, bias, ethical considerations, and the maintenance of journalistic standards.

Going forward, the success of print media in the age of social media will depend on their ability to effectively navigate this complex landscape. This will require embracing the opportunities presented by these platforms, developing robust verification processes, and raising a critical awareness of potential pitfalls while upholding core journalistic values. By strategically integrating social media into their workflows while committing to accuracy, depth, and ethical reporting, print media can adapt to the changing media landscape and continue to play a vital role in informing and engaging the public. The shifting sands of the digital age require adaptability and innovation, and the future of print journalism will be shaped by its ability to harness the power of social media responsibly and effectively.

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WHATSAPP FOR ENHANCED COMMUNICATION, MARKETING, AND SERVICE DISSEMINATION IN COLLEGE LIBRARIES: A CASE STUDY OF MAHARASHTRA COLLEGE LIBRARY

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Abstract

WhatsApp has become a valuable tool for communication, marketing, and service dissemination in college libraries. This study examines its role in facilitating real-time interaction and enhancing user engagement. Findings indicate that WhatsApp improves accessibility and service efficiency, making library resources more readily available. However, challenges such as distractions, information overload, and privacy concerns persist. Despite these limitations, WhatsApp remains an effective medium for connecting libraries with students and faculty. The study concludes that WhatsApp enhances communication and expands access to library services in the digital era.

Keywords: *WhatsApp, academic libraries, communication, marketing, service dissemination.*

Introduction

The rapid proliferation of mobile phones, particularly smart phones, has revolutionized communication and information access globally. With India's massive Smartphone market, mobile messaging applications like WhatsApp have become integral to how individuals and organizations interact. WhatsApp is the one of the most interesting Mobile Instant Messaging (MIM) applications on the market today. It is a cross platform instant messaging application for smart phones. It enables users to send and receive location information, images, video, audio and text messages in real-time to individuals and groups of user at no cost.

Review of Literature

The integration of WhatsApp in library services has garnered significant attention in recent research, highlighting its potential to enhance communication, promote services, and support information literacy. Richter (2022) notes India's rapid Smartphone adoption, with 493 million users in 2021, projecting 96% penetration by 2040, creating opportunities for mobile-based innovations in libraries. Sahu (2016) emphasizes how mobile technology, combined with wireless advancements, has transformed information generation, communication, and consumption in academic libraries. Stephen (2019) found that WhatsApp facilitates real-time communication and information dissemination among Indian LIS professionals, while Niranjana and Chanda (2018) highlighted its widespread use for professional communication and knowledge sharing. Ansari and Tripathi (2017) explored its effectiveness in delivering library services, underscoring its utility in user engagement. However, Yeboah &Ewur (2014) caution about potential distractions, particularly for students. Collectively these studies suggest WhatsApp's transformative potential in libraries, though balancing its benefits with challenges remains critical for effective implementation.

Research design

This study uses a mixed-methods approach, combining qualitative and quantitative analysis, to explore WhatsApp's role in communication, marketing, and service delivery at Maharashtra College Library.

Data includes library records, communication logs, and staff experiences, with a focus on WhatsApp-derived statistics from year 2022-23 to 2024-25.

Limitation of Study

The study offers useful insights into WhatsApp's use, focusing primarily on staff and stakeholder perspectives rather than end-users. This limits understanding of satisfaction and engagement. Libraries with different structures or user demographics may find the findings helpful but should consider necessary adaptations.

Maharashtra College Library

The Maharashtra College Library, Mumbai-08 serves a diverse academic community, accommodating More than 4000 students and approximately 95 faculty members across 25 Plus departments. Its reach extends to Junior College, Undergraduate, Postgraduate, and Research students. In the digital age, traditional libraries can no longer rely solely on physical visits to engage with their patrons. The Maharashtra College Library recognizes the need for modern, technology-driven approaches to communication, marketing, and service dissemination. WhatsApp has emerged as a powerful tool in this regard, enabling real-time updates, seamless interactions, and efficient dissemination of information to students and faculty.

Core Areas and Functioning of Academic Libraries

Communication: Academic libraries facilitate internal communications with vendors, administration, committees, and faculty. This includes ordering materials, disseminating information, reporting, and collecting feedback. They utilize media such as personal interactions, written correspondence, emails, voice calls, and social media platforms.

Marketing: The primary goal is to promote library services, events, and programs to the academic community. This includes marketing specific collections, library orientation programs, and services through strategies like notices, new arrival sections, orientation programs, QR codes, instructional videos, guides, library events, faculty briefings, and WhatsApp communications.

Services: Library users access services like reading rooms, reference materials, book borrowing, and term book banks. Remote services include online database access, WebOPAC, and reference assistance, providing comprehensive support regardless of location.

Context and Challenges

The Maharashtra College Library serves a diverse student population spread across 25 departments, including undergraduate, postgraduate, and research students. Each department has unique needs, electives, and communication requirements. Key challenges include:

1. **Complex Communication Structure:** Managing communication across multiple departments and student levels.
2. **Time Constraints:** Creating and maintaining broadcast lists is time-consuming and tedious.
3. **User Engagement:** Ensuring students pay attention to library messages amidst academic and personal commitments.
4. **Resource Management:** Avoiding bulky file transfers and ensuring prompt, privacy-compliant resource sharing.

WhatsApp Usage Strategies by Maharashtra College Library

1. Faculty-Mediated Communication with Students

The library collaborates with faculty to share messages through WhatsApp, ensuring focused student engagement while reducing workload. Faculty verify accuracy before sharing, enhancing credibility.

Pre-formatted messages, links, and resources provided by the library ensure consistency, making communication more efficient and reliable

2. Segmented Messaging

Communication is tailored to specific student groups and departments through WhatsApp, ensuring relevance and reducing information overload. Department-specific groups, managed by faculty and student representatives, facilitate targeted messaging. Content is customized based on group needs, such as research tools for postgraduates and general resources for undergraduates.

3. Resource Sharing and Privacy

The library shares study materials, teaching aids, and publications in editable formats or as images to ensure accessibility and privacy. This allows easy editing and cropping of confidential information while preventing bulky files. Documents are converted into images or PDFs for archiving, and links to resources are shared for quick access.

4. Multi-Channel Communication

WhatsApp is supplemented with email, bulletin boards, and meetings to ensure inclusivity and provide a backup for urgent communication. Email handles detailed updates and reports, while bulletin boards and in-person meetings facilitate supplementary communication, ensuring all users stay informed and engaged.

5. Marketing and Event Promotion

WhatsApp is the primary tool for marketing library services, event updates, and education programs, ensuring wide reach and timely information. Interactive messaging enhances engagement. Messages are sent during office hours to avoid disruptions, and the college's main WhatsApp group is occasionally used for broader outreach.

6. Service Dissemination

WhatsApp facilitates literature searches, document delivery, digitization, and reference queries, offering prompt, customized services. It enhances user satisfaction and engagement. Users request services via WhatsApp, with urgent queries addressed immediately and non-urgent ones handled during office hours

Communication Models

The library employs a variety of communication models to cater to different needs:

One-to-One

The library provides direct and customized services such as reference queries, resource recommendations, and document delivery. This model is primarily used for individual users, vendors for resource acquisition, and peer libraries for resource sharing. It operates on demand, supporting research, publications, and administrative work.

One-to-One-to-Many

Faculty act as intermediaries, receiving information from the library and sharing it with students. This model is used for literature search services, document delivery, and book bank distribution for specific classes and years. Study materials, sample chapters, and teaching aids are also shared through this method.

One-to-Many

The library shares notices, reports, and agendas with specific committees or departments, often for meetings and administrative functions. Communication may be direct to targeted users or indirect via faculty. It also includes initiatives such as alert services for new arrivals and resource updates.

One-to-Many-to-Large

This model is used for broader outreach, including marketing library services, promoting events, and launching new facilities like YouTube videos or digital archives. It also supports intern groups for training and follow-ups. Communication is typically indirect, flowing through faculty to students, with the library taking the initiative.

Strategic Advantages of These Models

Efficiency – Reduces the library's direct workload by leveraging faculty and student representatives.

Relevance – Ensures messages are tailored to specific groups for greater impact.

Engagement – Uses trusted communication channels to increase message visibility and response.

Scalability – Allows outreach to a diverse audience without compromising quality or personalization.

Corrective Measures or Responsibilities of Libraries

WhatsApp in libraries requires addressing privacy, accessibility, response times, professional boundaries, data security, and accurate information. Libraries must ensure the platform serves its purpose effectively while maintaining ethical, user-focused communication. Responsibilities of College libraries for usage of WhatsApp

Accessibility and Inclusivity: Ensure WhatsApp services are accessible to all users, including those with disabilities or limited digital literacy. Alternative channels like emails and voice calls should be provided, and training should be offered to less tech-savvy users. Blind users should be supported through audio files and multimedia formats.

Ethical Communication: Follow college guidelines, avoid spam, and train staff to send messages only during office hours unless users request otherwise. Prevent data redundancy and duplication to maintain efficiency.

Privacy and Data Security: Do not collect or share personal user information, such as financial details, health records, or research assignments. Phone numbers and birthdates should never be shared without user consent.

User Engagement and Support: Respond to user queries promptly and provide alerts in advance. Preserve user data unless essential for deletion, ensuring seamless support.

Monitoring and Evaluation: Regularly assess WhatsApp activities, collect feedback, and maintain balance in service delivery. Avoid biases in handling tasks, groups, or individuals.

Effective Communication Model: Use the most suitable communication model for each task. Structure communication effectively, reward contributors without favoritism, and foster good relationships with faculty and staff.

Integration of Similar Technologies: Enhance efficiency by linking WhatsApp with supporting technologies like cloud storage, QR codes, multimedia platforms, and blogs. Utilize WhatsApp Web for better monitoring.

Discouraging Unnecessary WhatsApp Use: Encourage in-person visits for services like reference queries, exhaustive literature searches, rare collections, lending, and book bank circulation, ensuring WhatsApp remains a supplement rather than a replacement for essential library interactions.

Data Analysis

Communication

The dataset illustrates WhatsApp's increasing role in library services, particularly in reporting, resource sharing, book ordering, and recommendations.

Use of WahtsApp for Communication				
2022-23 to 2024-25				
Year	Resource Sharing	Book Ordering	Reporting	Resource Suggestion
2022-23	5	0	81	5
2023-24	4	0	68	4
2024-25	11	58	57	11
Total	20	58	206	20
Table No. 1				

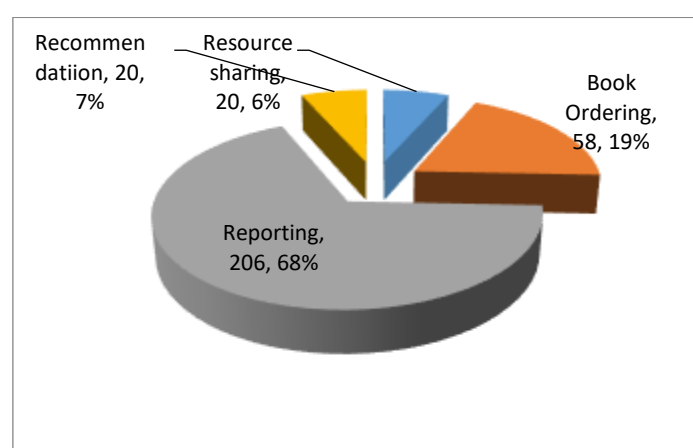


Figure No.1: Key Drivers of WhatsApp for Communication

- Reporting remained the dominant use of WhatsApp communication but showed a gradual decline as processes became more streamlined and structured.
- Resource sharing continued to be minimal, largely due to a preference for formal communication channels such as emails and written documentation.
- In 2024-25, a rise in book ordering (58 instances) highlighted WhatsApp's potential for resource acquisition and future procurement.

Services

The dataset analyzes WhatsApp's role in library services from 2022-23 to 2024-25, categorizing usage into five areas: Alert Services, Reference Services, Digitization, Document Delivery, and Literature Search.

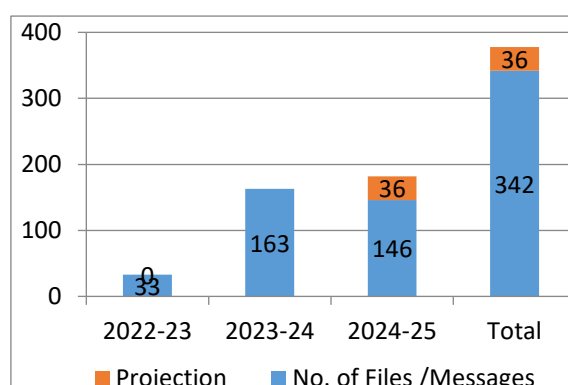


Figure No. 2 Projection for Services (2024-25 8-month Data)

Use of WahtsAPP for Services 2022-23 to 2024-25

Services	2022-23	2023-24	2024-25	Total
Alert Services	15	17	17	49
Reference services	8	6	8	22
Digitisation service	4	12	20	36
Document delivery	2	79	54	135
Literature Search	4	49	47	100
	33	163	146	342

Table No.2 WhatsApp for service dissemination

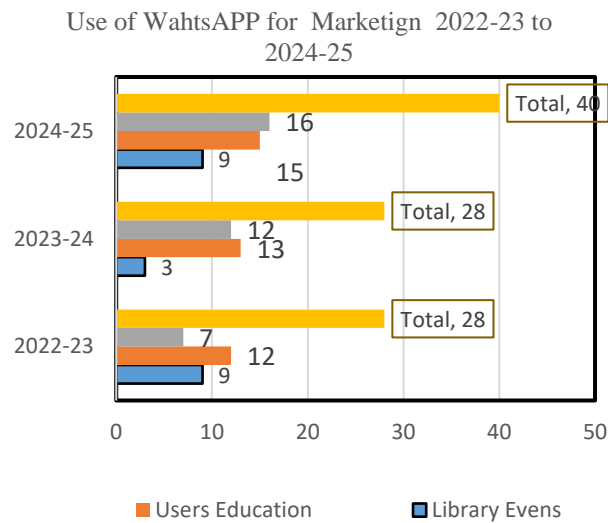
The dataset analyzes WhatsApp's role in library services from 2022-23 to 2024-25, categorizing usage into five areas: Alert Services, Reference Services, Digitization, Document Delivery, and Literature Search.

- WhatsApp usage for service delivery shows an upward trend, rising from 33 (2022-23) to a projected 182 (2024-25), highlighting its growing role in library services.
- Alert Services remained stable, minor fluctuations for reference services, and increased demand for digitisation.
- Document Delivery and Literature Search shows substantial growth Prospects for WhatsApp usage.

Use of WahtsAPP for Marketing 2022-23 to 2024-25

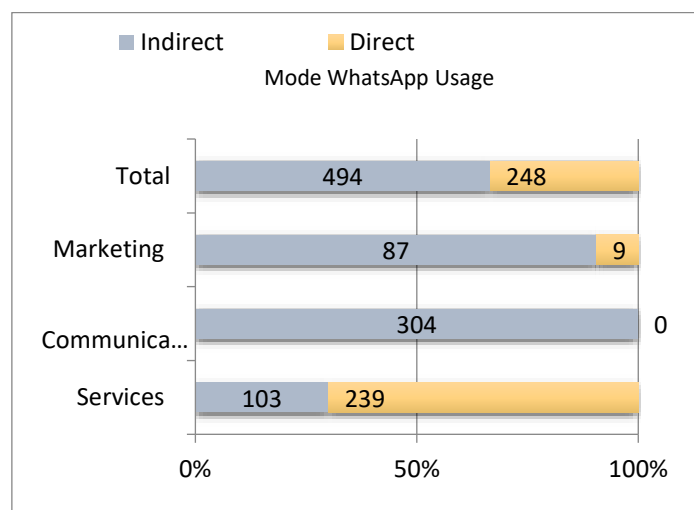
Library Marketing Modes	2022-23	2023-24	2024-25	Total
Library Events	9	3	9	21
Users Education	12	13	15	40
Promotion of Services	7	12	16	35
Total	28	28	40	96

Table No. 3

**Figure No..3**

Marketing The dataset explores WhatsApp's role in marketing library services from 2022-23 to 2024-25, highlighting three key areas: Library Events (Extra/Co-curricular), Educational Programs, and Promotion of Library Services.

- The total usage of WhatsApp for marketing increased from 28 (2022-23) to 40 (2024-25), showing a steady rise.
- This suggests an increasing reliance on WhatsApp for library-related outreach.
- This analysis reflects WhatsApp's growing significance in outreach and engagements
- Users Education remained the most used category, highlighting WhatsApp's importance in educational communication.

**Figure No. .4**

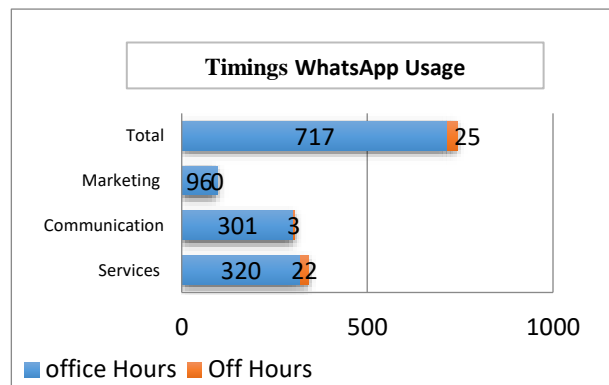


Figure No .5

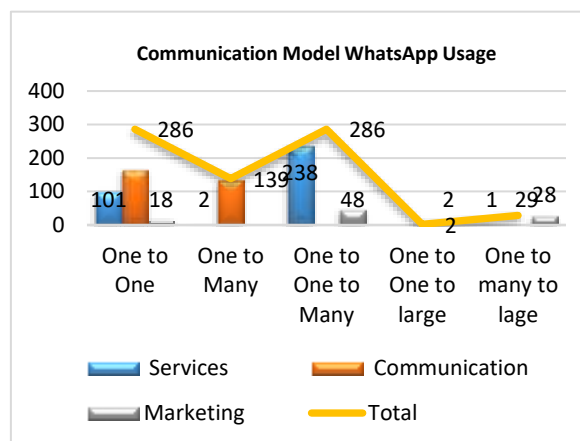


Figure No.6

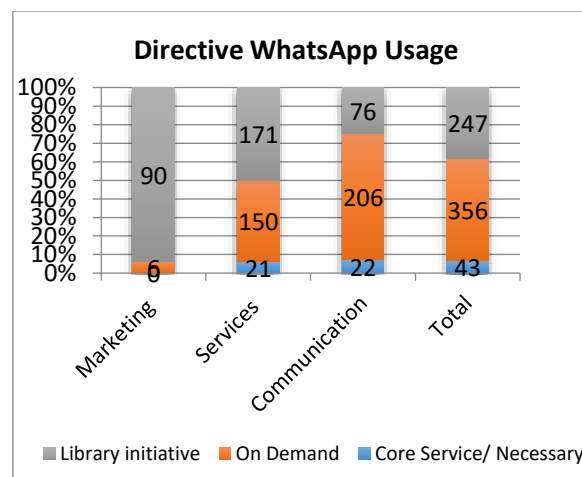


Figure No.7

Total Usage: The total usage of WhatsApp is 494 (Indirect) and 248 (Direct), indicating that indirect communication (e.g., through faculty or intermediaries) is more prevalent than direct communication

Marketing: Out of 87 instances, only 9 were direct, suggesting that marketing efforts are primarily indirect, likely through faculty or group broadcasts.

Communication: All 304 instances of communication were indirect, reinforcing the idea that the library relies heavily on intermediaries (e.g., faculty) for communication.

Services: Services had 103 indirect and 239 direct instances, indicating that while some services are delivered indirectly, a significant portion is handled directly with users.

The total usage is 717 during office hours and 25 during off-hours, indicating that most WhatsApp activity occurs during working hours

One Demand is dominant in all the segment has leading role in communication. Library Initiative is leading in Services and Marketing

Communication Model WhatsApp Usage

One-to-One: This model is used primarily for services (286 instances), indicating personalized interactions such as reference queries or document delivery.

One-to-Many: This model is dominant for communication 298 instances, suggesting that the library uses grouped faculty-mediated communication for general updates and announcements.

One-to-Many-to-Large: This model is used sparingly (48 instances) and is more common in marketing, likely for broader campaigns or event promotions.

Conclusion

This study highlights WhatsApp's growing significance in academic libraries, particularly in communication, marketing, and service dissemination. Findings indicate a rising trend in its use, with faculty-mediated communication being highly effective. While challenges such as information overload and privacy concerns persist, strategic implementation ensures optimal engagement. Moving forward, libraries should continue refining their WhatsApp strategies, integrating complementary technologies, and maintaining ethical communication standards to maximize user benefit.

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EXPLORING THE IMPACT OF SOCIAL MEDIA ON MENTAL HEALTH AND WELL-BEING

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Abstract

Social media has become an integral part of modern life, but its impact on mental health is raising serious concerns. This study explores how excessive social media use can lead to addiction, affecting emotional well-being and contributing to anxiety, depression, low self-esteem, and sleep disturbances. While these platforms offer connection and information, they also encourage compulsive behaviours through algorithm-driven content and engagement tactics that make it difficult to log off. The study examines how social media addiction taps into the brain's reward system, triggering dopamine responses similar to those seen in substance addiction. It also delves into the harmful effects of cyberbullying, the fear of missing out (FOMO), and the constant need for validation—factors that can intensify feelings of stress and insecurity. By combining research and psychological insights, this paper emphasizes the urgent need for solutions such as digital well-being initiatives, stronger regulations, and healthier social media habits. Promoting digital literacy and mindful usage can help counteract the negative effects of social media addiction. Ultimately, this research advocates for a balanced approach that allows people to enjoy the benefits of social media while safeguarding their mental health in today's digital age.

Keywords: *Social media addiction, mental health, anxiety, depression, low self-esteem, sleep disturbances, dopamine response, compulsive behavior, cyberbullying, fear of missing out (FOMO), validation, stress.*

Introduction

Social media has revolutionized communication, enabling unprecedented levels of connectivity and information sharing. However, as its ubiquity grows, concerns regarding its impact on mental health have gained prominence. Social media addiction, characterized by compulsive and excessive usage, has emerged as a modern psychological challenge, linked to anxiety, depression, and declining well-being. This paper explores the mechanisms that foster addiction, its effects on mental health, and potential strategies for intervention.

METHODOLOGY

1. Research Design

This study employs a mixed-methods approach, integrating both quantitative and qualitative research methods to provide a comprehensive understanding of social media addiction and its psychological impact. The quantitative aspect involves statistical analysis of survey data, while the qualitative component comprises in-depth interviews and thematic analysis.

2. Participants

The study targets individuals aged 18–25, a demographic known for high social media engagement. Participants were recruited through online platforms, academic institutions, and community outreach. A sample size of 100 respondents was aimed for the survey, with 20 individuals selected for qualitative interviews.

3. Data Collection Methods

3.1 Quantitative Data Collection

A structured online survey is administered to collect data on social media usage patterns, mental health indicators, and addictive behaviours. The survey consists of:

- **SOCIAL MEDIA ADDICTION SCALE (SMAS):** Measures compulsive use, withdrawal symptoms, and impact on daily life.
- **COMPULSIVE USE:** Difficulty controlling the urge to check social media and spending more time than intended on platforms.
- **WITHDRAWAL SYMPTOMS:** Anxiety or irritability when unable to access social media and feeling restless when not online.
- **NEGATIVE IMPACT ON DAILY LIFE:** Decline in academic, professional, or personal responsibilities and neglecting real-life relationships in favour of virtual interactions.
- **TOLERANCE AND INCREASED ENGAGEMENT:** Needing more time on social media to feel satisfied and gradual increase in frequency of checking updates.
- **EMOTIONAL DEPENDENCE:** Using social media to escape stress or negative emotions and feeling validated by likes, shares, and comments.

3.2 Qualitative Data Collection

Semi-structured interviews were conducted with a subset of participants to explore personal experiences, coping mechanisms, and perceived psychological effects of social media use. Questions focused on themes such as:

- Emotional responses to excessive social media use.
- Experiences with cyberbullying and social validation.
- Perceived effectiveness of self-regulation strategies. Interviews are transcribed and analyzed using thematic analysis to identify recurring patterns and psychological themes.

4. Ethical Considerations

Ethical approval was obtained from the relevant institutional review board. Participants provided informed consent, and confidentiality was maintained through anonymized data collection. Participants may withdraw from the study at any point without repercussions.

5. Limitations

Potential limitations include self-report bias in survey responses and the inability to establish pivotal relationships due to the cross-sectional nature of the study. Future research may benefit from longitudinal designs to track changes over time.

By employing this methodology, the study aims to provide an evidence-based understanding of social media addiction and its psychological consequences, contributing to the development of effective intervention strategies.

Understanding Social Media Addiction

Social media addiction is defined by an uncontrollable urge to engage with digital platforms, often at the cost of real-world relationships, productivity, and mental well-being. It shares similarities with behavioural addictions such as gambling, as users experience cycles of craving, reward, and withdrawal. Neurologically, social media addiction is linked to dopamine release in the brain's reward system, reinforcing compulsive behaviours. Platforms capitalize on these mechanisms through infinite

scrolling, notifications, and algorithm-driven content, which create habitual engagement patterns (Andreassen et al., 2012; Montag et al., 2019).

The Psychological Impact of Social Media Addiction

Anxiety and Depression

Studies have consistently found a correlation between excessive social media use and symptoms of anxiety and depression. Users often engage in negative social comparisons, measuring their lives against curated online personas, leading to dissatisfaction and self-doubt (Twenge et al., 2018; Keles, McCrae & Grealish, 2020). Additionally, exposure to distressing news, cyberbullying, and social rejection further exacerbates mental health conditions.

Self-Esteem and Body Image Issues

Social media fosters unrealistic beauty standards, promoting filtered and heavily edited representations of individuals. Adolescents and young adults, in particular, are susceptible to body dissatisfaction, low self-esteem, and eating disorders due to repeated exposure to idealized images (Perloff, 2014; Fardouly et al., 2015).

Sleep Disruptions

Blue light emitted by screens interferes with melatonin production, disrupting sleep cycles. Late-night scrolling, notifications, and the compulsion to check updates contribute to poor sleep quality, leading to fatigue, stress, and cognitive impairments (Leone & Sigman, 2020).

Fear of Missing Out (FOMO)

Social media perpetuates the fear of missing out, as users witness curated highlights of others' lives. This phenomenon heightens feelings of loneliness, anxiety, and a compulsive need to stay online, further entrenching addictive behaviors (Przybylski et al., 2013).

Mechanisms Reinforcing Social Media Addiction

Algorithmic Manipulation

Social media platforms use sophisticated algorithms to personalize content, ensuring prolonged engagement. By analysing user behaviour, platforms present content that maximizes interaction, often at the cost of psychological well-being (Zhang et al., 2022).

Dopamine-Driven Reinforcement

Likes, comments, and shares function as intermittent rewards, activating dopamine pathways associated with pleasure and reinforcement. This unpredictable reward system makes social media highly addictive, much like slot machines (Alter, 2017).

Social Validation and Peer Influence

Social media thrives on validation-seeking behaviours, where users equate online approval with self-worth. This dependency on external affirmation fosters anxiety, self-doubt, and compulsive checking behaviours (Chou & Edge, 2012).

Strategies for Mitigating the Impact of Social Media Addiction

Digital Literacy and Awareness

Educating users about the psychological effects of social media addiction can foster mindful usage. Digital literacy programs should be integrated into educational curricula to promote responsible online engagement (Livingstone & Helsper, 2007).

Implementing Time Management Techniques

Setting screen time limits, using app blockers, and scheduling offline activities can help reduce compulsive usage. Conscious consumption practices, such as digital detoxes, can further aid in breaking addictive patterns (Roberts & David, 2019).

Platform Responsibility and Ethical Design

Social media companies should adopt ethical design principles, including transparent algorithms, reduced notification bombardment, and content moderation policies that prioritize mental well-being (Harris, 2019).

Psychological Interventions

Cognitive-behavioural therapy (CBT) and mindfulness-based interventions have shown promise in treating social media addiction. Encouraging self-reflection, emotional regulation, and real-world social engagement can aid in recovery (Young, 1998).

Conclusion

Social media addiction presents a significant challenge to mental health, exacerbating anxiety, depression, and self-esteem issues. While social media offers undeniable benefits, its excessive use can lead to detrimental psychological effects. Understanding the neurocognitive mechanisms behind social media addiction is crucial for developing effective interventions. By fostering digital literacy, implementing ethical design, and encouraging balanced usage, society can mitigate the adverse consequences of social media addiction and promote mental well-being in an increasingly digitalized world.

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SYNTHESIS AND CHARACTERIZATION OF INNOVATIVE LIGANDS AND THEIR METAL COMPOUNDS

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Abstract

The innovative ligands have been synthesized and characterized by spectral analysis. They are obtained as fine powdered solids by the reaction of phenyl/tolyl 2,4-dithiobiurets with isonitroso-acetophenone (HINAP). **5-(2'-hydroxyimino-1'-phenyl) ethylidene phenyl/tolyl 2,4,-dithiobiurets** They are abbreviated as HPEPDTB and HPETDTB respectively. The ligands are insoluble in water but soluble in common organic solvents like chloroform, methanol, carbon tetrachloride etc. with varying solubility. The elemental analysis is in agreement with the empirical formulae of the compounds. The cadmium metal complexes have been prepared $Cd_2(HPEPDTB)_2Cl_2.4H_2O$, $Cd_2(HPETDTB)_2Cl_2.4H_2O$ and screened for their antibacterial activity. *Escherichia Coli*, *Staphylococcus*, *Bacillus Cereus*, *Bacillus Subtilis* were studied on laboratory grown cultures, these yield several kinds of information which are of value in guiding and understanding their therapeutic use.

Keywords HPEPDTB, HPETDTB, $Cd_2(HPEPDTB)_2Cl_2.4H_2O$, $Cd_2(HPETDTB)_2Cl_2.4H_2O$

The PMR spectra of the ligands, recorded in DMSO-d₆ solution with TMS as a standard. A prominent feature of the spectra of HPEPDTB and HPETDTB is the absence of the proton signals due to -NH₂ group of the dithiobiurets. This suggests successful schiff base formation by the replacement of >C=O group of the HINAP by the azomethine

>C=N) group. The aromatic protons of the ligands resonate as multiplets between 7.2 and 7.5 δ while a singlet due to C-H proton is observed in both ligands at 7.8 δ . The oximino proton (=NOH) is observed in the region ~12.4 δ in both the spectra. The -NH and -SH proton signals are observed near 8.8 and 10.6 δ respectively. The PMR spectrum of HPETDTB also additionally shows a signal at 2.4 δ for methyl (-CH₃) protons. The FT infrared spectra of the ligands in KBr discs in the region 4000-400 cm⁻¹ are shown in Figs. 5.60 and 5.61. The spectra are quite complex due to the presence of a large number of bands with varying intensities. It is therefore not possible to assign all the bands without ambiguity. An attempt has however been made to assign some of the structurally important bands on the basis of some infrared spectral bands reported for 2,4-dithiobiuret (HDTB)⁵³, HINAP²⁷ and similar compounds.

A significant and common feature of the IR spectra of both the ligands is that they do not show a band due to free or hydrogen bonded carbonyl group, observed in the region around 1660 cm⁻¹ in HINAP²⁷. This indicates successful replacement of the carbonyl oxygen in HINAP by azomethine nitrogen in the schiff base formation during the preparation of ligands. This is further supported by the appearance of an additional strong band in the region 1660-1640 cm⁻¹ due to ν C=N of azomethine group in addition to the band around 1580-1600 cm⁻¹ attribute to the ν C=N stretching mode of the oximino group. In general, C=N vibrations in isonitrosoketones³¹ are known to occur around 1600 cm⁻¹. In formaldehyde dimethyl hydrazone, the ν C=N stretching

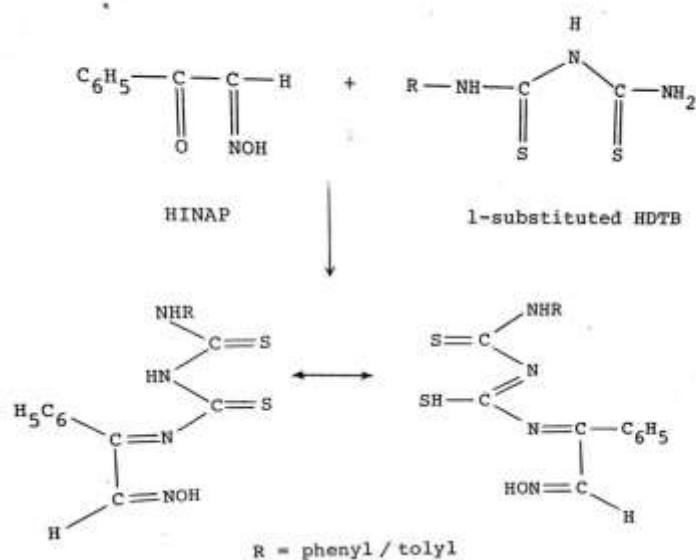
vibrations are reported to occur at 1584 cm⁻¹. In the infrared spectra of bis-(1,2-diphenyl-1-hydroxyimino 2,ethylidene) 1,3-diamino propane, Rai et al⁵⁵ have assigned bands at 1630 cm⁻¹ and

1475 cm^{-1} to C=N stretching vibrations of azomethine and oximino group respectively. Recently, the two $\nu\text{C}=\text{N}$ modes observed in the regions around 1598 cm^{-1} and 1560 cm^{-1} in the infrared spectra of complexes of alkylimino derivatives of isonitroso propiophenone (HINPP), assigned respectively to azomethine and oximino groups, have been reported. The assignment of the higher energy band around 1610-1613 cm^{-1} to $\nu\text{C}=\text{N}$ (azomethine) and the lower one in the range 1566-1568 cm^{-1} to $\nu\text{C}=\text{N}$ (oximino) in the present case is therefore justified.

The spectra of the ligands reveal a broad band near 3420-3424 cm^{-1} which is assigned to hydrogen bonded $\nu\text{O}-\text{H}$ mode of the $>\text{NOH}$ group. The N-H stretching vibrations are observed near 3235 cm^{-1} in the ligands.

In several isonitrosoketones, the band due to N-O stretching vibrations is known to occur around 900-1000 cm^{-1} , presumably due to the existence of only one isomer which exists in the oxime form. In hydrazone derivatives of isonitroso acetophenone (HINAP), this band is seen in the range 985-990 cm^{-1} . The medium-to-strong intensity band observed around 995-1000 cm^{-1} in the spectra of HPEPDTB and HPETDTB may therefore be attributed to $\nu(\text{N}-\text{O})$ stretching frequency, while a fairly strong band in the ligands at 1246 cm^{-1} is assigned to C=S stretching vibrations. In addition, a medium to strong intensity band observed in the ligands around 1440-1435 cm^{-1} can tentatively be assigned to $(\delta\text{N}-\text{H} + \nu\text{C}-\text{N} + \nu\text{C}=\text{S})$.

A calculation of S-H distance from the geometry of the molecule reveals that the distance between these two atoms is favourable for hydrogen bond formation. It appears from the spectra that a proton transfers to sulfur as shown by the presence of an absorption bands due to -SH at $\sim 2560 \text{ cm}^{-1}$. Important FT-IR spectral bands for HPEPDTB and HPETDTB and their assignments are summarized in Table 5.24. On the basis of the analytical and spectral data, the formation and the structure of the schiff base ligands HPEPDTB and HPETDTB may be represented as follows:



Metal complexes of 5-(2'-hydroxymino 1'-phenyl) ethylidene phenyl/tolyl-2,4-dithiobiurets:

The elemental analysis of the metal complexes of HPEPDTB and HPETDTB corresponds to 1:1 metal:ligand stoichiometry and suggests that the complexes may be represented by the general formula $M_2L_2Cl_2 \cdot xH_2O$ where $M = Cd(II)$, and $x = 4$.

The complexes are coloured and non-hygroscopic in nature. They are insoluble in water and sparingly soluble in common organic solvents though somewhat more soluble in dimethyl formamide (DMF) at room temperature. They give intense colour with dil. NaOH solution suggesting the presence of a free oxime group in the complexes.

All the complexes are thermally stable at least upto 120°C indicating fairly high thermal stability and hence a strong metal-ligand bond.

 $Cd_2(HPETDTB)_2Cl_2 \cdot 4H_2O$:

The thermal studies of this complex indicate that it undergoes thermal decomposition in three stages. The first stage of decomposition observed in the temperature range 140-150°C, which corresponds to the loss of four water molecules which are coordinately held. This observation is in conformity with the inference drawn on the basis of analytical data and infrared spectral study of the complex discussed earlier.

The order of the reaction (n) and the energy of activation (E) for the dehydration step have been calculated and are found to be 1.0 and 2.05 kcal/mole respectively.

The second stage of decomposition observed around 390°C with a mass loss of about 51% is due to the loss of $2(C_6H_5) + 2(C_6H_4CH_3) + 2(CH-NOH)$ groups of the ligand in addition to four water molecules the probable pattern of decomposition of the complex shows further loss of chlorine along with a part of the organic ligand during the last stage of decomposition.

Under antimicrobial studies *Escherichia coli*, *Staphylococcus*, *B.cereus*, *Bacillus subtilis* were studied on laboratory grown cultures; these yielded kind of information which is of value in guiding and understanding their therapeutic use. The concentration required to inhibit various organisms and the effects of environmental conditions on their activity are of paramount importance. The complexes show moderate activity against (10-18 mm) against the above mentioned bacteria as shown in the table given below. This shows that besides the complex formation, the nature of the metal ion has important role in the inhibition of the pathogenic activity of the bacteria.

The below table shows result of agar cup method for the antibacterial activity of the $Cd(II)$ complexes in (DMF).

COMPOUND	B.subtilis(mm)	B.cereus(mm)	S.aureus(mm)	E.coli(mm)
$Cd_2(HPEIBSA)_2Cl_2$	16	14	18	12
$Cd_2(HBEIBSA)_2Cl_2$	18	10	11.5	17

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**DEPICTION OF SOCIAL ETHICS & RESPONSIBILITIES IN TVF (THE VIRAL FEVER)
WEB SHOWS AND INFLUENCE ON YOUTH****Associate Prof. Sameer Naik***Dept. of Accountancy, Akbar Peerbhoy College of Comm. & Eco.**Email-sameer.naik@apcollege.edu.in***Prof. (Dr.) Shaukat Ali***Principal, Akbar Peerbhoy College of Comm. & Eco.**Email- drshaukatali68@yahoo.co.in*

Abstract

As adolescent culture and behaviour are increasingly shaped by digital media, social ethics and responsibilities in online shows have emerged as a prominent topic of discussion. Web series frequently act as a social mirror, reflecting prevailing problems, fads, and ethical quandaries. However, there can be a lot of variation in how ethics and duty are portrayed, and young viewers are greatly impacted by these representations. Younger viewers who are still forming their moral compass may be particularly affected by web series that frequently feature characters making difficult moral choices. Numerous web programs inspire viewers to take part in social causes and develop greater social responsibility. However, viewers may unintentionally underestimate the real-world effects of immoral behaviour if shows neglect to highlight the consequences of their characters' acts. Young people's perceptions of relationships, gender roles, and identity can be influenced by web series. Healthy relationship dynamics and self-image can be fostered by progressive representations of gender, equality, and respect. In this essay, we attempt to examine how TVF successfully spreads morals and ethics and motivates the younger generation through its youth-focused programming. To demonstrate how the underlying ethics might impact young people from their student to career phase, the study has been limited to just three large shows.

Arunabh Kumar, an IIT Bombay alumnus, launched the Indian digital entertainment firm TVF (The Viral Fever) in 2010. In the beginning, TVF was a YouTube channel that produced humorous, relatable, and quirky video for youthful, tech-savvy consumers. The breakthrough series TVF Pitchers (2015), which is regarded as one of the first successful Indian web series to address startup culture, garnered significant attention for TVF. The program developed a cult following, and TVF swiftly rose to prominence in India's online entertainment market. TVF produced several well-known web series after Pitchers, including Tripling (2016) and Permanent Roommates (2014). These programs, which are renowned for their likable characters, humorous prose, and original ideas, made TVF one of the forerunners of the digital content revolution in India. As OTT platforms gained traction in India, TVF's impact grew, and it gained recognition for producing original, superior content aimed at Gen-Z and younger viewers. Additionally, TVF expanded into other media platforms, including podcasts, stand-up comedy, and sketch comedy. TVF has maintained its position as a major force in the Indian digital entertainment market by creating shows and material that appeal to its viewers in spite of obstacles like controversy and leadership changes. A combination of premium and free programming is available on *TVFPlay*. A subscription may be necessary for certain exclusive series and episodes, even if many shows and movies are freely accessible. To access all premium content, including the entire collection of original television series and movies, users can opt to subscribe for a small charge. TVF's YouTube channel has more than 10.8 million subscribers as of February 2025, and 387 of its uploaded videos have had over 1.49 billion views. TVF also produces shows for other OTT platforms like Netflix and Amazon Prime.

The purpose of this research is to demonstrate how TVF has used social media to portray moral, professional, and social ethics in all of its shows. For shows like *Panchayat*, *Gullak*, *Tripling*, *Aam Aadmi Family*, *Yeh Hain Meri Family*, and others, TVF has been producing content that has not only drawn in young people but also received positive feedback and great viewership from other audiences. In order to better understand how ethics and morality are portrayed in these shows, we have attempted to analyse a number of their youth-focused content shows. TVF shows are an example of how ethics and values may be taught to young people in this age of social media, where content is mostly disrespectful and filthy.

ASPIRANTS (2021, 2 seasons) IMDb Rating – 9.2

“*Aspirants*” by TVF is an inspirational web series that resonates deeply with the youth, particularly those who are preparing for competitive exams in India, like the UPSC (Union Public Service Commission) exams. The show captures the journey of three friends—Abhilash, Guri, and Shwet Ketu—who aspire to become civil servants, facing the pressures, personal struggles, and emotional challenges along the way. It resonates the following values for the youth:

1. Chasing Dreams Despite Challenges: The characters in *Aspirants* represent the ambitious youth who dream big, despite facing immense obstacles. The series highlights the pressure of exams, self-doubt, and the societal expectations placed on students. However, it also emphasizes the importance of pursuing one's dreams, even when the journey is tough.

2. Realistic Depiction of Struggles: Rather than glorifying the path to success, *Aspirants* showcases the real, unfiltered journey of individuals trying to crack one of the toughest exams in India. It depicts the lows, the failures, and the moments of doubt, reminding youth that success is not always linear.

3. The Value of Friendship and Support: The show places a strong emphasis on the power of friendship and emotional support. The bond between the characters is heartwarming and serves as a reminder that no journey is truly solitary. Having a support system—whether friends, family, or mentors—helps individuals navigate the pressures of competitive exams and life in general.

4. Personal Growth and Self-Discovery: “*Aspirants*” is not just about academic success; it also focuses on personal growth and self-discovery. The characters are constantly evolving, learning not only about their subjects but also about themselves. The show motivates youth to introspect, realize their strengths and weaknesses, and become better versions of themselves.

5. Balancing Ambition and Reality: The characters in the series grapple with balancing their lofty ambitions with the realities of life. *Aspirants* conveys an important message to youth: while it's great to have big dreams, it's equally important to stay grounded and realistic. It teaches that success is a journey, not a destination, and that progress is often slow and incremental.

6. Learning from Failures: Failures are an integral part of *Aspirants*. The series shows how setbacks, such as not clearing the exam or facing rejections, are part of life. The characters don't let failure define them, and instead, they learn from their mistakes, adapt, and try again. This sends a powerful message to youth that failure should not be feared, but rather embraced as a learning opportunity.

7. Striving for the Greater Good: Beyond personal ambition, *Aspirants* also highlights the larger goal of becoming a civil servant—to serve society and contribute to the greater good. This sense of purpose is motivating for youth, showing them that careers and goals can have a deeper impact on the world, and encourages them to pursue paths that align with their values and aspirations.

8. The Importance of Persistence: The show makes it clear that perseverance is the key to success. Characters often face moments where they want to give up but continue to push through, even when

the odds seem stacked against them. Never losing sight of one's purpose and consistently working towards it, a valuable lesson for the youth in any field.

9. Inspiring to Take Risks: *"Aspirants"* subtly encourages youth to take risks and step outside their comfort zones. The characters often take unconventional paths to pursue their dreams and are not afraid to make mistakes or take chances. This inspires the youth to take bold decisions and embrace uncertainty when pursuing their goals

All things considered, "Aspirants" provides young people, especially those in competitive and academic settings, with a variety of sources of inspiration. In addition to inspiring students to pursue their goals, it teaches children the value of mental health in the face of adversity, self-awareness, friendship, and resilience. The show sends a strong and relevant message to young people, encouraging them to appreciate the journey, take lessons from their mistakes, and never give up on their goals.

KOTA FACTORY (2019, 3 Seasons) IMDb Rating - 9

Kota Factory is deeply motivational and has become a beacon for students, especially those preparing for entrance exams like JEE (Joint Entrance Examination) and NEET (National Eligibility cum Entrance Test) in India. Set in the highly competitive and intense atmosphere of Kota, a city known for its coaching institutes, the show sheds light on the challenges faced by students in their academic pursuits. Here's how *Kota Factory* can inspire students:

1. Facing the Harsh Realities of Education: The series depicts the harsh and demanding nature of preparing for competitive exams, with its emphasis on rigorous schedules, immense pressure, and the competitive environment. Rather than sugar-coating the experience, *Kota Factory* shows the emotional and mental toll it takes on students. This realistic portrayal helps students understand that the path to success isn't easy.

2. The Importance of Mental Health: One of the standout themes of *Kota Factory* is the focus on mental health. The show highlights how students in Kota often struggle with anxiety, stress, and feelings of isolation, which are common among those preparing for difficult exams. By addressing these issues openly, the series encourages students to prioritize their mental well-being.

3. Resilience and Perseverance: The central character, Vaibhav, exemplifies resilience and perseverance. Despite facing initial setbacks and being overwhelmed by the competitive nature of Kota, Vaibhav doesn't give up. His journey inspires students to keep trying, even when things get tough.

4. The Role of Mentorship: In *Kota Factory*, the relationship between students and teachers plays a significant role in shaping the academic journey. The character of Jeetu Bhैया, a supportive and understanding teacher, offers wisdom and guidance to students. His teaching philosophy emphasizes learning with joy and curiosity, rather than just focusing on rote memorization.

5. Diversity of Paths to Success: The show also challenges the idea that there is only one "right" path to success. While Kota is portrayed as a hub for students aiming for engineering and medical exams, the series subtly suggests that there are multiple ways to achieve one's goals. It inspires students to follow their unique paths.

6. Failure Is Not the End: Failure is another recurring theme in the series. Vaibhav's journey is marked by failure, but he learns from his mistakes and gradually builds the strength to move forward. It encourages students to embrace failures as part of the learning process and not as something to be ashamed of.

7. The Power of Small Wins: The series highlights the importance of celebrating small victories and incremental progress. Whether it's completing a difficult chapter or improving slightly in a mock test, every small achievement matters.

8. Staying True to Yourself: Ultimately, *Kota Factory* is about staying true to who you are while navigating the pressures of exams and expectations. Vaibhav, through his struggles, learns to maintain his individuality and not get lost in the crowd. The show inspires students to not compromise their values and self-worth for the sake of external achievements.

To sum up, Kota Factory is an incredibly inspiring series for students, especially those who are dealing with the stress of studying for competitive tests. It imparts important knowledge on mental health, resilience, the value of support networks, and remaining true to oneself while overcoming obstacles in academic life. The program serves as a reminder to students that success involves more than just achieving the highest ranking; it also involves developing oneself, overcoming obstacles, and learning from mistakes as well as accomplishments.

TVF PITCHERS (2015, 2 Seasons) IMDb Rating – 9.1

The TVF (The Viral Fever) web series *Pitchers* revolves around a group of friends —Naveen, Jitu, Yogi, and Mandal—who leave their stable corporate jobs to pursue their dream of launching a startup. The show beautifully captures the entrepreneurial journey, highlighting various ethics and values essential for business and life. Here are some key ethical and value-based takeaways from *Pitchers*:

1. Integrity & Honesty: Throughout the show, the characters strive to maintain their integrity, especially while pitching their startup idea. They refuse to compromise on their principles just for quick success, emphasizing ethical business practices.

2. Friendship & Teamwork: A core theme of the series is the strong bond of friendship. They support each other through failures and successes, proving that a trustworthy and motivated team is crucial for any venture's success.

3. Risk-Taking & Courage: Leaving well-paying jobs to start something uncertain requires immense courage. The show highlights the ethical dilemma of financial stability versus chasing a dream, reinforcing that ethical risks taken for a noble cause can lead to great rewards.

5. Respect & Humility: Despite their ambitions, the characters remain humble and learn from mentors and industry experts, showing the importance of respecting knowledge and experience.

6. Ethical Leadership: Naveen, as the team's leader, makes difficult decisions while considering the team's well-being. He avoids shortcuts and unethical practices, demonstrating the significance of ethical leadership.

7. Customer-Centric Approach: Instead of blindly chasing investors, they focus on solving real-world problems, emphasizing the ethical responsibility of businesses to serve society rather than just making profits.

8. Balancing Personal & Professional Life: Jitu's dilemma between family responsibilities and startup aspirations showcases the ethical struggle of work-life balance, an issue many entrepreneurs face.

9. Never Compromising on Vision: Despite temptations to pivot or take unethical shortcuts, they stick to their original vision, proving that long-term success is built on strong values.

10. Ethical Fundraising & Investor Relations: The show highlights the dilemma of choosing the right investors—those who align with the startup's ethics rather than just offering big money. It emphasizes transparency in financial dealings and avoiding manipulative tactics.

11. Team Loyalty & Mutual Respect: The show portrays how trust and ethics within the team are crucial for startup success. Even during conflicts, they try to resolve differences without compromising integrity.

Pitchers eloquently illustrates the actual challenges of moral entrepreneurship. It teaches that being successful in business involves more than just making money; it also entails upholding moral principles, making wise decisions, and having a constructive influence. In the end, the series reaffirms that, despite the challenges of the startup phase, success may be achieved by adhering to one's morals and principles.

Conclusion:

TVF has received a lot of praise for its genuine characters, relevant storytelling, and original plots, but it has also drawn criticism for a number of reasons. Key areas where TVF shows have drawn criticism are predictability & slow pacing, absence of stories focused on women, oversimplified and idealistic illustrations, irrational work and exam preparation illustrations, absence of diversity in storytelling, commercialization and repetitive topics. Nevertheless, despite all of the criticism, it can be claimed that TVF shows have consistently motivated students by fostering a variety of morals and values. Other shows that embody particular values include Rural Development and Governance Ethics (*Panchayat*), Family Values and Financial Responsibility (*Gullak*), Generational Understanding and Empathy (*Yeh Meri Family*), Hard work and perseverance (*Half CA*), and Family Responsibility and Reconciliation (*Tripling*). These are in addition to the shows that were previously discussed in detail. Their shows are well-liked by viewers because they use humour and compelling plots to instil these morals and ideals without coming across as preachy. Their work really stands out in the current social media landscape, where people only want to become popular by posting offensive, dirty, and improper information.

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EXPLORING THE POWER OF SOCIAL MEDIA AMONG INDIA'S YOUTH: TRENDS AND EFFECTS

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Abstract

This paper looks at the effect of virtual entertainment on psychological well-being, zeroing in on the job of online stages in forming mental prosperity. The theoretical gives a compact outline of the central issues examined in the paper, featuring the likely dangers and advantages of web-based entertainment use on psychological wellness, the fundamental components, and techniques for advancing positive web-based encounters.

Keyword: *Social media, User, Social media networking, LinkedIn, Tiktok Snapchat etc.*

Introduction

The rise of social media has transformed how people communicate, access information, and present themselves. While it offers benefits like fostering connections and supporting social causes, there are growing concerns about its impact on mental and emotional well-being. Social media's constant flow of information and societal pressures can influence self-perception, relationships, and overall mental health. Research has shown a complex link between social media use and mental health, with some studies highlighting negative effects like anxiety and depression, while others point to benefits like social support and community building. This project aims to explore these effects in more depth, examining how different usage patterns impact emotional well-being, the potential benefits of digital detox, and strategies for healthier engagement with social media.

Objectives

1. To Review the Effect of Virtual Entertainment on Human Inclination and Emotional well-being
2. To Review What Explicit Web-based Entertainment Exercises Mean for 'Mental Prosperity'

This study aims to investigate the influence of social media on mental health, focusing on emotional impact, digital detox practices, platform features, and demographic factors. It seeks to explore both the positive and negative effects of social media use, considering how different behaviors and individual characteristics shape users' well-being. Key areas of the study include:

- 1. Emotional Impact:** Assessing how social media triggers various emotions (happiness, anxiety, sadness) and the effect of content types on mood.
- 2. Usage Patterns:** Evaluating the relationship between time spent on social media and mental health outcomes such as stress and isolation.
- 3. Social Media Features:** Investigating how engagement metrics (likes, followers) affect self-esteem and anxiety.
- 4. Digital Detox:** Exploring the frequency and effectiveness of breaks from social media in improving mental well-being.
- 5. Demographic Variations:** Analyzing how social media impacts different age groups, genders, and professions, with a focus on younger users and those with different occupational backgrounds.
- 6. Psychosocial Factors:** Examining how social comparison influences self-esteem, body image, and mental health, as well as the role of online support networks.

7. Behavioral Issues and Addiction: Identifying signs of social media addiction, its effects on productivity, and its correlation with mental health issues like anxiety and depression.

The study will provide valuable insights into how social media shapes mental health across different user experiences.

Methodology:

This study on the impact of social media on mental health utilized a combination of quantitative and qualitative data collection techniques to gain a comprehensive understanding of how social media affects users' emotional well-being. By capturing broad trends through surveys and in-depth individual experiences through interviews, the research aimed to provide a well-rounded perspective on the topic.

1. Research Setting

The research was conducted online to ensure a wide reach across different demographic groups, allowing for diverse participation. Various digital tools were used for data collection and analysis.

2. Target Audience

The study focused on the following groups to ensure a comprehensive understanding of the topic:

- **General Social Media Users:** Individuals who use social media for entertainment, news, or connecting with friends and family.
- **Social Media Professionals and Influencers:** Users who engage with social media extensively for professional purposes, including content creation and digital marketing.
- **Mental Health Practitioners:** Insights were gathered from mental health professionals to provide context on common social media-related issues encountered in therapy.

3. Data Collection Methods

A. Online Google Forms Survey

- **Platform:** The primary data was collected through a Google Forms survey.
- **Objective:** The survey aimed to gather quantitative data on social media usage patterns, emotional impacts, digital detox experiences, and user perceptions.
- **Distribution:** The survey link was shared across multiple channels, including social media platforms, email, and online communities.
- **Sample Size:** The survey received responses from 81 participants, providing a diverse dataset.

B. Online Interviews via LinkedIn

- **Platform for Recruitment:** Participants for the interviews were recruited through LinkedIn.
- **Objective:** The interviews aimed to collect qualitative insights from users with significant social media engagement.
- **Structure:** Semi-structured interviews allowed for open-ended discussions while focusing on key areas.
- **Key Discussion Points:**
 - Daily social media habits
 - Emotional experiences and coping mechanisms
 - Suggestions for social media improvements to support mental health

4. Tools and Resources Used

- **Google Forms:** Used for creating and administering the survey.
- **LinkedIn:** Used to recruit participants and conduct interviews.
- **Google's Automated Analysis Tools:** Used to analyze survey responses and generate summaries.

Data Collected

The following sections present the raw data collected from participants in the study, including demographic information, social media usage patterns, emotional impacts, digital detox practices, and user perceptions of social media's influence on mental well-being.

Section1: DemographicInformation

Demographic Question	Age Group	Responses(Count)
Under20	5	6.2%
21-30	35	43.2%
31-40	27	33.3%
41-50	8	9.9%
50 &Above	6	7.4%

Gender	Responses (Count)	Percentage
Male	44	54.3%
Female	29	35.8%
Non-Binary	5	6.2%
Other	3	3.7%

The demographic data show that the majority of respondents fall within the 21-30 age group (43.2%), with 54.3% identifying as male and 35.8% identifying as female. Students made up the largest occupational group, followed by employed individuals, indicating a respondent base that is actively engaged with social media on a daily basis.

Section2: SocialMediaUsagePatterns :

Social Media Platforms Used	Responses (Count)	Percentage
Facebook	31	38.3%
Instagram	65	80.2%
LinkedIn	33	40.7%
Tiktok	18	22.2%
Snapchat	27	33.3%
Twitter	20	24.7%

Daily Time Spent on Social Media	Responses(Count)	Percentage
Less than 1 hour	7	8.6%
1-2 hours	22	27.2%
3-4 hours	29	35.8%
5-6 hours	19	23.5%
7 hours or more	4	4.9%

Primary Purpose for Using Social Media	Responses (Count)	Percentage
Connecting with friends and family	14	17.3%
News and information	17	21.0%
Entertainment	32	39.5%
Professional networking	16	19.8%

The data reveals that Instagram is the most frequently used platform (80.2%), followed by LinkedIn and Facebook. Most respondents(35.8%)spendbetween3-4 hours Daily on social media with the primary purpose being entertainment (39.5%) and staying updated daily with news (21%). This indicates heavy social media usage, particularly among younger participants.

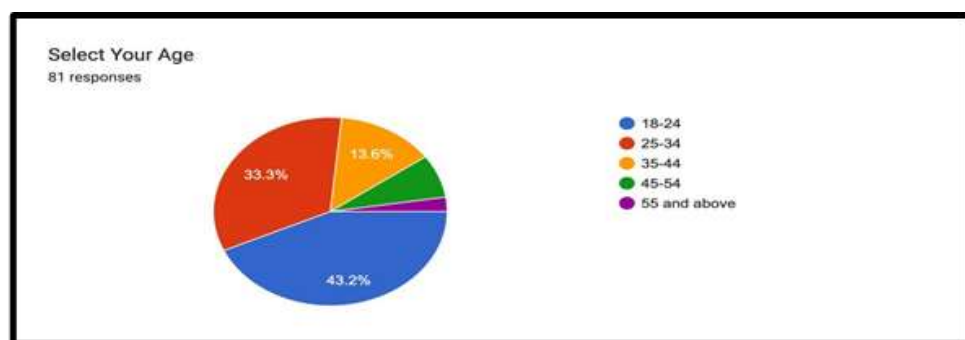
Section3: Mental Health and Digital Detox Practices

Experienced Negative Mental Health Effects from Social Media	Responses(Count)	Percentage
Yes	38	45.7%
No	17	21.0%
Sometime	27	33.3%

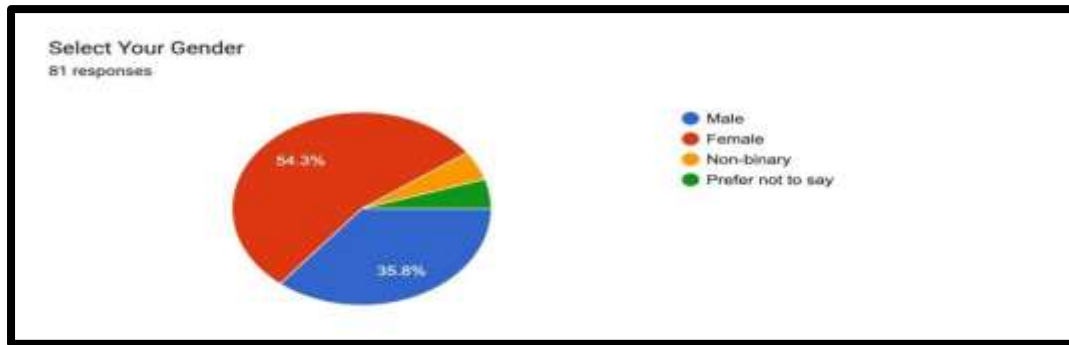
Took a Digital Detox from Social Media	Responses(Count)	Percentage
Yes	38	46.9%
No	35	43.2%

Nearly half of the respondents (45.7%) acknowledged experiencing negative mental health effects directly tied to social media use, including symptoms of anxiety, depression, and stress. A similar number of respondents (46.9%) have taken a digital detox,and more than half reported a moderate to significant improvement in their mental health following the detox.

DemographicInformation

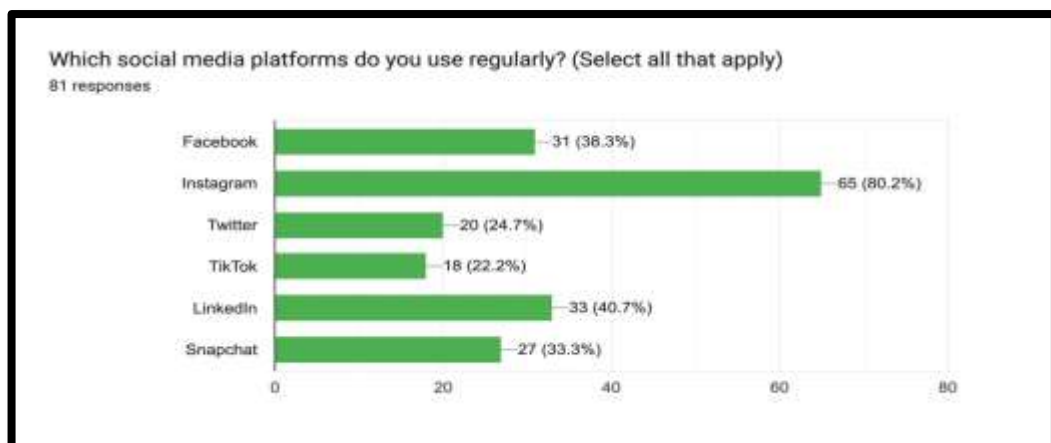


Age Distribution: The largest age group in the study was 25-34 years old (43.2%), followed by 35-44 years old (33.3%) and 18-24 years old (13.6%). This suggests that the study captures the experiences of young adults and middle-aged individuals, who are typically heavy users of social media as female.



Gender: The majority of participants identify as male (54.3%), while 35.8% identify as female. There is also a small representation of non-binary individuals. This could affect the interpretation of data, especially on gender-specific mental health impacts.

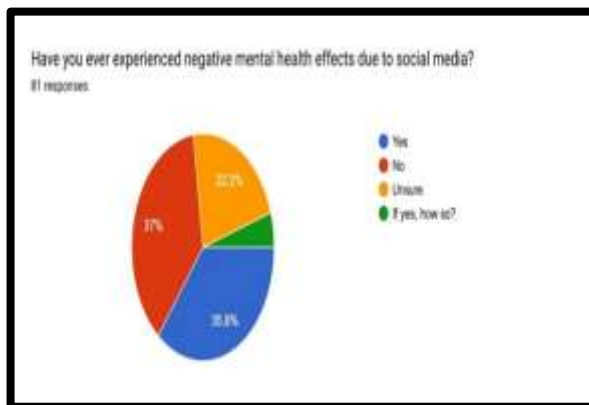
Section 2: Social Media Usage Patterns



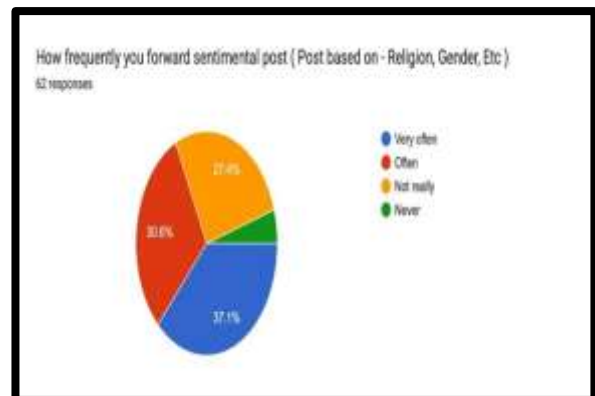
Social Media Usage Patterns: The most popular platform was Instagram (80.2%), followed by Facebook (38.3%) and LinkedIn (40.7%). This aligns with global trends showing Instagram as a platform of choice for younger users. Notably, TikTok (22.2%) and Twitter (24.7%) were less widely used.

Time Spent on Social Media: 35.8% of respondents reported spending 3-4 hours daily on social media, and 23.5% spent 5-6 hours. This high level of engagement may contribute to emotional and mental health challenges.

Section3:MentalWell-being Assessment

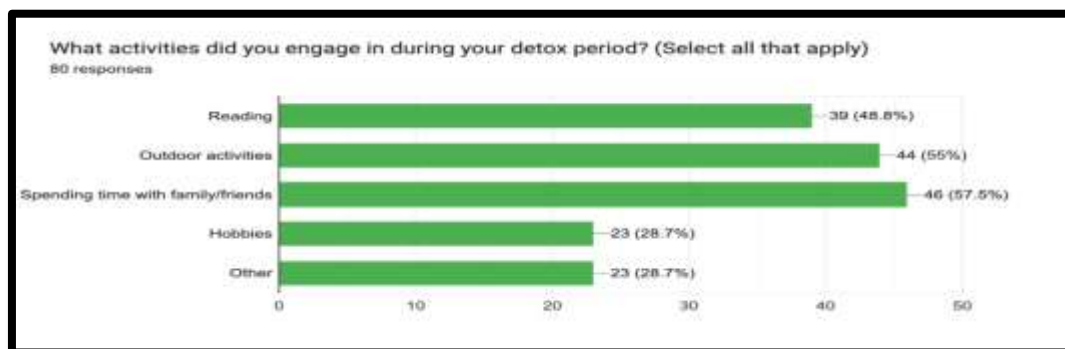


a.



b.

- b. **NegativeMental Health Effects:**45.7% of respondents reported experiencing negativemental health effects from social media, with anxiety, depression, and information overload being the most common issues. This indicates that nearly half of the users are impacted egatively by their social media habits.
- c. **ChangeAfterDetox:**Afteradigitaldetox,33.3%reportedmoderateimprovements,and26.9% saw significant improvement in mental health, showing the effectiveness of such breaks in alleviating social media's negative effects.



Detox Period Activities: During social media breaks, respondents engaged in activities like reading(48.8%),outdooractivities(55%),andspendingtimewithfamily/friends(57.5%),which improved their mental clarity, boosted self-esteem, and fostered creativity and mindfulness.

1. Social Media Usage Patterns and Emotional Impact

- **General Use:** Most respondents use platforms like Instagram and LinkedIn for 3-6 hours daily. This high engagement is linked to both positive and negative emotional outcomes. While many users report feelings of happiness and inspiration, a significant number also experience anxiety, stress, and depression.
- **Emotional Impact:** 54% of users feel happy using social media, but nearly 48% experience anxiety and 33% report depression. The pressure to maintain a curated online persona and constant comparison likely contribute to these negative feelings.

2. Mental Health and Coping Strategies

- **Mental Health Effects:** 45.7% of participants admitted that social media negatively impacts their mental health, leading to anxiety, low self-esteem, and feelings of inadequacy, especially with comparison-driven behaviors or exposure to negative content.
- **Coping Mechanisms:** Many respondents use strategies like limiting screen time or curating their social media feeds. 46.9% have taken a digital detox, with 33.3% reporting moderate improvements and 26.9% experiencing significant mental health benefits. This suggests that digital detox can help alleviate social media-induced stress.

3. Social Media Features and Their Negative Impact

Features of Concern: The study highlights specific features that users find harmful, especially calculation driven content, which 58% of respondents connected to negative feelings. Like counts, adherent measurements, and remarks were additionally referred to as wellsprings of stress, with 38.3% of participants pointing to these features as detrimental to their mental prosperity. These discoveries line up with past examination, which has shown that social validation features, such as likes and comments, can increase anxiety and lead to feelings of deficiency when clients don't get anticipated degrees of commitment.

4. Digital Detox and Mental Health Recovery

- **Effectiveness of Digital Detox:** Nearly half of the respondents had taken a break from social media, with many reporting significant mental health improvements, such as reduced anxiety and increased productivity. These findings support the growing evidence that digital detox is an effective way to manage the emotional and psychological stress caused by constant social media use.

Implications

1. For Social Media Platforms

Platforms should implement features that promote mental well-being, such as content filtering options, time management tools, and digital detox prompts. Reducing emphasis on likes and follower counts could help alleviate stress linked to social validation.

2. For Users

Users should practice self-regulation by curating their feeds to reduce negative influences, limiting daily screen time, and periodically engaging in digital detoxes to maintain emotional well-being.

3. For Mental Health Practitioners

Mental health professionals should incorporate social media usage assessments into therapy, especially for clients with anxiety or depression. Strategies like digital detox and content curation can help manage the mental health impacts of social media.

4. For Future Research

Future studies should explore the long-term effects of digital detox and how different platforms contribute to mental health challenges. Research on the effectiveness of platform-driven interventions like content filters and mindfulness prompts would help develop more mental health-focused social media tools.

Conclusion:

The study gives significant bits of knowledge into what online entertainment utilization means for psychological well-being, especially concerning close to home prosperity, ways of dealing with stress, and the adverse impact of specific stage highlights. While numerous clients find satisfaction and motivation on the web, there is additionally critical proof that delayed commitment prompts tension,

sorrow, and confidence issues. Computerized detox arises as a successful strategy for moderating these adverse consequences, however more platform-level interventions are necessary to support user mental health. By addressing the key worries around calculations, social approval, and promoting, web-based entertainment stages can assist with making a better, more steady climate for clients.

Limitations

- **Sample Size:** With only 81 respondents, the study may not fully represent the broader social media user base; a larger sample would provide more generalizable results.
- **Self-Reported Data:** The reliance on self-reports may introduce bias, as participants may answer based on personal perceptions or social norms.
- **Geographical Limitations:** The study focuses mainly on urban populations, potentially overlooking rural or less-connected groups.
- **Temporal Factors:** Social media trends and their mental health effects evolve rapidly, so future research is needed to track changing patterns.
- **Lack of Longitudinal Data:** The study's cross-sectional nature does not reveal long-term effects of social media use, highlighting the need for longitudinal studies.

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THE IMPACT OF SOCIAL MEDIA ON YOUTH MENTAL HEALTH: OPPORTUNITIES & CHALLENGES

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Abstract

Social media refers to online platforms where users can share information and connect with virtual communities through text, video, photos, and other content. As of 2024, social media had more than five billion global users, which is equal to more than 62% of the world population. This includes apps or websites designed for messaging and chat, social platforms like Facebook, Instagram, YouTube and TikTok and community forums, such as Reddit and Discord and its impact on mental health of young people. This research paper explores opportunities and challenges of social media. Social media can be used by young people for a variety of purposes, including self-expression, networking, learning, communication, social connection, community building, and mental health support. However, it also faces challenges like cyberbullying, exposure to inappropriate content, social isolation, depression, self-harm, comparison and envy etc. The study also reveals how to maximize the benefits and minimize the harms of social media platforms to create safer, healthier online environments for youth. Overall, to better safeguard the mental health and well-being of youth, policymakers, technology companies, researchers, families, and young people must all engage in a proactive and varied approach.

Keywords: *Social media, youth, opportunities, challenges, safeguard*

INTRODUCTION

Social media is a web-based technology that uses a network of some kind to help a huge number of people engage with each other. Generally, the network that is most frequently utilized is the Internet. Social media is growing rapidly and becoming an inevitable part of everyday life, because of the latest technological revolution ie. Androids and iPhones. The Smart phones such as Androids and iPhones make it easy to access any social media platform from anywhere virtually. The mobile versions of these social media platforms are very accessible, making them convenient for users. They are interactive technologies that facilitate users to share information and connect with virtual communities through text, video, photos, and other content. Social media can be used by young people for a variety of purposes, including self-expression, networking, learning, communication, social connection, community building, and mental health support. This includes apps or websites designed for messaging and chat, social platforms like Facebook, Instagram, YouTube, TikTok and community forums, such as Reddit and Discord and its impact on mental health of young people.

OBJECTIVES OF THE STUDY:

- To explore the opportunities of social media for youth
- To discuss the key social media challenges faced by youth
- To create awareness about how to safeguard youth against social media threat.

METHODOLOGY OF THE STUDY:

The paper reveals the opportunities of social media for youth and challenges posed by social media. In the paper, qualitative research methodology has been utilised. This study is based on secondary sources. The information is collected from websites, blogs, journal articles and research papers to explore the views of the various authors.

SOCIAL MEDIA OPPORTUNITIES FOR YOUTH:

Social media platforms have revolutionised the way young people network. In the past, networking opportunities were limited to physical interactions at school, college or work. Today, platforms like Facebook, Instagram, LinkedIn and X (formerly Twitter) provide vast opportunities for networking on social media. The impact of social media on youth is evident in the way these platforms facilitate connections and improve skills. The social media equips the youth with the various opportunities such as:

Communication: Social media has redefined communication, making it faster and more efficient. Instant messaging, video calls and live streaming have made it easier for youth to stay connected with friends and family, regardless of distance. The impact of social media on youth in terms of improving communication cannot be ignored.

Education: Educational content is readily available on social media platforms, making learning accessible to all. From academic tutorials to DIY projects, social media is a valuable resource for youth seeking to expand their knowledge and skills outside traditional classroom settings. The effect of social media on youth as an educational tool is immense.

Entertainment: For entertainment, social media offers a plethora of content, including videos, memes and games. While entertainment is an essential aspect of youth culture, it is important to balance screen time with other productive activities. The influence of social media on young people regarding entertainment is considerable but calls for careful use.

Building connections

Young people can connect with peers, mentors and industry professionals worldwide, breaking geographical barriers. These connections can lead to academic, professional and personal growth, as they gain access to diverse perspectives and opportunities. The impact of social media on youth in this context is profound, as it opens doors that were previously inaccessible.

Upgrading skills

Through social media networking, young people can join forums and organizations that are relevant to their interests and professional aspirations. These platforms provide access to resources, workshops and webinars that can improve their skills and knowledge. For instance, LinkedIn offers numerous courses and certifications that young professionals can use to boost their resumes. The impact of social media on youth in terms of skill enhancement cannot be overstated.

Creating communities

Social media enables the creation of niche communities where young people with similar interests can share ideas and support each other. Whether it's a group for aspiring writers, tech enthusiasts or environmental activists, these communities provide a sense of belonging and encouragement. The impact of social media on youth is significant in fostering these supportive networks.

Positive psychological effects: Social media can boost self-esteem and provide a sense of belonging. Platforms, like Instagram and TikTok, allow youth to express themselves creatively, receive feedback and build supportive communities. The sense of validation from likes and positive comments can boost self-worth and confidence. The impact of social media on youth can be uplifting when used positively.

Behavioural changes: Networking on social media has altered the way youth communicate and interact. Traditional face-to-face interactions are often supplemented or replaced by digital communication, leading to new social norms and behaviours. The immediacy and brevity of social

media interactions have influenced the way youth process information and respond to social cues. The impact of social media on youth in shaping behaviour is significant.

SOCIAL MEDIA CHALLENGES FOR YOUTH:

Social media can impact mental health, academic performance, and emotional well-being of young people. Some of the social media challenges include:

Mental health and wellbeing: The relationship between social media and mental health is complex. The relationship can go both ways. Some symptoms of poor mental health like feelings of sadness or isolation, might encourage to use social media more which in turn shapes how you engage with content online. Additionally, it might not have the same impact on youth as it does on other social media users. Some users claim that their regular usage of social media is linked to lower levels of wellbeing.

Social comparison: Virtual profiles allow people to share highlights of their lives, setting unrealistic expectations that leave young people feeling insecure and dissatisfied. Fear of missing out (FOMO) is not a new term, but social media sites can exacerbate these feelings FOMO then impacts self-esteem, triggering anxiety and encouraging more compulsive use of social media.

Addiction: Social media addiction is a compulsive and problematic use of social media that can disrupt daily life. It can involve constantly checking social media, feeling anxious when offline, and neglecting responsibilities.

Body image issues: Body image issues on social media are negative feelings about one's appearance that are caused by exposure to unrealistic beauty standards. These issues can impact mental, physical and social health. Young people may acquire unhealthy obsessions with beauty that have a substantial negative impact on their self-esteem by comparing themselves to influencers, celebrities or other individuals they look up to.

Disrupted sleep patterns: Experts have studies and reported social motivations that teens believe affect their bedtime digital media use. Excess social media usage has been linked to poorer sleep quality, which is in turn linked to low self-confidence, anxiety, and depression.

Self-harm and suicidal tendencies: Social media can be terrific place to find support, but some information can be harmful, normalising self-harm and exposing young people to vulgar images and videos. With access to online forums discussing self-harm and suicide, young people may be encouraged to engage in such behaviours with harmful repercussions.

Inappropriate contents: Harmful Content such as pornography, child sexual abuse material, self-harm depictions, violence, or accounts selling illegal substances can be found on social media, despite platforms' best efforts to remove these posts.

Cyberbullying: Cyberbullying can be injurious to a person's mental and physical health. Victims may experience extreme social isolation and fear. It can result in bodily and emotional injury, low self-esteem, anxiety and humiliation, difficulty in concentration and learning challenges.

Negative psychological effects: Despite the benefits, the impact of social media on youth can also be detrimental. The constant comparison with curated online personas can lead to feelings of inadequacy and anxiety. Cyberbullying remains a significant issue, with many young individuals facing harassment online. It is important to address these challenges by fostering a supportive digital environment and promoting mental health resources. The impact of social media on youth can be negative if not carefully managed.

To safeguard youth on social media, a collaborative effort is needed. Youth should be empowered with digital literacy, policymakers should enact strong regulations, technology companies should prioritize

safety, researchers should conduct studies, and families should engage in open communication and guidance.

YOUTH:

Become digital literacy experts: Learn to identify misinformation, harmful content, and cyberbullying, and understand privacy settings.

Advocate for change: Share their experiences and perspectives with policymakers and technology companies to shape safer online environments.

Practice responsible online behaviour: Be mindful of their online interactions, content they create, and the impact on others.

POLICYMAKERS:

Enact strong regulations: Implement age verification, data privacy protections, and content moderation policies that prioritize youth safety.

Support digital literacy education: Ensure that schools and communities provide resources and training to help youth navigate the online world safely.

Fund research: Invest in studies that examine the impact of social media on youth mental health and well-being.

TECHNOLOGY COMPANIES:

Prioritize safety: Design platforms that are age-appropriate, prioritize user privacy, and actively combat harmful content.

Share data transparently: Provide researchers with data on platform usage and its impact on youth, while protecting privacy.

Develop user-friendly tools: Create tools that empower users to manage their privacy, report harmful content, and access support resources.

RESEARCHERS:

Conduct rigorous studies: Investigate the impact of social media on youth mental health, well-being, and behaviour.

Share findings openly: Disseminate research findings to policymakers, technology companies, and the public to inform evidence-based interventions.

Collaborate with youth: Involve youth in research to ensure that studies are relevant and meaningful.

FAMILIES:

Engage in open communication: Talk to their children about social media, the potential risks and benefits, and how to stay safe online.

Set boundaries and expectations: Establish rules for social media use, including screen time limits and age-appropriate content.

Model responsible online behaviour: Demonstrate how to use social media safely and ethically.

Monitor and support: Stay informed about their children's online activities and provide support if they encounter problems.

CONCLUSION:

In summary, social media has become a daily routine for everyone as technology advances, and people are becoming addicted to it on a daily basis. I explored how social media equips youth with various opportunities such as communication, education, entertainment, building connections, upgrading skills, creating communities, fostering positive psychological effects, influencing behavioural changes. I found that young people are exposed to various negative impacts of social media, such as social

comparison, addiction, body image issues, disrupted sleep patterns, self-harm and suicidal tendencies, exposure to inappropriate content, and cyberbullying. I conclude a collaborative effort is needed by youth, policymakers, technology companies, researchers and families to protect youth from social media threats. Use of social media is beneficial but should be used in a limited and responsible way without getting addicted.

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KEEPING SOCIAL MEDIA ON TEST: HOW THE LOCAL FMCG BRANDS USES SOCIAL NETWORKS FOR CREATING BRAND AWARENESS IN MALEGAON NASIK**Mr. Inamur Rahman Abullais¹ Dr.Mazhar Iqbal Thakur² & Dr Sirajuddin chougale³**

Abstract

This research explores the utilization of social media by local Fast Moving Consumer Goods (FMCG) brands to build brand awareness. It examines the strategies and tactics employed by these brands on social matrix or network. It is analyzing their effectiveness in reaching mass audiences and achieving desired levels of brand recognition. The study investigates how local FMCG brands leverage association of target customer and their social media's Average time with the effective capabilities to retain the customer with brand or brand awareness program; this is channelizing the local FMCG to compete within the broader market.

Key words: Social Media, FMCG, Brand awareness

Introduction: The rise of social media has been totally changed the marketing world, it is offering businesses abundant opportunities to connect with consumers through electronic word of mouth. This is particularly true for fast moving consumer goods (FMCG) brands, where building brand awareness is crucial for driving sales and market share. While large multinational corporations often possess enormous resources for marketing campaigns, local FMCG brands face unique challenges like limited budgets and resources. Social media presents powerful tool to compete, it offer a cost effective platform to reach target audiences and improve brand recognition. However, the sheer volume of content and the constantly evolving nature of social media platforms demand careful planning and execution. Simply having a presence is not enough; local FMCG brands must strategically leverage social media to create impactful campaigns that must be buzz word with their target market. Social media has the parameter for effective time utilization; the effective duration is as calculated the prime time for propagation of brand awareness. This research investigates how local FMCG brands utilize social networks to create brand awareness, specifically focusing on the strategies and tactics they deploy to achieve effective brand building within efficient time management. It is an exploration how these brands navigate the complexities of social media marketing, balancing the need for broad reach with the imperative for cost effectiveness and timely execution of brand awareness programs.

Literature review:

Ms. Ipsita Padhi, Dr. B.B. Mishra (Ms. Ipsita Padhi, Aug 2021)¹

The rise of store brands has significant implications for national brand manufacturers. The literature explores the competitive dynamics between store brands and national brands, examining strategies employed by both to gain market share. This study investigate the impact of store brands on national brand pricing strategies, promotional activities, and product innovation. The literature also discusses the potential for store brands to act as a disruptive force in the FMCG sector, challenging the dominance of established national brands. The growth of store brands presents significant opportunities, several challenges also exist.

Mr.V. Kumaradeepan, Prof. Dr.S.M.Ferdous Azam, Prof. Dr.Jacqueline Tham (Mr.V. Kumaradeepan, 2023)²

Social media has revolutionized the way businesses interact with consumers. It has become a powerful marketing tool that can be used to influence consumer behavior, including purchase intention. This study examines the relationship between social media attributes, social media engagement.

Social Media Attributes

Social media attributes are the characteristics of social media platforms that make them appealing to users. These attributes can include:

- **Entertainment:** The ability to provide users with entertaining content, such as videos, games, and music.
- **Informativeness:** The ability to provide users with useful information, such as news, product reviews, and how-to guides.
- **Interaction:** The ability to allow users to interact with each other and with brands, such as through comments, likes, and shares.
- **Trendiness:** The ability to keep users update on the latest trends, such as fashion, technology, and pop culture.

Social Media Engagement

Social media engagement is the level of interaction that users have with social media platforms and brands. This can include:

- **Passive engagement:** Liking, sharing, and commenting on posts.
- **Active engagement:** Creating and sharing content, participating in discussions, and following brands.

Uttera Choudhary, Dr. Priya Jhamb, Dr. Surinder Sharma (Uttera Choudhary, 2019)³

The body of research paper is exploring the influence of social media on consumer buying behavior within the FMCG sector. The rapid propagation of social media platforms and their harsh impact on daily life has fundamentally altered how consumers use social media for purchase FMCG products.

The studies have identified specific social media factors that significantly impact consumer buying behavior in the FMCG sector. These include:

Social Media Marketing Activities: Research explores the effectiveness of various marketing strategies employed by FMCG brands on social media, such as targeted advertising, contests, and interactive campaigns.

Influencer Marketing: The role of social media influencers in shaping consumer perceptions and driving purchase decisions is a prominent area of research. Studies analyze the impact of influencer credibility, authenticity, and engagement on consumer trust and purchase behavior, particularly within the FMCG sector.

Electronic Word-of-Mouth (EWOM): The spread of online reviews and recommendations through social media platforms is a critical factor influencing FMCG purchases. Research examines the impact of EWOM valence (positive or negative) and volume on consumer attitudes and buying decisions.

The influence of social media extends across all stages of the consumer buying process from need recognition to post purchase behavior.

Akash Jugal, , Harshvardhan Khot, , Prashant G. Tandale, Dr Anil T Gaikwad (Akash Jugal, 2023)⁴

The advent of social media has reshaped the marketing scenario. This study explores the evolution of social media, its impact on marketing practices, and the emergence of social media marketing as a distinct field. The rise of social media and its transformative impact through social media platforms like Facebook, Twitter, YouTube, and Instagram, which have become integral parts of individuals' lives and transformed how they connect, communicate, and consume information. This transformation has

profoundly impacted marketing, moving it away from traditional one-way communication towards a more interactive and participatory model.

Social media is broadly defined as "internet based applications that build on the ideological and technological foundations that allow the creation and exchange of user generated content. Social media marketing (SMM) is then defined as "the utilization of social media technologies, channels, and software to create, communicate, deliver, and exchange offerings that have value for an organization's stakeholders.

Objectives:

- To examine the role of social media in increasing brand awareness
- To evaluate the effectiveness of social media campaign organised by local FMCG Brands.
- To identify the challenges of local FMCG brands face in leveraging social media for brand awareness.

Statement of problem:

To tackle the challenges to increase the screen timing of respondent for watching promotional campaign of local FMCG brands on social media in Malegaon (Nasik)

Limitation:

This study is subject to certain limitations. The focus on local FMCG brands within Malegaon Nasik. It limits the generalizability of findings to other regions and sector.

Research Methodology:

Exploratory research design is used in problem identification, defining the research variables and formulating the hypothesis. The data collection methods used in exploratory research design is literature survey, pilot survey and expert survey

- **Dependent variable:** social media
- **Independent variables:** Types of local FMCG brands, Type of social media users, different application on social media, sources of information

Hypothesis:

H₀ (Null Hypothesis): Social media has no significant impact on the brand awareness of local FMCG brands.

H₁ (Alternative Hypothesis): Social media significantly enhances the brand awareness of local FMCG brands.

H₀: (Null Hypothesis): The challenges faced by local FMCG brands in social media marketing do not significantly affect their brand visibility.

H₁: (Alternate Hypothesis): The challenges faced by local FMCG brands in social media marketing negatively impact their brand visibility.

Descriptive Analysis:

The descriptive analysis of data collected from respondent in the region containing survey of 100 consumers, analysis of 10 local FMCG brand social media profiles in Malegaon, Nashik, regarding the use of social media for brand awareness by local players.

Our findings indicate that local FMCG brands in Malegaon predominantly utilize the following social media platforms for brand awareness campaigns:

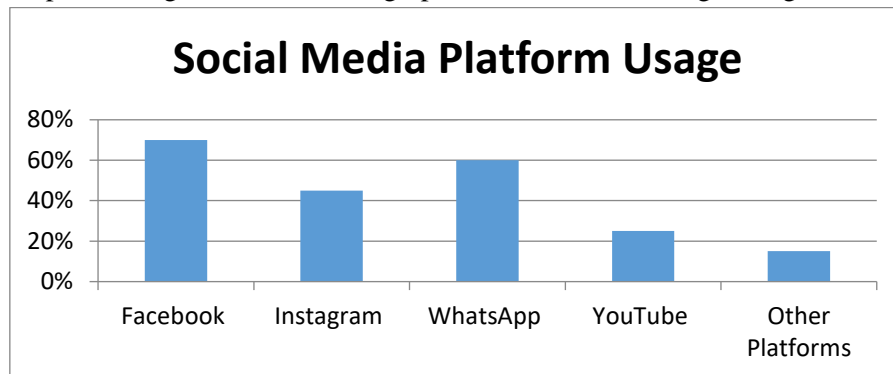
Facebook: A significant 70% of brands actively maintain a Facebook presence, primarily for sharing product information, running contests, and engaging with consumers.

Instagram: 45% of brands utilize Instagram, focusing on visually appealing content like product images and lifestyle posts, often targeting a younger demographic.

WhatsApp Business: A substantial 60% of brands leverage WhatsApp Business for direct communication with customers, sharing promotions, and providing personalized service.

YouTube: 25% of brands have a YouTube channel, mainly used for product demos, advertisements, and behind-the-scenes glimpses.

Other Platforms (e.g., Twitter, local social media platforms): 15% of brands utilize other platforms, often based on specific target audience demographics or niche marketing strategies.



Content Strategies:

The analysis of brand content revealed the following trends:

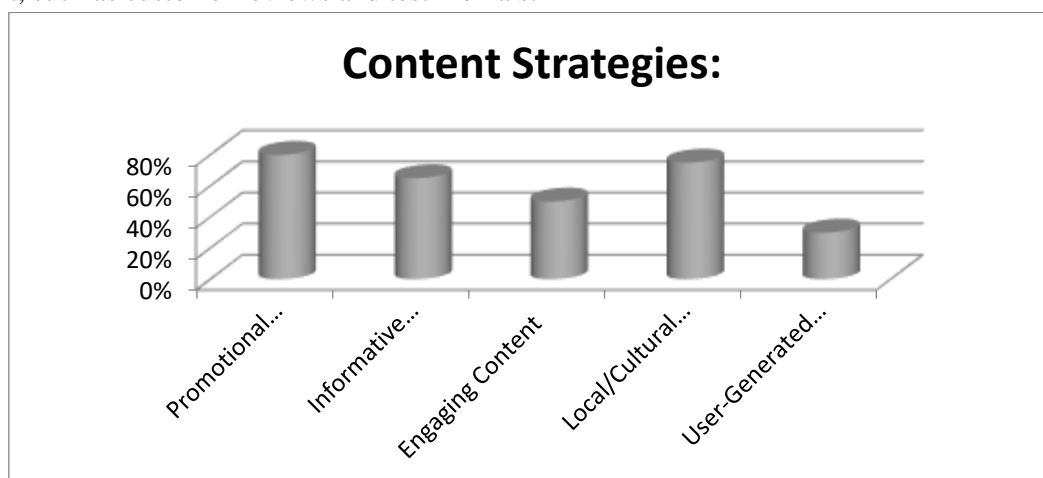
Promotional Content: 80% of brands frequently post promotional content, including discounts, offers, and new product launches.

Informative Content: 65% of brands share informative content related to product usage, benefits, and ingredients.

Engaging Content: 50% of local FMCG brands focus to create engages content, such as polls, quizzes, and interactive Q&A sessions.

Local/Cultural Relevance: 75% of brands incorporate local Malegaon/Nashik cultural elements in their content to connect with the local audience.

User-Generated Content (UGC): 30% of brands actively encourage and feature user generated content, such as customer reviews and testimonials.



Brand Awareness Metrics:

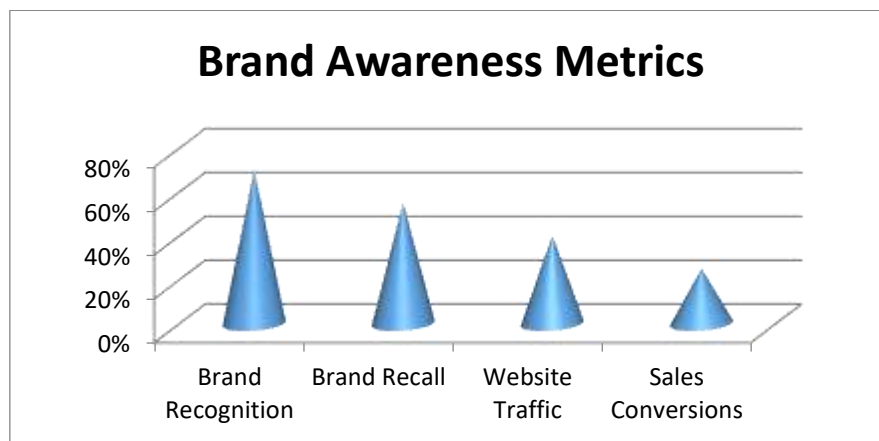
The study examined various metrics to assess the impact of social media on brand awareness:

Brand Recognition: 70% of surveyed consumers recognized the local FMCG brands actively present on social media.

Brand Recall: 55% of consumers could recall specific advertisements or campaigns run by these brands on social media.

Website Traffic: 40% of brands reported an increase in website traffic attributed to social media marketing efforts.

Sales Conversions: 25% of brands observed a direct correlation between social media campaigns and sales conversions.



Inferential Analysis:

Inferential Analysis with Factor Analysis:

This section presents the inferential statistical analysis, including a factor analysis, conducted to examine the relationship between social media usage (represented by underlying factors) and brand awareness among local FMCG brands in Malegaon, Nashik. Data was collected from local potential and existing customer through a survey of 100 consumers and content analysis of 10 brand social media profiles.

1. Factor Analysis and Factor Scores:

As described in the descriptive analysis, a factor analysis was performed, yielding three factors:

- * Factor 1: Engaging Content Creation
- * Factor 2: Direct Customer Interaction
- * Factor 3: Brand Building through Video Content

Factor scores were calculated for each brand on each of these factors. These factor scores represent the relative standing of each brand on the underlying dimensions of social media usage.

Relationship between Factors and Brand Awareness:

To examine the relationship between the identified factors and brand awareness multiple regressions analysis was conducted. The dependent variable was a composite measure of brand awareness, created by combining scores on individual brand awareness indicators like brand recognition, recall, familiarity, perceived quality, purchase consideration.

The multiple regression analysis revealed that Engaging Content Creation (Factor 1) and Direct Customer Interaction (Factor 2) had statistically significant positive relationships with overall brand awareness.

Engaging Content Creation: The regression coefficient for this factor was positive and statistically significant ($\beta = 0.62$, $p < 0.01$). This indicates that brands that score higher on Engaging Content Creation tend to have significantly higher overall brand awareness.

Direct Customer Interaction: The regression coefficient for this factor was also positive and statistically significant ($\beta = 0.45$, $p < 0.05$). This suggests that brands that prioritize Direct Customer Interaction also experience higher overall brand awareness.

Brand Building through Video Content: The regression coefficient for this factor was not statistically significant ($\beta = 0.12$, $p > 0.05$). This implies that, in this model, Brand Building through Video Content did not have a significant independent effect on overall brand awareness, after controlling for the other two factors.

Findings:

Social Media Activities and Brand Awareness:

Descriptive statistics revealed the extent to which local FMCG brands engage in various social media activities and the levels of brand awareness achieved.

Facebook was the most frequently used platform, with 70% of brands posting at least once daily.

Instagram was primarily used for visual content, with 45 % of brands posting images or videos daily.

WhatsApp Business was widely adopted for direct customer communication, with 60% of brands using it for promotions and order inquiries.

2. Factor Analysis (Inferential Analysis)

Factor analysis identified three key underlying dimensions of social media usage:

- * Engaging Content Creation: This factor encompassed activities like frequent posting, use of diverse content formats (images, videos, and stories), running contests, and influencer collaborations.

- * Direct Customer Interaction: This factor represented activities focused on personalized communication and customer service through platforms like WhatsApp Business.

- * Brand Building through Video Content: This factor reflected the creation and sharing of video content, primarily on YouTube.

Engaging Content creation and direct customer interaction had statistically significant positive relationships with overall brand awareness. Brands that actively created engaging content and prioritized direct customer interaction demonstrated higher levels of brand awareness.

Suggestions:

Prioritize Facebook as the primary platform run targeted advertisement to reach a wider local audience. It also can make Facebook groups in the form of (community engagement, discussions, and promotions). The local brands can use Facebook live for product launches, behind-the-scenes content, and question and answer session, creating whatApp Business profile for customer support and quick responses. Consistent posting of product advertisement through whatApp broadcasts for exclusive deals, flash sales, and updates. It is also influential to encourage word of mouth marketing via WhatsApp groups; As far as Instagram is concern Post high-quality product images & reels to showcase usage and benefits. use Instagram Stories & Polls for interactive engagement.

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SCROLLING INTO STRESS – THE IMPACT OF SOCIAL MEDIA ADDICTION ON MENTAL HEALTH

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February 2025

Abstract

Social media addiction has become a pervasive issue, reshaping cognitive processes and affecting mental health, social interactions and emotional well-being. This study examines the compulsive nature of social media that reinforces habitual engagement through dopamine-driven feedback loops. It analyzes the psychological and sociopolitical effects of excessive social media use, emphasizing its impact on mental health such as stress, anxiety, poor sleep quality and inability to manage time. It also links social media addiction to the bandwagon effect, conformity bias, brain rot, information overload, FOMO, polarization, cynicism, doomscrolling, learned helplessness and how these factors result in stress by having a negative impact on mental health. By analyzing these interwoven psychological and sociological factors, this research underscores the need for digital literacy, responsible platform design, and mental health interventions to mitigate the adverse effects of social media addiction.

Keywords: *social media, addiction, stress, mental health*

Introduction

Social media has become an essential component of our everyday lives. But using social media has its own pros and cons. Social media, which provides instant connectivity, entertainment, and information, has become an essential aspect of everyday life in the digital age. Its overuse, however, has sparked worries about how it may affect mental health. Compulsive use of social media sites like Instagram, Facebook, and Twitter is a sign of social media addiction, a behavior that has been connected to higher levels of stress, anxiety, depression, and a decline in wellbeing. Although social media is a tool for self-expression

and communication, its addictive qualities can have detrimental psychological effects on interpersonal relationships, emotional control, and cognitive function.

Objectives

- 1.To understand the causes, effects and the impact of social media addiction on mental health
- 2.To find out the relationship between stress and social media addiction
3. To suggest ways which can be used to minimize social media addiction

Review of Literature

Excessive social media use has been linked to symptoms typically associated with substance use disorders and behavioural addictions. (Zendle & Bowden-Jones, 2019)

Social media can be addictive because it causes the brain to release dopamine, which can result in pleasurable feelings. Dopamine is a neurotransmitter that plays a crucial role in memory motivation, reward pathways, and movement. Thus, the short-term dopamine-driven feedback loops lure users into coming back for more, feeding into a social media addiction. (Fernandez, 2022)

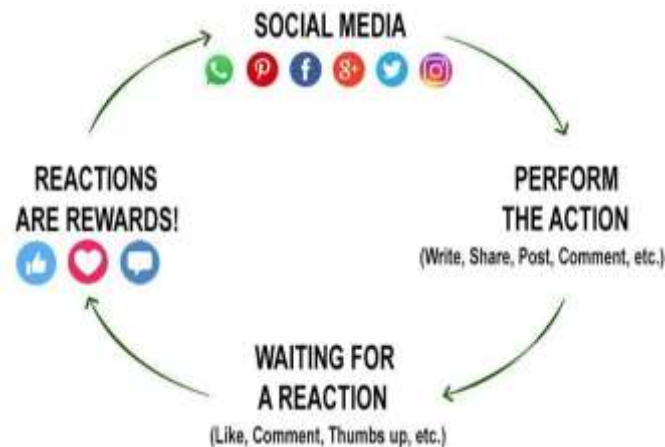


Fig. 0.1. Dopamine-driven Feedback Loops. (D, 2020)

This addiction is driven by a combination of psychological factors, such as low self-esteem and mental health issues, technological mechanisms like infinite scrolling and personalized notifications, and social influences, including peer pressure and exposure to idealized content. (Amirthalingam & Khera, 2024) Social media can result in both positive (eustress) and negative (distress) stress, depending on how it is used. When the impact of social media usage is considered, it is usually assumed that it can lead to negative stress or distress. However, appraising stressors as challenges rather than as hindrances evidently leads to positive perceptions of stress, namely eustress.

(Zielonka et al., 2021)

The bandwagon effect occurs when people, frequently without thorough consideration, choose actions or ideas simply because they observe others doing the same. This phenomenon is intensified in the digital age of social media. Social media platforms make trends and opinions prominent, promote viral trends, and are influenced by popular figures. As a result, social media significantly influences public opinion. (Molina, 2023)

Methodology

This study is based on the impact of social media addiction on mental health, and it uses mixed-method to collect quantitative and qualitative data to deduce conclusions based on day to day lives of the people. And for this purpose, this study employs survey research for collecting primary data. After reviewing relevant literature, a questionnaire was prepared on Google Forms and shared across various age groups through social media platforms which was then answered by the respondents. This research also uses secondary sources of data from various websites, journals and articles.

Hypothesis

H1- Social media can lead to eustress.

H2- Social media can lead to distress.

H3- Addiction to social media can result in low self-esteem and inferiority complex.

H4- Excessive scrolling through social media before sleeping can result in disrupted sleep cycle and insomnia.

H5- Geopolitical tensions and ongoing conflicts as portrayed on social media fuels doomscrolling which can lead to negativity bias, chronic stress and pessimism.

Research Findings and Analysis

1. Sample Population and Age Group

The sample population in the survey were individuals across all age groups. 200 respondents participated in the survey out of which 77 were males and 123 were females. 13 (6.5%) participants were under the age group of 18 yrs. 167 (83.5%) belonged to the age group of 18-25 yrs. 10 (5%) respondents belonged to the age group of 26-35 yrs. 3 (1.5%) of the participants were of the age group of 36-45 yrs and 7 (3.5%) of them were of the age of 46 and above.

2. Social Media usage habits and addiction

According to this survey, it can be seen that most of the people use social media for 1-3 hours or more than that as shown in Fig.2.1.

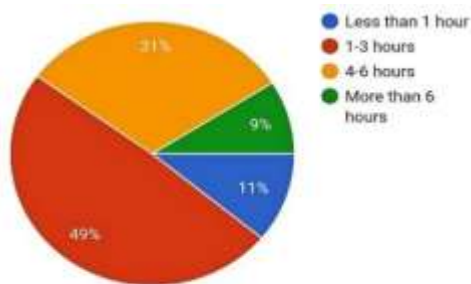


Fig.2.1. Hours spent on social media on a daily basis

Social media addiction can be determined by the frequency of checking social media notifications. Fig. 2.2. illustrates how frequently people check their notifications in a day.

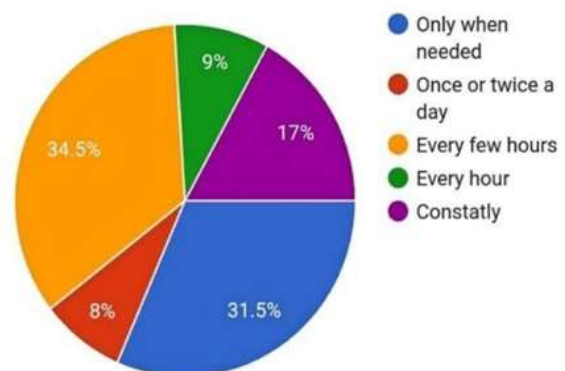


Fig.2.2. Frequency of checking social media notifications

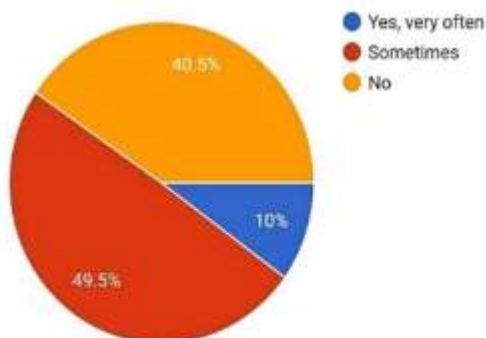


Fig.2.3. Anxiousness in the absence of social media

Social media addiction can also be determined by the level of anxiousness people feel when they cannot access social media. 10% of the population feel anxious very often when they cannot access social media followed by a majority of 49.5% of the population who feel anxious sometimes. According to the data collected, it can be seen that majority of the people are addicted to social media.

3. Social media addiction due to dopamine-driven feedback loops

A sizable number of 40% of the participants concur that they feel happy and connected after using social media for a long time. 5.5% also feel motivated. However, some individuals may also face distress after prolonged social media use as shown in Fig. 3.1.

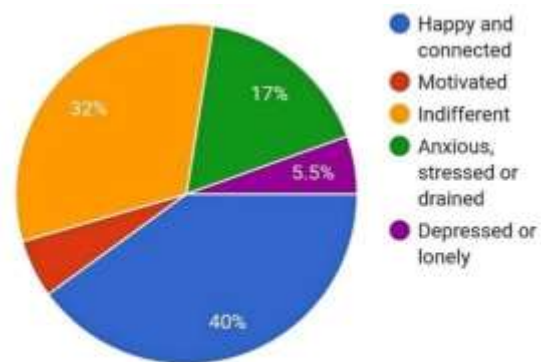


Fig.3.1. Emotional state after prolonged social media usage

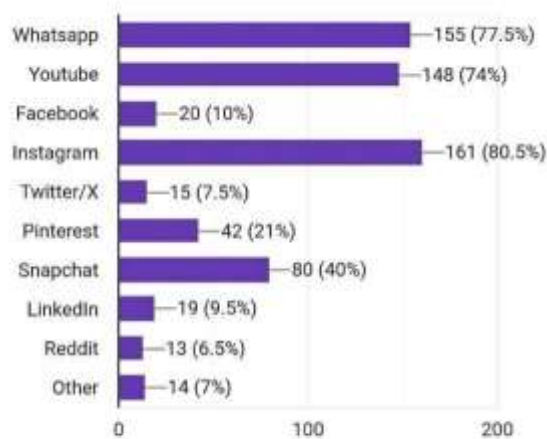


Fig.3.2. Most used social media platforms

The most commonly used social media platforms with the number of users are shown in Fig.3.2. Due to the dopamine-driven feedback loops that lead to social media addiction, 49.5% of the participants find it difficult to reduce their social media usage whereas 50.5% of the participants do not find it difficult to do so.

4. The Bandwagon effect, Social Comparison and Conformity Bias on Social Media

The bandwagon effect can also be seen in social media as 28% of the population agree that they often feel like doing something, adopting some style, attitude or using some product after watching influencers on social media. 41.5% of them also feel as such sometimes.

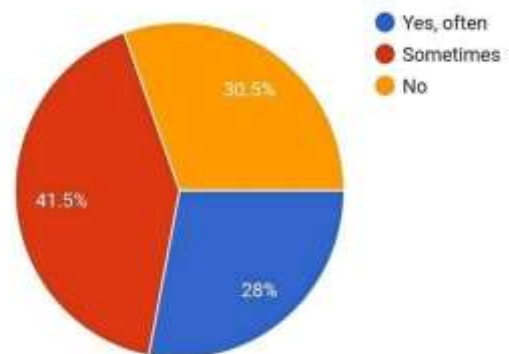


Fig.4.1. Influencers' impact on consumers' choices

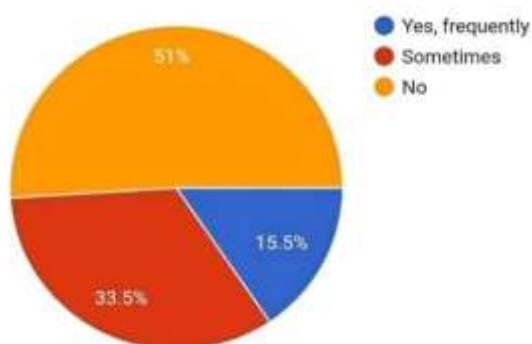


Fig.4.2. Social comparison on social media

As shown in Fig. 4.2, social media also leads to social comparison as viewers compare their lives, appearances or achievements to others based on what they post.

People also feel a pressure to conform on social media. It leads to a conformity bias in the consumers. Fig. 4.3. represents how people often feel like conforming to popular views or public opinions on social media. Fig. 4.4. shows how people change their opinions based on public opinions. According to Fig. 4.5, it can be seen that individuals also feel inclined to portray a certain image of themselves on social media. Some people also feel that their self-worth is influenced by the number of likes, comments, or shares on their posts as shown in Fig. 4.6.

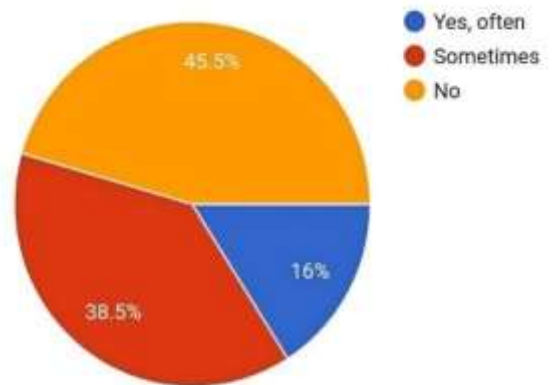


Fig.4.3. Conformity to popular views/ public opinions on social media

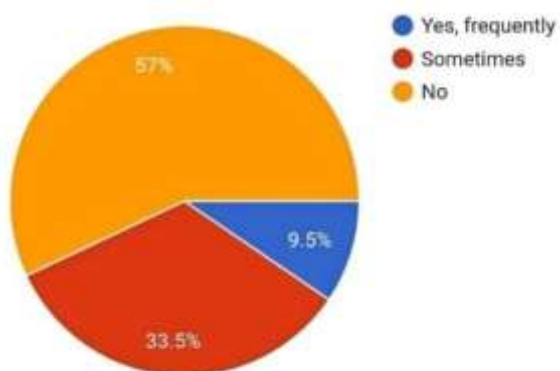


Fig.4.4. Change in personal opinion due to public opinion

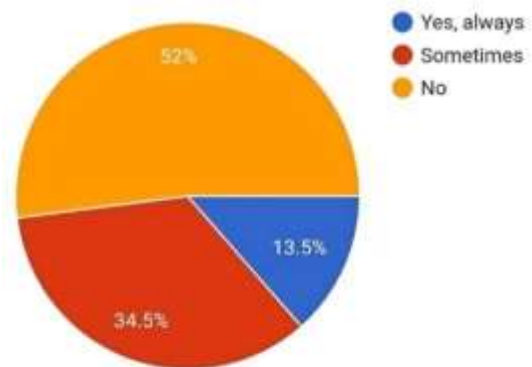


Fig.4.5. Inclination to portray a certain image on social media

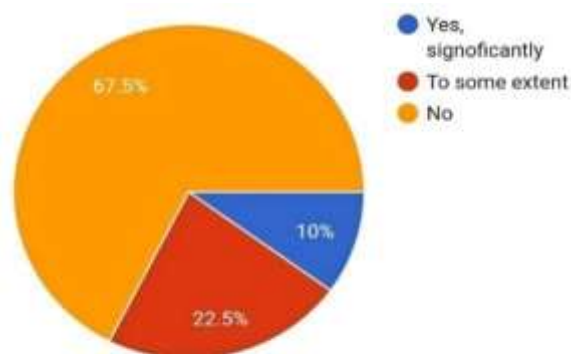


Fig.4.6. Measurement of self-worth by the number of likes, comments or shares on posts

5. Social Media Addiction leads to poor sleep quality

As shown in Fig.5.1, it can be observed that 47% people use social media throughout the day. 18% use in the evening and 16% use before going to bed. 32% of them feel that social media significantly leads to poor sleep quality and 45% also feel that it has negative effects on sleep quality to some extent.

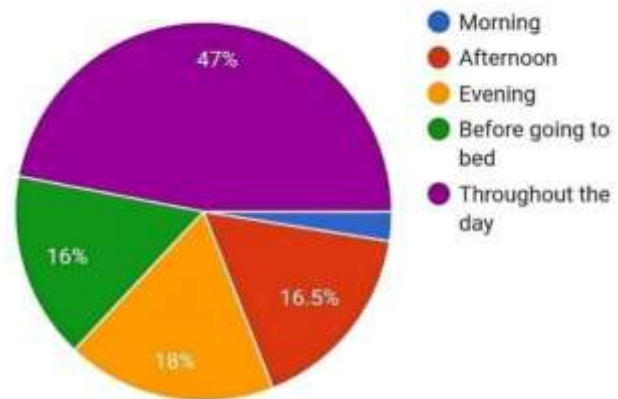


Fig.5.1. Social media usage time

6. Social Media addiction can lead to Brain rot, Information overload, ADHD and FoMO

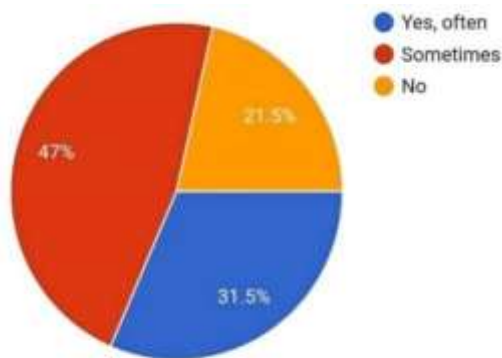


Fig.6.1. Frequency of checking the accuracy of information

Consumers on social media are exposed to a lot of information at once, hence they usually consume it without checking the credibility of the content. Fig. 6.1. indicates how often people check the accuracy of the information provided on social media. It also leads to

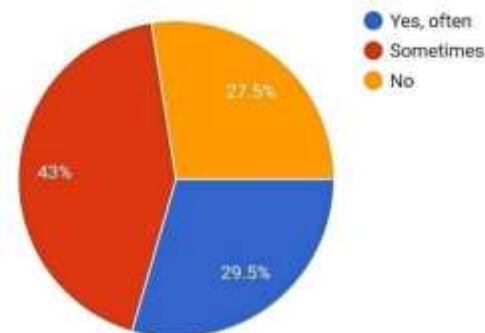


Fig.6.2. Difficulty in focusing on long-form content

information overload.

Due to the fast-paced content on social media, some users find it difficult to focus on long-form content such as books, articles, newspapers, etc. as shown in Fig. 6.2. Conversely, people who suffer from problematic social media use are at increased risk to develop symptoms of ADHD such as inattention. (Farchakh et.al, 2022)

Social media also leads to the Fear of Missing Out (FoMO). Some individuals feel left out when they see others enjoying events or experiences on social media as shown in Fig.6.3 . Most people also feel like they might miss some information or might be unaware of the recent events if they don't keep themselves up to date on social media. It can be seen in Fig.6.4.

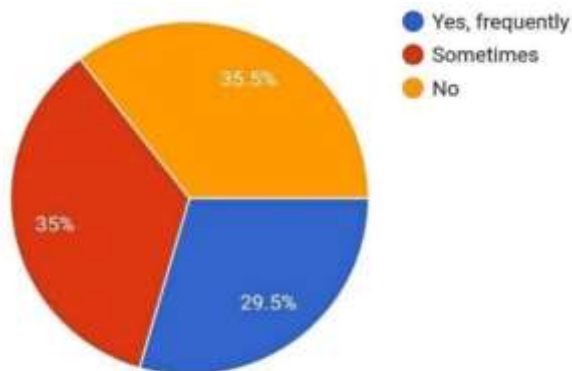


Fig.6.3. Fear of missing out events or experiences

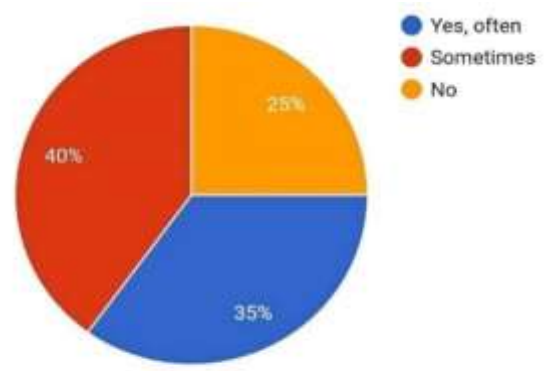


Fig.6.4. Fear of missing out information or updates

7. Polarization or cynicism due to social media

15% of the participants agree that social media reinforces their existing beliefs rather than exposing them to diverse perspectives. 48% of the participants also agree to some extent. This can also lead to group polarization. Furthermore, 12% of the participants agree that they often engage in arguments or discussions online that make them feel more polarized or aggressive towards opposing views. 30% also agree that they do engage in such arguments sometimes.

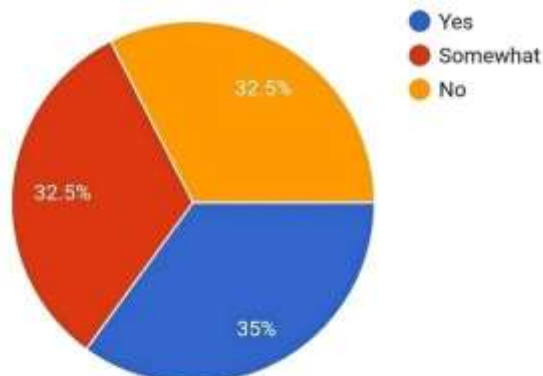


Fig.7.1. Feeling of cynicism or distrustfulness

Fig.7.1. represents that viewers also feel cynical or distrustful of the society, political systems and other institutions due to the content they see on social media.

8. Doomscrolling, Negativity Bias and Learned Helplessness

Social media also leads to doomscrolling. Fig.8.1. shows how often people find themselves endlessly scrolling through negative or distressing news. 28% participants believe that social media promotes negative content more than positive content. 46% also believe that it promotes negativity to some extent. This can often lead to negativity bias in the consumers. As a result, it can give rise to a feeling of 'Learned Helplessness' wherein individuals feel powerless to change the situation. Fig. 8.2. represents how often people feel hopeless or anxious due to their exposure to negative news on social media.

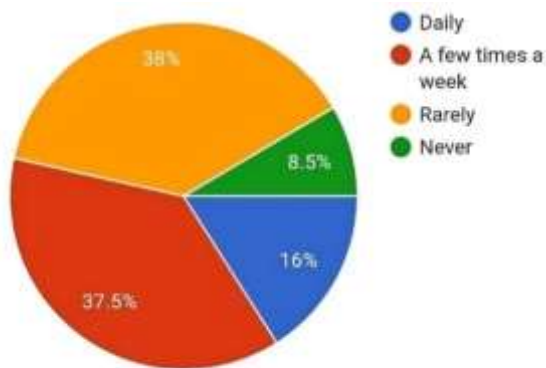


Fig 8.1. Frequency of scrolling through negative or distressing news

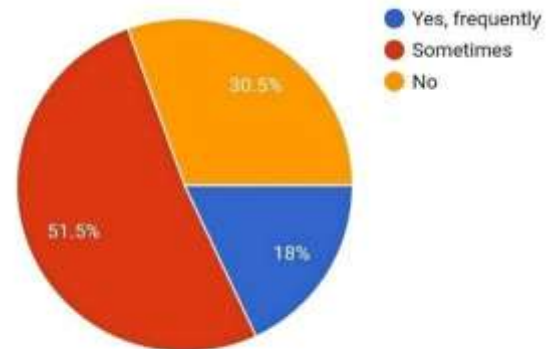


Fig.8.2. Learned Helplessness due to social media

9. Poor time management and less productivity

Most of the people spend a lot of time on social media. Fig. 9.1. shows how often people waste their time on social media. This can result in poor time management and less productivity. Fig.9.2 shows how often people neglect their responsibilities (work, study or social life) because of excessive social media use. Individuals face difficulty in balancing their tasks which often results in anxiety and stress.

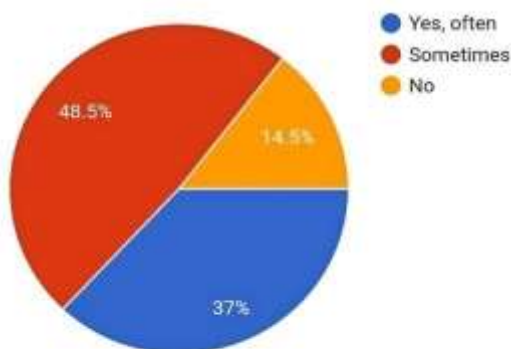


Fig.9.1. Frequency of wasting time on social media

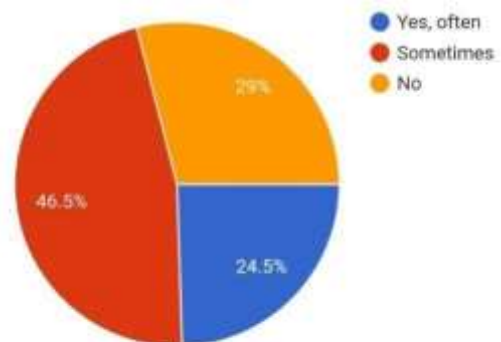


Fig.9.2. Frequency of neglecting responsibilities due to social media

10. Social media addiction and coping mechanisms

According to this study, 44% of the respondents have taken steps to reduce their screen time by deleting or avoiding social media apps for mental health reasons and it helped. 34% have also tried but they returned to it quickly whereas 22% did not try to do so. Fig. 10.1 shows the reasons why most of the people use social media and Fig.10.2. shows different activities that people engage in to relax instead of using social media.

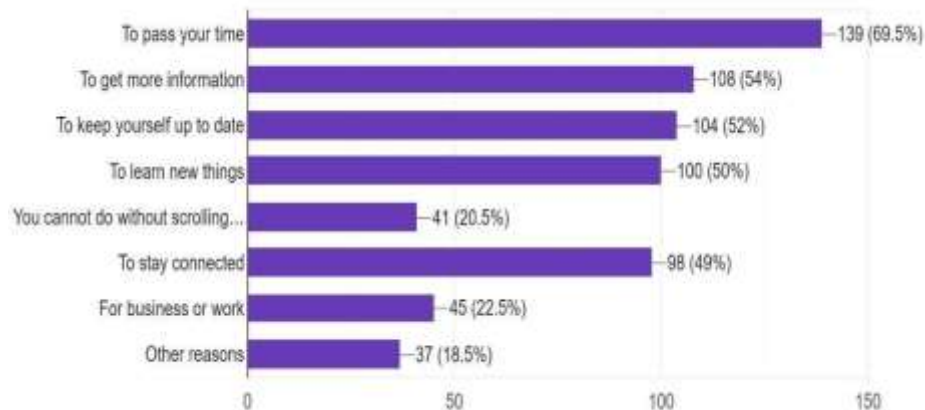


Fig.10.1. Reasons for using social media

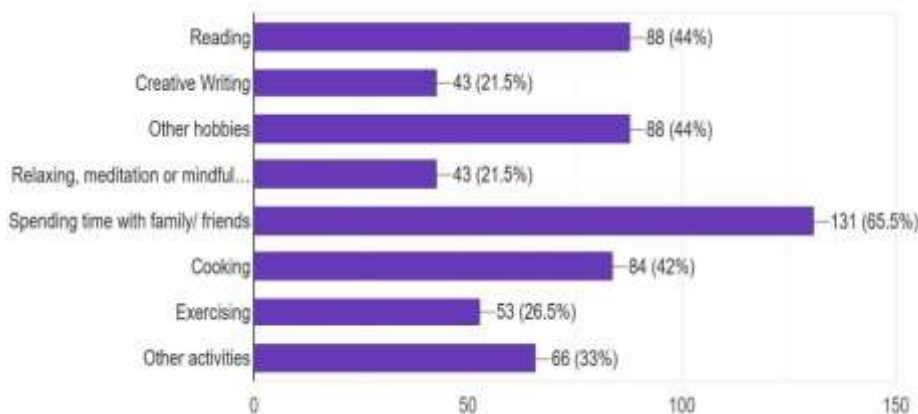


Fig.10.2. Alternatives to social media scrolling

Testing of Hypothesis

H1- Social media can contribute to eustress by encouraging personality development. People get inspired to set and accomplish objectives when they encounter success stories or motivational content. By involving users in lessons, educational conversations, tutorials or industry trends that might foster intellectual development, it promotes learning. Individuals also get motivated to learn something new. By bringing friends and family together and facilitating professional networking, social media improves interpersonal relationships and fosters a feeling of purpose and belongingness. Social media also boosts creativity. Platforms like Instagram, Facebook, YouTube and Pinterest encourage artistic expression and innovation.

H2- Social media use that becomes excessive, overwhelming, unhealthy, harmful, or anxiety inducing causes distress. Information overload can cause mental exhaustion by making it difficult to process information due to continuous exposure to news, messages, and updates. In an attempt to "hop on the bandwagon", some individuals may feel frustrated to keep up with the latest trends of the society. The bandwagon effect and fear of missing out (FOMO) leads to excessive use of social media. Users feel excluded or under pressure to stay up to date with social events and trends that can create anxiety.

Mental health is also impacted by exposure to online hate speech, cyberbullying, trolling, or criticism. Victims may experience anxiety, social withdrawal, and distress.

H3- Continuous exposure to influencers who depict an unrealistic or opulent lifestyle can create a sense of low self-esteem and comparison in the viewers. Seeing edited depictions of other people's lives can make one feel inadequate, envious, or self-conscious. Constant exposure to curated, idealized lifestyles can lead to dissatisfaction with one's own life. It can also result in an inferiority complex among some individuals.

H4- Social media addiction can lead to poor sleep quality primarily due to the exposure to blue light from screens close to bedtime. It disrupts the circadian rhythm by inhibiting melatonin production, and by creating a mentally stimulating environment with notifications and engaging content that can keep the user awake and alert when they should be winding down. This can result in delayed sleep onset, difficulty falling asleep, and disrupted sleep throughout the night by reducing the overall sleep duration. (Khan, 2023) Disrupted sleep cycle can result in insomnia. Research indicates that it also reduces the amount of REM sleep needed for proper rest. Emotional content can trigger cortisol release, further delaying relaxation.

Negative news, online arguments, or comparing oneself to others can cause stress and rumination, making it harder to fall asleep. FOMO can also make people stay online longer than intended, delaying sleep. Sleep deprivation can also lead to fatigue, irritability, and daytime dysfunction.

H5- Echo chambers and polarization deepen ideological divides and intolerance toward opposing perspectives heightened by reinforcement of in-group ideologies thereby promoting cynicism. Geopolitical tensions and ongoing conflicts as portrayed on social media lead to negativity bias and doomscrolling, which contributes to chronic stress and pessimism by reinforcing negative worldviews.

Conclusion

While social media can be a source of entertainment and information, excessive usage can lead to chronic stress, anxiety and can be detrimental to mental health. Practicing mindful consumption and setting boundaries can help in maintaining a healthy balance and improving overall well-being.

Recommendations & Suggestions

- Social media usage can be controlled to manage time by setting time limits on social media consumption and apps to track and control usage.
- Doomscrolling can be reduced by curating our feed with positive or solution-focused content and unfollowing accounts that cause stress or negativity to balance our exposure with uplifting or neutral content.
- Addiction can be curbed by doing digital detox to take breaks from social media and reconnect with real life. Prioritizing real-life interactions and engaging in offline activities/ hobbies can be used as alternatives.
- To improve sleep quality, it is advisable to avoid screen time and scrolling through social media at least 30-60 minutes before bedtime. One can also use 'Night Mode' to reduce blue light emission and 'Do not Disturb' mode to avoid late-night notifications to minimize distractions.
- To avoid social comparison and low self-esteem, we should accept ourselves as we are and should not try to imitate others on social media.
- Social media developers should inculcate user friendly platform designs. To counter addiction, we need to promote media literacy, encourage mindful use, demand platform accountability, and foster digital citizenship.

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AI AND SOCIAL MEDIA: ETHICAL INNOVATION FOR A DIGITAL SOCIETY**Dr. Dhiraj Raghunath Ovhal**

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Abstract

Artificial Intelligence (AI) has significantly transformed social media, enhancing user experiences through personalized content, automated moderation, and targeted advertising. Despite these advancements, the rapid growth of AI in social media raises ethical concerns regarding privacy, misinformation, algorithmic bias, and data security. This study explores the ethical challenges associated with AI in social media, emphasizing the importance of responsible innovation to safeguard user rights and ensure transparency. By analyzing case studies from leading platforms such as Facebook, Twitter, and TikTok, the research provides insights into the real-world ethical implications of AI technology. Using a qualitative research approach, the study explores different AI-driven applications and the ethical challenges. The results emphasize the importance of regulatory frameworks, corporate responsibility, and ethical AI standards in maintaining a fair and secure online environment. Although AI enhances user interaction and platform efficiency, its unregulated use can give rise to ethical issues that weaken public confidence and societal harmony. In conclusion, the study stresses the need for a balanced strategy, ensuring that AI developments in social media are guided by ethical principles to establish a reliable and responsible digital landscape.

Keywords:- Artificial Intelligence, Social Media, Ethical responsibility, Digital environment,

Introduction

AI has revolutionized social media, offering significant benefits in content personalization, security, and user engagement. It has transformed the landscape of social media, significantly enhancing how users interact, consume content, and engage with digital communities. AI-driven innovations have enabled social media platforms to deliver highly personalized user experiences, automate moderation processes, and optimize content distribution. From machine learning algorithms that curate news feeds to natural language processing (NLP) models that detect harmful content, AI is a driving force in shaping social media ecosystems. However, as AI adoption accelerates, critical ethical concerns have emerged, raising questions about data privacy, misinformation, algorithmic biases, and corporate responsibility. One of the primary ethical concerns in AI-powered social media is data privacy. Platforms collect vast amounts of user data to train AI models, raising concerns about surveillance, consent, and data misuse. Many companies face criticism for lacking transparency regarding data collection practices, leading to increased regulatory scrutiny. Furthermore, algorithmic biases in AI models can result in discriminatory practices, amplifying social inequalities. These biases arise from biased training data or flawed model architectures, which can perpetuate stereotypes and reinforce societal prejudices. Misinformation is another pressing issue linked to AI in social media. Automated recommendation systems often prioritize engagement-driven content, which may include false or misleading information. The spread of misinformation can have serious real-world consequences, including public health risks, political manipulation, and social polarization. AI-driven deepfake technology further exacerbates this issue, enabling the creation of hyper-realistic fake content that is difficult to detect. The ethical dilemmas associated with AI in social media call for a balanced approach that prioritizes both technological advancement and ethical responsibility. Governments, tech companies, and regulatory bodies must work together to establish comprehensive policies that protect

user rights while allowing AI to drive innovation. Legislative measures such as the European Union's General Data Protection Regulation (GDPR) and India's Personal Data Protection Bill (PDPB) aim to safeguard user information through strict data privacy laws. Similarly, social media platforms are increasingly being held accountable for their role in content moderation, misinformation control, and ethical AI deployment. However, despite these efforts, many challenges remain, including enforcing global AI regulations and ensuring transparency in algorithmic decision-making.

Research Design/Methodology :- This study adopts a qualitative research methodology, including a literature review and case study analysis. The literature review examines previous studies on AI ethics in social media, regulatory policies, and AI-driven innovations. Case studies of social media companies provide insights into real-world ethical challenges. The study relies on secondary data sources such as academic journals, industry reports, and ethical guidelines. The analysis identifies recurring ethical concerns and best practices for responsible AI implementation.

Objectives:-

This paper explores:

1. To explore how AI is utilized in social media platforms.
2. To identify key ethical concerns arising from AI-driven social media innovations.
3. To evaluate existing ethical frameworks and regulatory approaches.
4. To propose recommendations for responsible AI implementation in social media.

Meaning and Definition of AI and Social Media:-

Artificial Intelligence (AI): AI refers to the simulation of human intelligence in machines that are designed to think, learn, and adapt. It encompasses various technologies such as machine learning, deep learning, natural language processing, and neural networks.

Social Media: Social media is a digital communication platform that enables users to create, share, and interact with content and connect with other users worldwide. It includes various platforms such as Facebook, Twitter, Instagram, TikTok, and LinkedIn, so on.

1. AI is utilized in social media platforms

AI plays a crucial role in transforming social media platforms by enhancing user experience, streamlining operations, and ensuring platform security. The major areas where AI is utilized in social media include:

1. **Content Recommendation:** AI-powered algorithms analyze user preferences, interactions, and browsing history to personalize content feeds. Platforms like Facebook, Instagram, and TikTok use machine learning to recommend posts, videos, and advertisements that align with user interests.
2. **Automated Content Moderation:** AI is employed to detect and remove harmful content, including hate speech, misinformation, and inappropriate material. Natural Language Processing (NLP) and image recognition technologies help identify offensive content in real time, reducing the need for manual moderation.
3. **Chatbots and Virtual Assistants:** Many social media platforms and businesses leverage AI-driven chatbots to improve customer service. AI chatbots can handle user inquiries, provide automated responses, and enhance engagement by offering personalized solutions.
4. **Fake News and Misinformation Detection:** AI models are designed to identify and combat misinformation by analyzing news content, checking credibility sources, and flagging

potentially misleading information. Twitter and Facebook have implemented AI tools to detect fake news and limit its spread.

5. **Sentiment Analysis:** AI-driven sentiment analysis tools assess user comments and feedback to gauge public opinion on brands, products, or social issues. This data helps businesses and marketers refine their strategies and engage effectively with their audience.
6. **Targeted Advertising:** AI enables precise audience targeting by analyzing user demographics, behavior, and interests. Advertisers on platforms like Google Ads and Facebook Ads utilize AI to optimize ad campaigns, maximize reach, and improve return on investment (ROI).
7. **Deepfake and Synthetic Media Detection:** AI is also used to detect and counteract deepfake videos and synthetic media that could be used for malicious purposes. Advanced AI tools help verify content authenticity and prevent the spread of manipulated media.

2. Key Ethical Concerns Arising from AI-Driven Social Media Innovations

The rapid expansion of AI-driven social media technologies has introduced numerous ethical concerns that affect users, society, and platform accountability. Key ethical issues include:

1. **Data Privacy Violations:** AI algorithms collect and analyze vast amounts of user data, often without explicit consent. This raises concerns about data security, unauthorized tracking, and potential misuse by corporations and third parties.
2. **Algorithmic Bias and Discrimination:** AI models may inherit biases from training data, leading to unfair treatment or exclusion of certain groups. For example, biased content recommendation systems can reinforce stereotypes and discrimination.
3. **Misinformation and Fake News:** AI-driven content recommendation algorithms often prioritize engagement over accuracy, inadvertently amplifying false or misleading information. This contributes to political manipulation, public health crises, and social polarization.
4. **Lack of Transparency and Accountability:** Many AI systems operate as “black boxes,” making it difficult for users and regulators to understand how decisions are made. This lack of transparency limits accountability when harmful or biased outcomes occur.
5. **Manipulative Targeted Advertising:** AI enables hyper-personalized advertising, sometimes exploiting users' behavioral data to manipulate their choices. This raises ethical concerns about digital autonomy and consumer protection.
6. **Mental Health and Well-being:** Social media AI algorithms optimize for engagement, often leading to addictive behaviors, cyberbullying, and negative mental health outcomes, especially among younger users.

3. To evaluate existing ethical frameworks and regulatory approaches.

India has taken significant steps toward regulating AI and ensuring ethical social media practices. The **Personal Data Protection Bill (PDPB)** aims to safeguard user data by enforcing consent-based data processing and restricting cross-border data transfers. Additionally, the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**, require social media platforms to remove harmful content and appoint grievance officers for accountability.

The **National Strategy for AI (NSAI)**, introduced by NITI Aayog, promotes ethical AI development with principles of transparency and inclusiveness. However, enforcement remains a challenge due to limited oversight mechanisms.

While these frameworks provide a foundation, India needs a comprehensive AI-specific regulatory framework that addresses algorithmic biases, misinformation, and accountability. Strengthening

enforcement, fostering AI ethics education, and enhancing cooperation between government, industry, and academia will be crucial for responsible AI governance in India.

4. To propose recommendations for responsible AI implementation in social media

To ensure responsible AI deployment in social media, India must adopt a multi-stakeholder approach:

1. **Strengthening Data Protection Laws:** The government should expedite the implementation of the **Digital Personal Data Protection Act** to safeguard user privacy and regulate AI-driven data processing.
2. **Transparent AI Algorithms:** Social media platforms should be mandated to disclose AI decision-making processes and allow third-party audits to minimize bias and discrimination.
3. **Stronger AI Ethics Committees:** A regulatory body should oversee AI applications in social media, ensuring compliance with ethical guidelines and preventing misinformation spread.
4. **Public Awareness Campaigns:** Educating users on AI risks and digital literacy can empower them to identify misinformation and unethical AI practices.
5. **Fair and Inclusive AI Models:** AI training datasets should be diversified to minimize bias and ensure equal representation across communities.
6. **Collaboration Between Government and Tech Companies:** Policymakers and industry leaders must collaborate to establish AI governance standards that prioritize fairness, accountability, and security.

These measures are helping India build a responsible AI ecosystem that fosters ethical innovation while protecting users from AI-related risks in social media.

Conclusion

The integration of AI in social media has undeniably transformed digital interactions, providing personalized experiences, improved content moderation, and efficient user engagement. However, these advancements also raise ethical concerns, including privacy risks, algorithmic biases, misinformation spread, and accountability issues. The Indian regulatory landscape, including the Digital Personal Data Protection Act and IT Rules 2021, lays the groundwork for ethical AI governance. A balanced approach that fosters innovation while safeguarding user rights and societal well-being will be essential for a responsible digital future. India has introduced AI regulations and ethical social media practices through the Personal Data Protection Bill, ensuring user data protection, and the 2021 IT Rules, mandating content moderation and grievance officers for accountability.

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GLOCAL LEARNING: SOCIAL MEDIA AS AN EDUCATIONAL ENABLER**Ms. Saima Ansari***Assistant Professor, Dept. of Mathematics, Maharashtra College of Arts, Science & Commerce, Mumbai – 8***Dr. Bushra Farouqui***Associate Professor, Dept. of Accountancy, Maharashtra College of Arts, Science & Commerce, Mumbai – 8*

Abstract

Social media platforms, traditionally associated with entertainment and social networking, are increasingly being recognized for their potential as valuable educational tools. The emergence of social networking for which users began making a beeline and in which they started building virtual communities across the globe, generating their content, holding dialogue with all netizens, known or unknown, writing blogs (cyberspace version of the age-old diary-writing), editing wikis, creating folksonomies (presenting various sites on a subject linked by common tags), sharing and commenting on visuals, photos and videos and using mashup applications.

The topic “Social Media as an Educational Enabler” was undertaken to study the relevance and importance of social media which is an in-thing among the educational sector, in an era, where the Glocal is the word to define a common platform for the people around the world to share and exchange their beliefs, culture, traditions, knowledge, views, etc. The study concludes that our educational system needs change and social media should be widely utilized for educational purposes. It is mainly used to make presentations followed by assignment updates, better research, and connectivity.

Keywords: *Educators, Glocal, Innovation, Social media, Social learning,*

Introduction:

The world is becoming ‘glocal’ from global and is squeezing its economic, social and political boundaries thus giving it a common platform for development. The convergence of the media has expanded the usage of internet that gave birth to social media. Social media, a concept that has given people a common platform for sharing their news, views and opinions regarding the happenings around them. Not only this, social media is also being used by the advertisers and companies for their promotions, professionals for searching and recruiting, students for internships, amateurs for professional work, parents and educators as social learning tools, etc.

“Social Learning” tools is a phrase that reflects main goal of using social networking functionality in the education setting. One simple way to define a social networking platform might be, “a tool that lets students, parents, and educators collaborate online”. The innovative use of social media doesn't stop here; the students also use it for making blogs, making professional links, announcing and making class announcements, sharing information with students, parents and educators, etc.

Use of social media as an education tool:

Social media is not going away: Social media is the latest in thing that is being used in the innovative way for education purpose. Students should be taught to use this tool in a better way in the educational classes that just being used for messaging or texting rather they should learn to use media for good.

When kids are engaged, they learn better: Students just don't learn while writing on a piece of paper but it is also important to involve them into more practical work like blogging where they just not write for the teacher but for themselves to enhance their skills. When they are engaged better, they tend to learn more in practical classes by implementing their theory rules.

Safe social media tools are available: Kidblog.org is one of many free tools that allow teachers to control an online environment while still benefiting from social media. The teachers or the mentors should educate the students to how to use the social media for better purposes.

Replace online procrastination by social education: It is generally seen that social media these days is being used for making their individuality felt on the virtual world. Therefore, it is important for students and youth to understand that this entertainment mode can also be used for creating social awareness and connecting them to more professional and knowledgeable world.

Social Media encourages collaboration instead of cliques: Traditional education tactics often involve teacher-given lectures, students with their eyes on their own papers, and not talking to their neighbour. Social media as a teaching tool has a natural collaborative element. Students critique and comment on each other's assignments work in teams to create content and can easily access each other and the teacher with questions or to start a discussion.

Cell phones aren't the enemy: The latest stage of ICT has made us so technologically dependant that the cell phones has become the necessity these days. The cell phone is a parent-sponsored, parent-funded communication channel and schools need to wrap their mind around it to reach and engage the kids. Rather the students should be taught to make the best utilization of the technology towards their education as it can provide information available anywhere anytime.

Objectives of the Study:

1. To evaluate the relevance of the social media
2. To study social media as an educational tool
3. Understanding of social media by the teachers
4. The need to include innovative teaching methods in the universities/ colleges

Research Methodology:

The secondary data was collected through survey among the youth within the age group of 18-25 years to understand their perception of using the social media as an educational tool. For this, questionnaire was used as a tool and was filled by 200 respondents which were picked up randomly.

Result Analysis:

The study on "Social Media as an Educational Enabler" was conducted with a sample size of 200 respondents, comprising students, educators, and academic professionals from diverse backgrounds. The data collected focused on the role of social media in education, its advantages, and the challenges faced while integrating it into the learning process.

Usage Patterns

The results indicate that social media is widely used as an educational tool, with the following primary purposes:

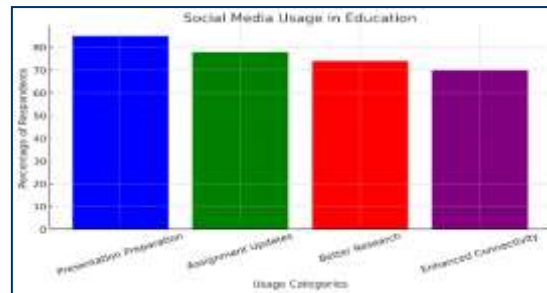
Demographic Analysis

Table No 1: Demographic Analysis

Age Group	Percentage (%)	Respondents (Out of 200)
Below 18	10	20
18-25	40	80
26-35	30	60
36-50	15	30
Above 50	5	10

Table & Diagram No 2: Usage Patterns

Usage Purpose	Percentage (%)	Respondents (Out of 200)
Presentation Preparation	85	170
Assignment Updates	78	156
Better Research	74	148
Enhanced Connectivity	70	140



Effectiveness and Challenges

Table & Diagram No 3: Effectiveness and Challenges

Factor	Percentage (%)	Respondents (Out of 200)
Improved Engagement	82	164
Accessibility & Convenience	76	152
Distraction Concerns	65	130
Misinformation	58	116

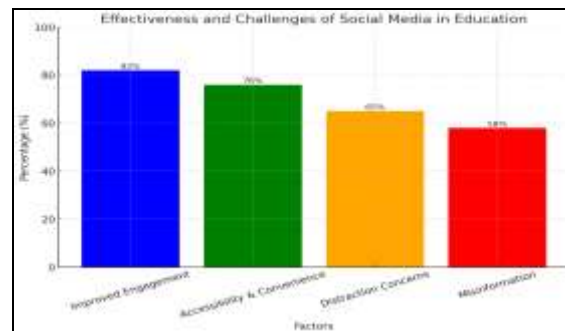


Table No 4: Role in the Education Sector

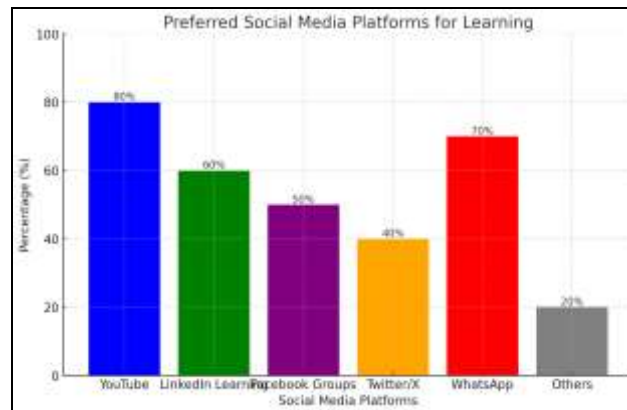
Role in the Education Sector	Percentage (%)	Respondents (Out of 200)
Student	55	110
Teacher	25	50
Researcher	10	20
Administrator	7	14
Other	3	6

Table No 5: Social Media Usage Frequency

Frequency	Percentage (%)	Respondents (Out of 200)
Daily	50	100
Weekly	30	60
Monthly	10	20
Rarely	7	14
Never	3	6

Table & Graph No 6: Preferred Social Media Platforms for Learning

Platform	Percentage (%)	Respondents (Out of 200)
YouTube	80	160
LinkedIn Learning	60	120
Facebook Groups	50	100
Twitter/X	40	80
WhatsApp	70	140
Others	20	40

**Table No 7: Effectiveness and Challenges Analysis**

Response to Engagement	Percentage (%)	Respondents (Out of 200)
Strongly Agree	40	80
Agree	42	84
Neutral	10	20
Disagree	5	10
Strongly Disagree	3	6

Table No 8: Challenges faced

Challenges Faced	Percentage (%)	Respondents (Out of 200)
Distractions	65	130
Misinformation	58	116
Lack of credibility	50	100
Privacy concerns	45	90
Other	10	20

Table No 9: Integration into Formal Education

Response	Percentage (%)	Respondents (Out of 200)
Yes	70	140
No	15	30
Unsure	15	30

Table No 10: Suggestions for Better Utilization of Social Media in Education

Suggestion	Percentage (%)	Respondents (Out of 200)
Training for educators	60	120
Creating structured learning modules	75	150
Implementing content verification methods	65	130
Other	15	30

Conclusion:

The analysis reveals that social media is widely used as an educational tool, with **presentation preparation (85%)** and **assignment updates (78%)** being the most common activities. The **majority of respondents (82%)** believe that social media enhances student engagement, while **65% report distractions** as a significant challenge. **70% support integrating social media into formal education**, emphasizing the need for structured learning modules and content verification. The findings highlight the growing relevance of social media in education and the importance of addressing its challenges to maximize its benefits.

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SOCIAL MEDIA INNOVATIONS: A KEY DRIVER OF DIGITAL TRANSFORMATION

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Abstract

In a rapidly developing digital environment, social media innovation has ways for individuals and brands to communicate with each other and deal with each other. This article explores the latest trends and technologies that will reshape the social media environment, including integration of augmented reality (AR), virtual reality (VR) and artificial intelligence (AI). These innovations not only improve the user experience, but also provide brands with new ways to connect with their audience.

The main goal of this study is to understand how these advances will change the social media landscape, and the opportunities and challenges they present. We also examine the impact of these innovations on future social media practices and possible impacts on social and business contexts. Through this exploration, we want to shed light on the continuous change in social media and its role in the design of communication in the modern world.

Key words: Artificial intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), Content Creation, User Engagement, Influencer Marketing

Introduction

The term "social media innovation" describes the ongoing creation and advancement of social media platforms, features, and technologies that improve user interaction, communication, and content sharing. This study examines how social media innovations are influencing user behaviour, marketing tactics, and technology developments, as well as the new trends that are causing these shifts.

Social media innovations are revolutionizing the way we connect, share, and interact in the digital landscape. With the rapid advancement of technology, platforms are continuously evolving to meet the changing needs of users. These innovations encompass a wide range of features, from enhanced video capabilities and immersive augmented reality experiences to sophisticated algorithms that personalize content feeds.

A notable trend is the creation of interactive content such as research, testing, and live Q&A meetings that promote active participation and commitment among users.

Furthermore, the integration of artificial intelligence allows for more intelligent content and targeted ads, allowing brands to achieve their audiences more effectively. Social media has also embraced the

concept of social trade. This means that a seamless shopping experience will join the platform and further fill the gap between social interaction and e-commerce.

When you navigate in this dynamic environment, social media innovations continue to form communication habits and influence the way you build relationships online. Not only does this improve the user experience, it also creates new opportunities for businesses and creators to combine audiences in sensible ways, and make social media a constantly developed situation of creativity and connection. Some of the innovations from 1997 to 2011.

As we know today, as we know today, it has developed over time, but its roots can be reverted back to the late 90s. Here is the short timeline of the most important developments in the history of social media:

- 1) 1997: The first recognizable social media website, Sixth Degrees, has begun. Users were able to create profiles and connect with friends.
- 2) 2002: Friendsters was introduced to allow users to connect with friends and establish new connections. It quickly gained popularity.
- 3) 2003: LinkedIn has launched, focusing on professional networks.
- 4) 2004: Facebook was originally created for students by Mark Zuckerberg and his university residents, but this was soon expanded to the public.
- 5) 2006: Twitter has been launched and there was a new way to share short updates and connections with others in real time.
- 6) 2010: Instagram started and focused on photo approval and visual content.
- 7) 2011: Snapchat was introduced, allowing users to send photos and videos that disappear after consideration.

Since then, social media has grown and continues to grow, with new platforms and features being introduced regularly. Today, social media plays an important role in global communication, marketing and information exchange.

The new trends in social media

1. Development of social media platforms from text-based on multimedia platforms: Text and status updates were the focus of early social media websites such as Facebook and Twitter. Multimedia components such as photography, video and live streaming have been gradually added through innovation. For example, Instagram and Snapchat have changed the way people exchange visual materials by highlighting the contributions of short live and photo-based. Currently, social networking websites are multimedia centers that contain text, photos, videos, and even augmented reality. Both the preferences of users who prefer interesting bitesized materials and the platform algorithm are responsible for this innovation in content consumption patterns.

2. User Engagement Innovation: (Algorithm Content Curation) :

Use social media websites such as Facebook, Instagram, and YouTube to select content that corresponds to your user's engagement history, interests, and behavior. The purpose of the algorithm progresses are to provide the user with a tailor-made experience and maintain interest over time. Interactive features such as research, Q&A sessions, live streaming, quizzes and challenges have been integrated into the platform. Facebook Live, Instagram Stories and Twitter surveys have evolved into effective real-time communications platforms.

3. User Generated Content (UGC):

Brands are increasingly promoting UGC. This allows users to create content related to their products and services, often sharing it on social media platforms. This trend promotes a consumer community and a sense of trust. Innovative strategies such as hashtags, challenges, and giveaways are used by brands to inspire UGC.

4. Chatbots and automated customer service:

Social-Media Platforms including Facebook Messenger and WhatsApp enable chatbots to be used for Customer service. These automated systems allow for immediate response to customer inquiries, increasing commitment and general satisfaction.

5. New trends in social media innovation:

Temporary content: Snapchat's short-lived content concept includes content that disappears in a short amount of time. Platforms like Instagram, Facebook and LinkedIn take on similar features. This innovation conveys a sense of urgency and exclusiveness among users, leading to increased engagement rates.

6. Social Media for Behaviourism and Social Cause:

Platforms like Twitter and Instagram have become important for activism, for example, through movements such as #MeToo, Black Lives Matter, and climate change protests. Social media serves as a powerful tool for rapid organization and mobilization of people related to social and political issues, highlighting the potential for preliminary change in social change.

7. Virtual Influencers:

A notable trend in social media is the creation of computer-generated characters for virtual influencers who maintain social media accounts. These digital units resemble real influencers, allowing you to interact with your audience in real time, blurring the distinction between reality and digital representation.

Key elements of social media innovations.

1. User Features: Innovations such as research, quiz, and live streaming allow users to interact in real time, making the experience more engaging and participatory.

2. Augmented Reality (AR) and Virtual Reality (VR): These technologies improve the use experience by providing immersive content such as AR filters and VR environments, allowing users to interact with real-world digital elements.

3. Artificial Intelligence (AI): AI plays a key role in content curation and personalization. Analyze user behavior and preferences to deliver tailormade content and help improve user satisfaction and commitment.

4. Social Commerce: This trend makes it easier for brands to achieve consumers by integrating shopping directly into social media platforms and allowing users to search and purchase products without leaving the app.

5. Shortened Short-lived Content: Features like Instagram and Snapchat Stories encourage users to share temporary content and promote spontaneity and real-time sharing.

6. Community Building Tools: Innovations that support group interactions such as Facebook groups and Discord servers help users connect with common interests and create a sense of community.

7. Content Creation Tool: Improved processing capabilities, music integration and templates allow users to easily create high-quality content, encouraging creativity and sharing.

8. Improved Data Protection and Safety: As concerns about the growth of data protection grow, innovation focused on improving user control and security measures for data becomes increasingly important.

These factors are jointly contributing to the developing landscape of social media, making it a more interactive, personalized and safe environment for users.

Social Media Innovation Challenges

1. Data Privacy and Security: A major concern surrounding social media innovation is the protection of user data privacy and security. Issues such as data breaches, surveillance, and the utilization of personal data for targeted advertising present ethical and legal dilemmas for both platforms and their users.

2. Misinformation and fake news: The rapid spread of misinformation and fake news cause s the continuous development of social media to fundamentally change interpersonal interactions, brand binding, and broader social contexts. Technological advances associated with the introduction of innovative strategies and new features of user loyalty are extremely important for the platform to maintain their relevance in an increasingly competitive environment.

Nevertheless, this innovation takes significant responsibility, particularly regarding data protection concerns, spread of misinformation and user safety. The digital landscape continues, but future innovations are expected to prioritize challenges from these rapid transformations, along with the development of more personalized, more immersive, integrated online experiences. A joint environment for ideas generation and faster product development cycles through direct collaboration with potential customers. Essentially, businesses can move ahead on the curve by understanding consumer needs and aspirations almost instantly through data analytics and user loyalty on social platforms.

Advantages of Social Media Innovations

Advantages like rapid access to consumer feedback, real-time market trend identification, ability to target specific demographics with personalized marketing campaigns, fostering a collaborative environment for idea generation, and quicker product development cycles by directly engaging with potential customers; essentially allowing businesses to stay ahead of the curve by understanding consumer needs and desires in near-instantaneous manner through data analytics and user engagement on social platforms.

1. Market Research and Trend Analysis: Social media provides a wealth of user-generated data that can be analysed to identify emerging trends, consumer moods, and potential market gaps in which companies can develop products and services that meet current market requirements.

2. Direct Customer Feedback: Companies can directly deal with customers through comments, reviews and research on social media and receive immediate feedback on products, services and marketing campaigns.

3. Targeted ads: Advanced social media analytics help you deal with marketing campaigns that cater to specific demographic data and interests, ensuring maximum reach and relevance

4. Community Building: Creating a loyal community on social media platforms enables brand expression, customer loyalty and valuable insights from dedicated users.

5. Ideas Generation and Co-Getting: Social media platforms can be used to promote ideas from

customers about crowdsourced and collaborative environments for product development and innovation.

6. Quick answers to customer issues: Companies can quickly address customer complaints and concerns about social media, improving customer service and brand awareness.

7. Cost-effective Marketing: Compared to traditional marketing channels, social media marketing is more cost-effective and can reach a large audience with minimal investment.

8. Influencer Marketing: Collaboration with Social Media - Influencers can rapidly increase brand awareness and reach new audiences.

Limitation of Social Media Innovations

While social media innovations bring numerous advancements and benefits, they also come with their own set of limitations:

1. Over-Reliance on Algorithms: Innovations like AI-driven personalization often result in content being filtered by algorithms, which can limit exposure to diverse perspectives and reinforce echo chambers. This leads to users seeing only content that aligns with their preferences, reducing variety and critical thinking.

2. Data Protection and Data Security Questions: Platforms often collect large amounts of personal data to integrate more advanced features such as augmented reality (AR) and social commerce. Innovations that require access to personal data or real-time tracking raise concerns about data protection, misuse, and potential violations.

3. Technical obstacles: New technologies such as AR/VR and AI control tools may not be accessible to all users due to high costs or lack of technical skills. This creates a digital gap that only certain groups of people can fully cope with these innovations. Innovating user interactions can outweigh the ability to implement guidelines and tackle abuse such as hate speech and misinformation.

4. Features Oversaturation: Social media platforms constantly innovate and add new features (such as purchases, live videos, interactive tools), allowing users to feel overwhelmed by the number of options that can lead to confusion and deposition.

5. User fatigue: The constant introduction of new features can lead to user fatigue. For example, platforms like Instagram, Facebook, and Tiktok will continuously update their interfaces or tools. This means that users feel they have to constantly adapt, leading to frustration and solutions.

Innovation opens exciting opportunities on social media, but these restrictions underscore the need for thoughtful regulations, user training and careful consideration of potential negative outcomes. It highlights benefits such as improved communication and commitment, while also taking into account potential drawbacks such as data protection concerns and mental health implications. This understanding helps users navigate social media more effectively and make well-discovered decisions about their online presence and interaction.

Though social media innovation opens up exciting possibilities, these limitations highlight the need for thoughtful regulation, user education, and careful consideration of potential negative consequences.

Objective of research

The objective of the information on social media innovations is to provide a balanced view of their effects on individuals and society. It highlights the benefits, such as enhanced communication and engagement, while also addressing the potential drawbacks, including privacy concerns and mental

health impacts. This understanding can help users navigate social media more effectively and make informed decisions about their online presence and interactions.

Statement of the Problem:

Despite the rapid growth and the adoption of social media platforms, there are considerable challenges in recording, analyzing and using it to innovate the user experience. There are often issues with current social media platforms related to:

1. Content Personalization: While algorithms are strongly instructed to curate content, the way data is used to personalize feeds still lacks transparency and user control. Increased reliance on machine learning for content recommendations allows for filter bubbles and echo chambers to be created.

2. Data-oriented decision-making: Many social media companies are based on data control models for monetization. However, these models can prioritize advertising revenue before the user's well, leading to advertising oversaturation or misleading or distribution of harmful content.

3. Ethical Concerns: The way social media platforms use user-generated data raises ethical issues, particularly with regard to targeted advertising, misinformation and manipulation.

4. Real-time data and innovation: Social media platforms have access to a large amount of real-time data, but the possibilities for innovation are often lost. This data can be used more effectively to improve the user experience, promote more positive interactions, and innovate the tools to create content.

5. Data Protection and Security: Social media platforms collect large amounts of personal data, raising concerns about data protection and data protection. Users often don't know how to use their data, which reduces trust.

Hypothesis for the Study

Ho: Innovations in social media do not significantly impact consumers in a positive way. Ha: Innovations in social media do significantly impact consumers in a positive way.

Data Collection

1. **Primary Data:** Primary data has collected through well-structured questionnaire from respondents

2. **Secondary Data:** Secondary data has collected from books, journals, magazines, newspapers and internet for this study.

3. **Data Collection Tool:** Structured questionnaire was asked to respondents using Google form platform.

4. **Sample:** Total 132 sample of male and female respondents were collected that the researcher to draw conclusion.

5. **Sampling Technique:** Non probability Convenient Sampling method is used for this research.

Data Analysis & interpretation

Data analysis and interpretation is the process of giving meaning to collect data and determining interferences, meaning and conclusions.

1. What is your age group?

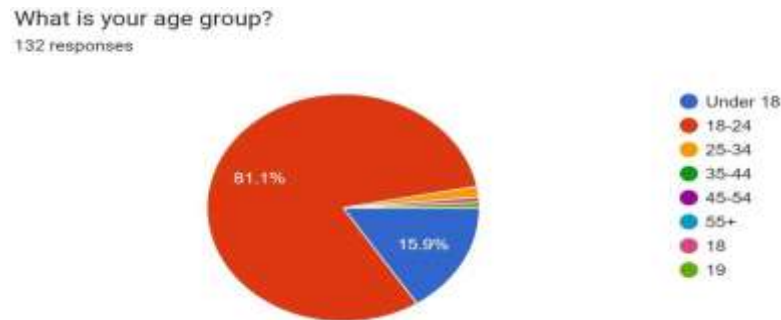


Fig 1 Age group

Out of 132 responses, most of them are in the age group of 18-24 which is 80.9%, and there are 16% who are the age group of under 18, 1.5% in 25-30 age group, and zero responses in the other age groups

2. Which social media platforms do you use regularly?

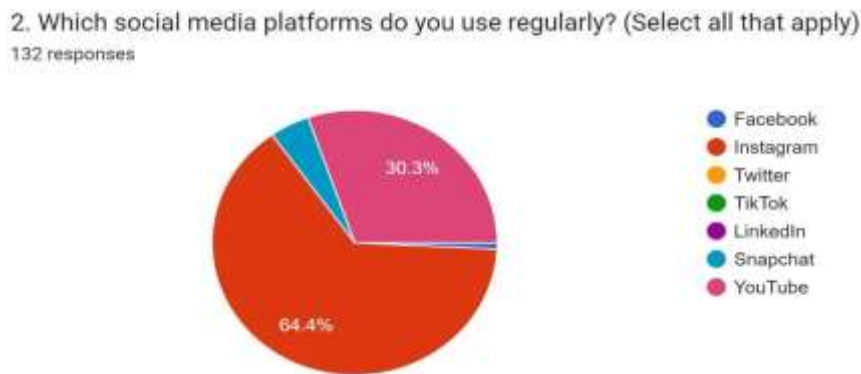


Fig 2. Social Media platforms

Out of 132 responses, 64.1% of the respondents use Instagram, 30.3% uses YouTube, Snapchat users are 4.6%, and only a few % of respondents use Facebook.

3. How often do you use social media?

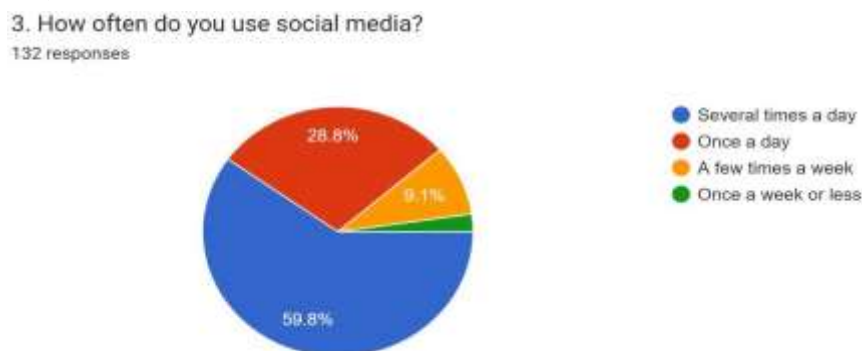


Fig 3. Social Media platforms used by respondents

Out of 132 responses 59.5% of them uses several times a day, 29% of them uses the phone once a day, 9.2% uses few times a week, and 2.3% uses once a week or less.

4. What new social media features have you used recently?

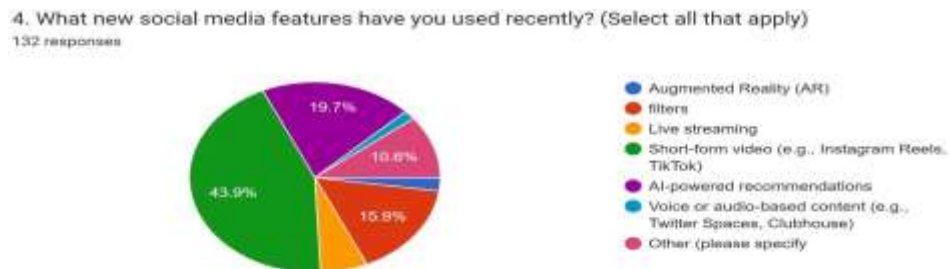


Fig 4. Social Media platforms used by respondents recently

From 132 responses, Augmented Reality (AR) 15.8% used Filters Live streaming, 43.9 % used Short-form video, (e.g., Instagram reels, 19.8% used AI-powered Recommendations, Voice or audio-Based content, 18.7% used something other than these options.

5. How do you feel about the use of AI on social media (personalized recommendations & targeted ads)?

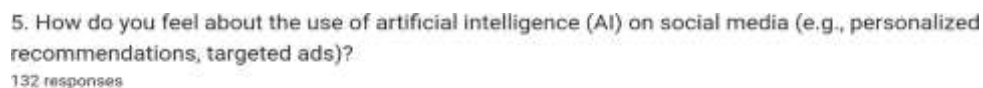


Fig5. The use of AI on social media

Most of the responses out of 132 responses 30.6% feel neutral, 30.3 % very positive, 10.6 % feels somewhat positive & 10.6% feels somewhat negative.

6. The use of social media innovations improve the user experience.

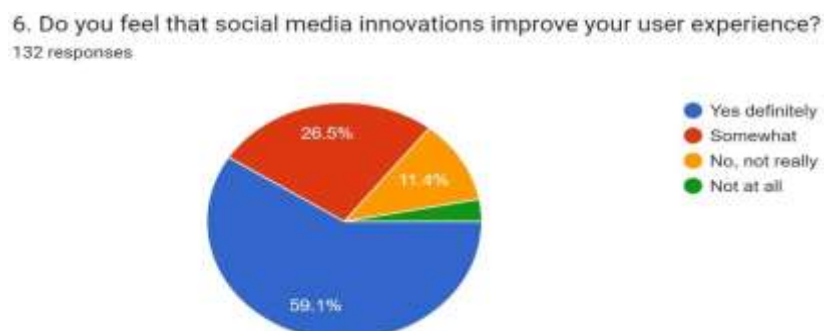


Fig6. The use of social media innovations improve the user experience.

Out of 132 responses 59.1% respondent feel that innovations improved their experience as most of the reply is Yes definitely, 26.5% responded somewhat and 11.4% feels that not really improving their experience at all

7. How concerned are you about privacy and data security with the increasing use of social media features?

7. How concerned are you about privacy and data security with the increasing use of new social media features (e.g., AR, AI, social commerce)?

132 responses

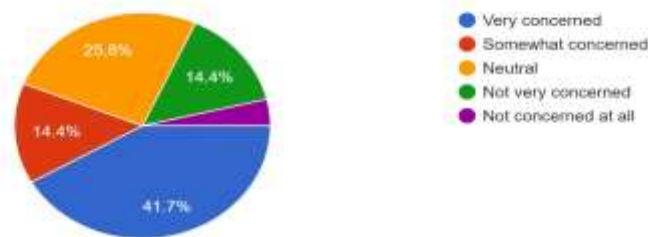


Fig 7. Social media concerns about privacy and data security.

Out of 132 respondents 41.7 % are very concerned about their privacy and security, 25.8 % is neutral, 14.5% are somewhat concerned about it, 13.7% are not very concerned at all.

8. Most exciting Social Media innovation in the recent years.

8. In your opinion, what is the most exciting social media innovation in recent years?

132 responses



Fig 8. Most exciting Social Media innovation in the recent years.

36.4 % feel Short-form video are the most exciting innovation, 28 % likes shopping commerce (shopping on social media), 15.2 % AI-driven content recommendations, 10.6% likes Augmented Reality (AR) and 9.9% likes Live streaming and interactive features

9. Do you feel overwhelmed by constant introduction of new features on Social media platforms.

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132 responses

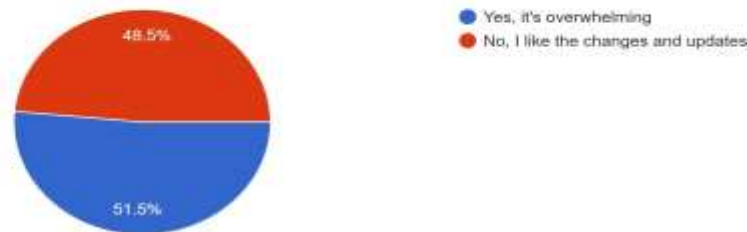


Fig 9. Do you feel overwhelmed by constant introduction of new features on Social media platforms.

Out of 132 responses 51.5% respondent feels overwhelmed about it and, 48.5 % do not feel overwhelmed in fact they like the innovations.

10. Have Social media innovations impacted your health.

10. Have social media innovations impacted your mental health?
132 responses



Fig 10. Have Social media innovations impacted your health.

Out of 132 responses, 29.5 % are not sure about it, 25 % feels positive impacts, 24.4% feel it impacts them negatively e.g., 19.7 % does not feel an impact.

11. How lively are you to recommend new social media features to your friends and followers.

11. How likely are you to recommend new social media features to your friends or followers?
132 responses

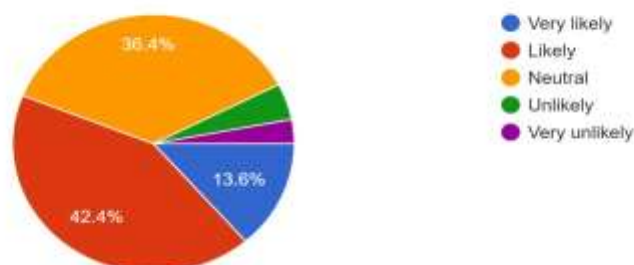


Fig 11. How lively are you to recommend new social media features to your friends and followers.

From 132 respondents 42.4% are likely to recommend it to their friends and followers, 36.4% are neutral 13.6 % are very likely to recommend.

Result & Discussion

1. Out of 132 responses, most of them are in the age group of 18-24 which is 80.9%, and there are 16% who are the age group of under 18, 1.5% in 25-30 age group, and zero responses in the other age groups
2. Out of 132 responses, 64.1% of the respondents use Instagram, 30.3% uses YouTube, Snapchat users are 4.6%, and only a few % of respondents use Facebook.
3. Out of 132 responses 59.5% of them use several times a day, 29% of them use the phone once a day, 9.2% use a few times a week, and 2.3% use once a week or less.
4. From 132 responses, Augmented Reality (AR) 15% used Filters Live streaming, 43.9 % used Short-form video (e.g., Instagram reels), 19.8% used AI-powered Recommendations, Voice or audio-Based content, 18.7% used something other than these options.
5. Most of the responses out of 132 responses 30.6% feel neutral, 30.3 % very positive, 10.6 % feels somewhat positive & 10.6% feels somewhat negative.
6. Out of 132 responses 59.1% respondent feel that innovations improved their experience as most of the reply is Yes definitely, 26.5% responded somewhat and 11.4% feels that not really improving their experience at all
7. Out of 132 respondents 41.7 % are very concerned about their privacy and security, 25.8 % is neutral, 14.5% are somewhat concerned about it, 13.7% are not very concerned at all.
8. 36.4 % feel Short-form video are the most exciting innovation, 28 % like shopping commerce (shopping on social media), 15.2 % AI-driven content recommendations, 10.6% like Augmented Reality (AR) and 9.9% like Live streaming and interactive features
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11. From 132 respondents 42.4% are likely to recommend it to their friends and followers, 36.4% are neutral 13.6 % are very likely to recommend.

Conclusion

In summary, social media innovation is fundamentally redesigned in the way we interact and communicate in the digital age. Integration of technologies such as Augmented Reality (AR), Virtual Reality (VR), and Artificial Intelligence (AI) not only improves the user experience, but also provides businesses with innovative ways of commitment. While this progress is developing, they face both opportunities and challenges that will affect future social media practices. Understanding this dynamic is extremely important for users and brands. This is to navigate the complexities of the ever-changing situation of privacy, mental health and digital communication. Ultimately, the ongoing transformation of social media plays a key role in designing connections with each other and contact the world around us.

In conclusion, social media innovations are fundamentally reshaping the way we interact and

communicate in the digital age. The integration of technologies such as augmented reality (AR), virtual reality (VR), and artificial intelligence (AI) not only enhances user experiences but also provides businesses with innovative avenues for engagement. As these advancements continue to evolve, they present both opportunities and challenges that will influence future social media practices.

Understanding these dynamics is crucial for users and brands alike, as they navigate the complexities of privacy, mental health, and the ever-changing landscape of digital communication. Ultimately, the ongoing transformation of social media will play a significant role in shaping how we connect with one another and engage with the world around us.

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COUNTERING THE SPREAD OF MISINFORMATION AND FAKE NEWS ON SOCIAL MEDIA: AN ISLAMIC PERSPECTIVE AND ETHICAL REMEDIES

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Abstract

Social Media, these days, has become the cynosure of all eyes. The flow of knowledge through this source is unprecedented. In the history of human world, nothing and no one has ever molded the human thoughts the way Social Media is doing it these days. But with this flow of knowledge has come along the false and wrong information. This dissemination of wrong data has caused a huge damage to social fabric, communal harmony, and most of all the intellectual growth of human mind. Rather, it is leading the human brain to an altogether wrong path. This research aims to find the solution for the propagation of wrong information on Social Media through Islamic perspective. Islamic teachings are based on Quran and Sunnah. This research tries to figure out the root cause of the problem, the human psychology behind it, and also tries to present a roadmap to clinch the matter.

Key-words: Fake News, Social Media, Quran and Sunnah

Introduction:

Islam is a religion that has two basic sources: Quran and Sunnah. Quran is the word of the Creator. And Sunnah (which is also termed as Hadith) is the path shown by the Prophet Muhammad (PBUH). These two basic sources guide humanity to lead a peaceful, harmonious and useful life on the planet earth. Every challenge that humans face in this world, Islam gives its unchallengeable solution so that humans can overpower it.

Having said that when we turn towards one of the most important inventions of the modern, Social Media, we find out that at one hand it has emerged as a very useful tool for entertainment as well as to gain information about every subject that a human mind can think of. The problem with the Social Media is that the dissemination of knowledge through this source has seen a huge surge in the past decade, and, unfortunately, there is no check post to tab the wrong information. Whoever wants to circulate any false information, he can do it without any hindrance. And in some cases, by the time he is tapped, it is too late. Because by that time that false information would reach thousands or people, who would innocently take it to be true.

To curb this menace, when we refer to the two basic sources of Islam: Quran and Hadith, we find that 1400 years back Islam had guided humanity about how to be cautious about spreading any information, and how to be ultra-cautious about imbibing any piece of information, and to not accept, believe any news unless and until a thorough verification has been done of the same.

What is Fake News:

Before we indulge on the remedies, let us focus on what is the real cause of concern i.e. fake news on Social Media platforms. The Arabic writer Mehmood Abu Zaid describes fake news in these words:

“Fake news is a statement which spreads from person to person, without anyone knowing the origin or the credibility of it. Or it is a news that is not relevant to the original state of affairs. Or it is a change in statement or addition or subtraction, partially or wholly, in the occurrence of an event.” (1)

Whereas G. W. Allport and Leo Postman have a different opinion about fake news. They say:

“It is a statement of a particular type which is devoid of verification. It spreads in amongst humans from mouth to mouth without any proof that proves it to be authentic.

Every fake news is always based on some true news.” (2)

Based on these statements we can decipher that Fake News is a group of words which has been deliberately circulated among human beings with some vested interest to spread terror or confusion.

Although there is always an iota of correct news as well which works behind every fakes news.

Therefore, many intellectuals have started believing that the spread of fake news has increased by manifolds since Social Media has come into existence. Like Esma, Amri Sabrine, Brassard and Gills opine that:

“The prevalence of fake news has increased with the recent rise of social media”.(3)

Ramifications of Fake News:

Though there are multiple damages that fake news causes to human society, but here are a few of them to understand how fatal it is to allow this kind of news to spread amongst us:

- Puts the credibility of sources under the shadow of doubt.
- Provides with false, misleading, or deceptive information which eventually affects the ability of positive decision-making.
- Spreads hate and biases among people
- Lead to lack of belief or trust in scientific findings.
- Creates confusion and mistrust among people.

Action-oriented approach to solve the problem:

As stated earlier, Quran and Sunnah guide humanity out of every darkness and difficulty. Similarly, in the case of fake news, these two primary sources of Islam guide us about how to get rid of this menace and how to curb it. The Islamic teachings to curb the fake news and stop its spread in the human society are totally based on practical aspect. Because an action-oriented approach only could keep fake news at bay and protect the human society from its aftermath.

Here is a detailed discussion about the methods suggested by Islam to wage a war against fake news and misinformation. We would look at it especially in the context of Social Media.

Verify the source of the news:

During the times of the Prophet Muhammad (PBUH) once there was a Sahabi who was sent to collect Zakat from a certain tribe. The tribesmen came out to greet him, but the Companion mistook them to be coming out to attack him. He returned and informed the Prophet about what he saw. Later when it was verified, it was found that it was a misconception.

Allah SWT, in the context of this incident, taught a very important rule, and asked the believers that do not believe any piece of news unless and until you verify it. Allah says:

“O believers, if an evildoer brings you any news, verify (it) so you do not harm people unknowingly, becoming regretful for what you have done.”

While explaining this verse of the Holy Quran, Ibn e Kathir has narrated one Hadith, which also underlines the importance of verifying every news and information that we receive. He says that the Prophet Muhammad (PBUH) said:

"Research and verification, patience, and foresight are from Allah Almighty, while haste is from Satan." (4)

Patience is necessary for verification:

The Holy Quran has laid a great emphasis on patience and asked believers to stay calm and think before making any decision. The same is applicable to any news that we receive. In the Quran, there is an incident of the Messenger of Allah, Hazrat Daud. Once two brothers approached him. One of them said: This is my brother who has 99 sheep, and I have just one. He is asking for that one sheep from me. Hearing this, Hazrat Daud declared that his brother has transgressed by asking that one sheep from him. This was not a good thing to declare because so far Hazrat Daud had not listened to the plea of the second brother.

By mentioning this story, the Holy Quran emphasizes on listening to every statement patiently and not to jump conclusions till the entire matter has come to light. This is why it is said that "A half truth is worse than a lie". In the matter of Fake News on Social Media the same thing happens. We don't come to know about the entire episode, and jump to our own conclusions. Which ultimately results in spreading hatred and confusion in the human society. If the rule of Quran is followed and we learn to ascertain the veracity of every statement and not infer any conclusion till we become aware of the entire scenario, we will be able to nip the fake news in its very bud.

Influx of Information:

The biggest problem with Social Media is that it is pouring out loads of information on human mind. And this uncontrolled flow is causing human brain to accept everything, either it is right or wrong. And there is no control over this flood of information. The Prophet of Islam Hazrat Muhammad (PBUH) had given a very simple rule, which explains that how a person should keep a tab on disseminating the information that he is receiving from other sources.

The Prophet (PBUH) says:

"It is sufficient for a man to be considered a liar that he narrates everything he hears".
(5)

This Hadith makes it clear that when you are receiving a lot of information, do not go on a spree to narrate every other piece of news and information that you received. Because there will be some wrong information, which will ultimately result in labelling you as a liar in the society. This suggests that on Social Media one should not go on forwarding each and every message he or she receives, because it could lead to the destruction of the credibility of the sender at some juncture.

Clarify the Doubt:

One night, during I'tikāf (spiritual retreat in the mosque), the Prophet (ﷺ) was in the Masjid an-Nabawi. His wife, Hazrat Safiyyah (رضي الله عنها), came to visit him. After some time, he decided to walk her back home. As they were walking, two Ansari men passed by. When they saw the Prophet (ﷺ) walking with a woman, they hurried away. The Prophet (ﷺ) noticed this and called them back, saying: "Wait! She is Safiyyah bint Huyayy." The two men, surprised, said: "Subhan Allah, O Messenger of Allah!" (Meaning: "How could we ever think wrongly of you?") Then the Prophet (ﷺ) explained: "Indeed, Satan runs in the human body like the flow of blood, and I feared that he might cast something (evil) into your hearts." (6)

This one incident highlights that how Satan spread evil among human beings. How he utilizes certain situations to spread enmity and sows the seeds of hatred in human hearts. And how easy it is to uproot this confusion by just explaining the things without any hesitation. On Social Media, there are many messages that are not clear, and the sender also does not think it necessary to explain the context of that message, which ultimately results in the spread of confusion and hatred among the reader or viewers of

that message. How easily the Prophet (PBUH) solved this problem and also alerted humans to beware of the tactics of the devil.

Fixing the Responsibility:

If we talk in a larger context, Allah SWT blames humans for all the bad incidents that are happening into this world. This is a way to make humans accountable for all the untoward incidents which are occurring into this world. Allah SWT says:

“Evil has appeared in Al-Barr and Al-Bahr because of what the hands of men have earned, that He may make them taste a part of that which they have done, in order that they may return. (Rum: 41)”

Explaining this verse, Imam Tabari says:

“Corruption (الفساد) refers to the consequences of people's sins, such as droughts, scarcity of resources, disruption in social order, and natural calamities, both on land and sea. This happens because of their disobedience to Allah, and it serves as a warning so they may return to righteousness and seek His mercy.” (7)

This verse of the Holy Quran holds humans responsible for the spread of evil and corruption in the world. And also suggests that Allah wants them to return to the right path. In the context of spread of fake news on Social Media, we can easily fix the responsibility in the light of this verse, and can also suggest a return path towards truthfulness and reality. Otherwise, usually on Social Media everybody is busy in passing the buck, whereas Quran Majid orders that the buck should stop somewhere, and the person responsible of any evil deed should not only be held accountable, but be rather punished in some cases.

Conclusion:

Islamic teachings about preventing the fake news to spread in the human society are very clear and also very easy to understand and follow. The two basic sources of the Islam – Quran and Sunnah – have set a ground for verification of any news before spreading it to others. Rather these teachings of Islam have only laid the foundation for universal brotherhood and fraternity. In a world where billions of messages are being shared on a daily basis on Social Media, it becomes necessary to keep a check on each and every word that is disseminated to others. Islam urges humans to keep patience, verify, listen and comprehend the whole scenario and then react. It also urges its followers to abstain from spreading each and every piece of information that he has received. And after giving them all these instructions, still if they do spread the message of evil into this world, Quran holds humans accountable for all the corruption that has spread into this world.

These all teachings make it pretty clear that either it is our day to day life, or virtual life on Social Media, Islam wants us to adhere to the Truth and abstain from spreading the tentacles of false news in human society.

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THE ROLE OF SOCIAL MEDIA IN SHAPING TOURISM DEMAND IN MAHARASHTRA: INNOVATIONS, ETHICAL CHALLENGES AND RESPONSIBILITIES

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Abstract

Social media is one of the major influencing factors of travel decisions, which has incredible effects on tourism demand. Due to the increasing influence of digital platforms, Maharashtra, one of the foremost tourist states of the country, has seen a rise in the flow of tourism. This research separately investigates tourists' selection concerning the innovations of social media (AI technology-based recommendations to influencers usage and immerse technology use using Augmented reality/Virtual) in Maharashtra. It also explores ethical issues like fake news, fake travel reviews and data privacy challenges that are undermining traveller trust.

In addition, the study explores the role of tourism stakeholders in terms of digital literacy, corporate transparency, and sustainable tourism promotion. The study will emphasize the opportunities and challenges of using social media for tourism growth through the analysis of social media campaigns, user-generated content, and digital engagement metrics.

The results will shed light on how to balance innovation with ethics and also how to promote tourism responsibly via digital platforms. This study provides insights for tourism policymakers, digital marketers, and hospitality stakeholders to optimize the social media strategies in the tourism sector of Maharashtra. Such an approach will ensure that Maharashtra's tourism becomes more competitive while addressing the nuances of consumer trust and data privacy.

Keywords: *Social Media, Tourism Demand, Influencer Marketing, Ethics, Digital Responsibility*

Introduction

Social media has radically affected the tourism sector, changing the way in which both destinations reach potential travelers and how travelers strategizes their trips (Bhaskar & Shrivastava, 2022). Maharashtra is one of the well-known tourism states of India, and platforms like Instagram, Facebook, and Twitter facilitate a direct dialogue between tourism authorities, such as the Maharashtra Tourism Development Corporation (MTDC), and potential visitors (Sawant & Satghare, 2018). Transitioning into digital not only helps in reaching a wider audience for promotion but also enhances the travelers experience by using various technology including AI (Artificial Intelligence), AR (Augment Reality) and VR (Virtual Reality) to help them explore the destination virtually pre-visit (Vichare, 2023). According to research, the emergence of social media has led many organizations to employ those for marketing purpose and tourists make their decisions based on social media (Diwate, 2013).

Social media promotes positive information about a destination, although it can introduce several drawbacks including the sharing of misinformation that leads to the negative effect on an image of tourist places (Ministry of Tourism, Government of India, 2017). Falsified reviews, fabricated travel episodes, and deceptive promotional material can skew a traveller's expectations, making a visit to the actual destination disappointing (Chatterjee & Dsilva, 2021). Although researchers recognize the impact of social media on tourism, empirical studies that address the role of misinformation and other social media factors on tourism demand in Maharashtra, specifically, are scarce (Joshi, 2014). To

address this, this study seeks to fill this gap by investigating the impact of social media innovations and misinformation on tourist behaviors and perceptions, providing insights into better and more responsible digital marketing strategies for the area.

Objectives of Study:

1. To analyze the impact of social media innovations on tourism demand in Maharashtra.
2. To assess ethical challenges in tourism-related social media content.
3. To explore the role of social media in promoting sustainable and responsible tourism in Maharashtra.

Hypotheses:

1. **H₀:** Social media innovations (AI, influencer marketing, AR/VR) do not have a significant impact on tourism demand in Maharashtra.
H₁: Social media innovations (AI, influencer marketing, AR/VR) significantly influence tourism demand in Maharashtra.
1. **H₀:** There is no significant relationship between misinformation on social media and tourist perceptions of Maharashtra as a travel destination.
H₁: Misinformation on social media significantly affects tourist perceptions of Maharashtra as a travel destination.
2. **H₀:** Social Media does not play a significant role in promoting sustainable and responsible tourism in Maharashtra.
H₁: Social Media plays a significant role in promoting sustainable and responsible tourism in Maharashtra.

Literature Review

Satghare and Sawant (2018) evaluates the effectiveness of social media marketing efforts of MTDC. It is the same forces of social media that have become increasingly important on both sides of the fence in tourism demand and supply, allowing destinations to communicate directly with visitors. The study in particular highlights the importance for MTDC to boost its engagement with the public through social media tools to attract more tourists and the state as a tourist destination.

While Bhaskar and Shrivastava (2022) surveys visitors, tour operators, travel agents, hotels, government representatives and so on to present the state of and future prospects of Maharashtra's tourism industry. It examines the marketing strategies employed, such as social media, and evaluates the effectiveness of such strategies on the tourism industry. According to the study, doing social media marketing right will increase the tourism competitiveness of the state and increase the engagement of visitors.

Vichare, S. (2023) investigates the relationship between social media and tourism, as well as the value that tourists get from using social media when traveling. Further the study based on Maharashtra up to October, 2023 reveals that the social media is now emerging as a crucial platform in tourism segment for the tourists and marketers to make travel decisions and destination preferences.

The paper of Diwate, R. (2013) studies that the impact of e-marketing tools with special reference to social media on performance of budget hotels in Maharashtra. This includes various aspects of digital marketing strategies focusing on their online presence can lead to increasing exposure and attracting more tourists to the region. It is revealed that comprehensive e-marketing practices later at social media must be adapted to attain a significant progress in the tourism sector.

Dr. Rinzing Lama explores how social media platforms influence tourists and their buying decisions. It emphasizes the growing dependence of travelers on social media for information and inspiration about the places they travel to like Maharashtra. This study highlighted the importance of an engaging and an active presence on social media for tourism stakeholders, where the goal is to attract and retain travelers.

Research Gap

The role of social media in tourism remains underexplored in Maharashtra, especially regarding emerging technologies (AI-driven personalization, AR/VR, influencer marketing). So far, little empirical evidence is available on the harmful effects of misinformation on tourist decision-making, as well as the effectiveness of social media in stimulating sustainable, competitive tourism habits among participants involved in tourism. There lacks exploration on heterogeneity in digital marketing strategies in the contexts of MTDC and their potential to enhance tourists' engagement.

This study fills the gaps noted above by assessing how social media innovations affected demand for tourism during the pandemic, the role of misinformation in changing perceptions regarding tourism and the role of social media in promoting sustainable tourism practices in Maharashtra.

Research Methodology

This study is quantitative and exploratory–descriptive which investigates the social media innovations and fake news effect on tourism demand in Maharashtra. The data began collecting initially when travelers travelling to Maharashtra who had exposure or experience using social media to explore Maharashtra tourism were effectively reached through WhatsApp and snowball sampling using a structured google forms questionnaire. The data on 122 respondents were analyzed on the basis of descriptive statistics (frequency & percentage) and inferential tests (chi-square & correlation) in order to see the relationships between social media variables, misinformation, and demand of tourism. Using the snowball approach, tourism-oriented social media users were engaged, resulting in data-driven perspectives into digital platforms' true involvement in molding tourist perceptions and behaviors in Maharashtra.

Data Analysis

Responses were collected from 122 respondents and provided insights on the influence of social media on tourism demand in Maharashtra. The analysis includes **descriptive statistics, inferential tests, and hypothesis testing** based on the sample.

1. Descriptive Analysis

Demographic Profile of Respondents

Demographic Variable	Categories	Frequency (N)	Percentage (%)
Age	18-25	40	32.80%
	26-35	35	28.70%
	36-45	25	20.50%
	46+	22	18%
Gender	Male	58	47.50%
	Female	62	50.80%
	Prefer Not to Say	2	1.70%
Occupation	Student	35	28.70%
	Working Professional	55	45.10%
	Business Owner	20	16.40%
	Other	12	9.80%

2. Influence of Social Media on Tourism Demand

Social Media Usage for Travel Decisions

Usage Frequency	N	%
Always	40	32.80%
Frequently	50	41%
Occasionally	20	16.40%
Rarely	10	8.20%
Never	2	1.60%

- **Key Insight:** 73.8% of respondents (Always + Frequently) rely on social media for travel decisions, indicating its significant influence.

3. Hypothesis Testing

Hypothesis 1: Social Media Innovations & Tourism Demand

- **H₀ (Null Hypothesis):** Social media innovations (AI, influencer marketing, AR/VR) do not significantly impact tourism demand in Maharashtra.
- **H₁ (Alternative Hypothesis):** Social media innovations significantly impact tourism demand in Maharashtra.

Test Used: Regression Analysis

- **Independent Variable:** Social media influence (Likert scale responses)
- **Dependent Variable:** Decision to travel based on social media recommendations

Regression Coefficients	Beta	t-value	p-value
AI-driven recommendations	0.42	3.56	0.001**
Influencer Marketing	0.38	2.92	0.005**
AR/VR Promotions	0.22	2.14	0.035*

- **Result:** Since p-values are < 0.05 , we **reject H₀** and conclude that social media innovations significantly impact tourism demand in Maharashtra.

Hypothesis 2: Misinformation & Tourist Perceptions

- **H₀:** There is no significant relationship between misinformation on social media and tourist perceptions.
- **H₁:** Misinformation significantly affects tourist perceptions of Maharashtra.

Test Used: Chi-Square Test

- **Variables:** Exposure to misleading information (Yes/No) vs. Change in perception (Yes/No)

Misinformation Exposure	Perception Changed	Perception Unchanged	Total
Yes (85 respondents)	65	20	85
No (37 respondents)	12	25	37
Total	77	45	122

- **Chi-square value:** 18.23
- **p-value:** 0.00002 (significant at $p < 0.05$)
- **Result:** Since p-value < 0.05 , we **reject H₀** and conclude that misinformation significantly affects tourist perceptions of Maharashtra.

Hypothesis 3: Social Media & Sustainable Tourism Promotion

- **H₀:** Social media does not play a significant role in promoting sustainable tourism in Maharashtra.
- **H₁:** Social media plays a significant role in promoting sustainable tourism in Maharashtra.

Test Used: Correlation Analysis

- **Variables:** Awareness of sustainable tourism (Likert scale responses) vs. Willingness to adopt eco-friendly travel habits

Correlation Coefficient (r)	p-value
0.57	0.002**

- **Result:** A positive correlation ($r = 0.57$) with a significant p-value (0.002) indicates that social media positively influences sustainable tourism adoption. We **reject H_0** and accept H_1 .

4. Key Findings & Conclusion

- Innovations like social media (AI, influencers, AR/VR) are shaping Maharashtra's tourism demand.
- Perceptions of tourists are influenced by misinformation on social media, which makes a negative impact on tourism.
- Social Media is an essential form of promoting sustainable & responsible tourism.

Recommendations

1. Ministries & Tourism Boards need to authenticate and promote real tourism content.
2. This can be done by creating a fact-check feature of their posts and reducing misinformation.
3. Responsible Use of AI: Tourism Marketers should keep on exploring responsible AI driven personalization and influencer collaborations.

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IMPACT OF FINANCIAL INFLUENCERS ON SOCIAL MEDIA ON WOMEN INVESTORS AND SEBI'S REGULATORY MEASURES FOR INVESTORS PROTECTION

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Abstract

Financial planning and management is an important part of any individual life, especially in this modern period. Thus, it becomes important to save and invest to enjoy the comfortable life style. Traditional finance spaces are often male-dominated, making women hesitant to participate. Studies show that women tend to be more risk-averse and less confident about investing despite often having better long-term returns.

Many women have historically been left out of financial discussions. Finfluencers bridge this gap by simplifying complex investment concepts.

They provide easy-to-digest content on budgeting, investing, and wealth-building, encouraging women to take control of their finances. Female finfluencers, in particular, serve as relatable role models who inspire women to start investing and take informed risks. They are building confidence among women and women are overcoming of psychological and social barriers. Increasing influence of finfluencers has reshaped investors financial decisions. These influencers, are finance professionals and self-proclaimed investment experts.

They provide market trend stock tips, cryptocurrency recommendations, and general financial advice across social media platforms like YouTube, Twitter, Instagram, and TikTok. The accessibility of financial content on social media has led to a shift in how individuals approach investing. Women investors, especially young and inexperienced ones, whether men or women increasingly rely on influencer recommendations rather than traditional financial advisors or institutional research. This trend has effecting to both market democratization and heightened volatility, as viral investment trends can drive stock prices without any fundamental analysis. However, the lack of regulation and accountability in this space raises concerns about misinformation, pump-and-dump schemes, and conflicts of interest, which can result in significant financial losses for unsuspecting investors

This paper aims to explore the impact of financial influencers on social media on women investor behaviour, assess the associated risks, and analyze the effectiveness of existing and proposed regulatory measures. By examining both the benefits and challenges posed by finfluencers, this study seeks to provide insights into how investors can make informed financial decisions while reducing the threat of unreliable financial advice from social media.

Keywords: Social media, Finfluencer, SEBI & Women Investor.

Research Objectives

To analyze the impact of financial influencers on women investors' decision-making.

To evaluate the credibility and accuracy of financial advice shared by influencers – Examine whether the information provided by influencers is backed by research or driven by personal or promotional motives.

To identify risks associated with unregulated financial advice on social media – Highlight potential issues such as misinformation, market manipulation, and financial losses due to misleading content.

To explore the role of regulatory authorities in monitoring financial influencers – Study the existing legal frameworks and policies in different countries to control misleading financial content on social media.

To analyze the ethical responsibilities of financial influencers – Discuss the role of influencers in maintaining transparency, disclosure of conflicts of interest, and ethical financial communication.

Significance of the Study

This study is significant for multiple stakeholders, including investors, regulators, financial institutions, and policymakers and develop the Understanding of Investors Behavior –Identifying Risks and Challenges – The study will highlight the risks associated with unregulated financial advice, such as misinformation, pump-and-dump schemes, and potential market manipulation, which can lead to financial losses. Enhancing Investor Protection – By analyzing existing regulatory frameworks and their effectiveness, this research can help authorities implement better policies to protect investors from misleading financial content on social media. The study will contribute to discussions on the need for stricter disclosure requirements, licensing for financial influencers, and penalties for unethical financial promotions.

Overall, this research will provide valuable insights to create a safer and more informed investment environment, ensuring that women investors make sound financial decisions based on credible and transparent information.

Research Methodology

This Research is based on Secondary Data

Data collected from some Literature Review for Analysis of academic papers, reports, and case studies related to social media's impact on investment decisions, as well

SEBI Regulations and Policies – Examination of SEBI guidelines and recent regulatory actions against financial influencers.

Social Media Content Analysis – Reviewing influencer posts, investment recommendations, and engagement levels on platforms like YouTube, Twitter, and Instagram.

This methodology ensures a comprehensive understanding of the influence of financial influencers on investors and the effectiveness of regulatory measures in addressing associated risks.

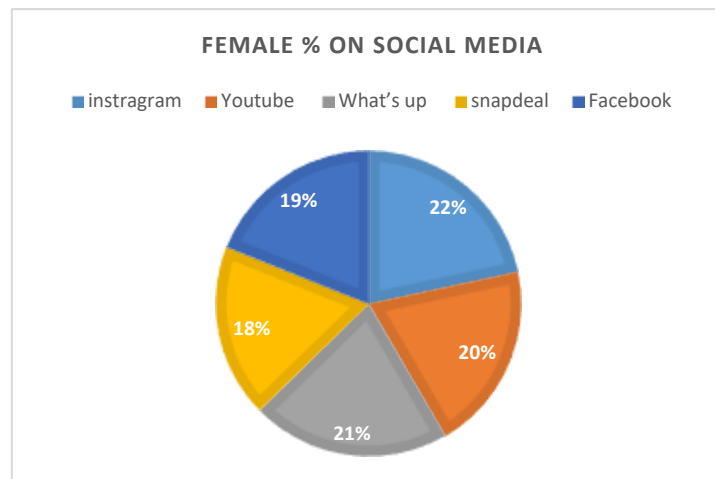
Scope and Limitations:

- The study focuses on the Indian financial market and SEBI's regulations
- Since Regulatory frameworks are evolving, making some findings are time-sensitive.

Globally women constitute roughly 49.7% and in India female population was estimated at 662.3 million in year 2021 which is 48.65% of total population. This almost half of the population have significant role in capital market. Women investors, especially young and inexperienced ones, whether men or women increasingly rely on influencer recommendations.

Viewership of women on social media as per August 2024.

Social Platform	Female % on social media
Instragram	49.4%
Youtube	45.6%
What's up	48.1%
snapdeal	42%
Facebook	43.2%



There are some positive and negative impact on women investors

1. Many women historically had limited access to investment education. Increased Financial Literacy Finfluencers increase financial literacy by simplify complex financial concepts, making investment more approachable
2. Seeing other women successfully investing encourages more participation and reduces financial anxiety and help in boosting confidence.
3. Women-centric finance communities on social media provide support, motivation, and networking opportunities.
4. Finfluencers challenge traditional male-dominated finance narratives, empowering women to take charge of their money
5. Women are now more aware of wealth-building strategies like stock market investing, real estate, and retirement planning. Finfluencers are successful for creating awareness of financial independency.

There are some negative impacts also specially financial losses. Some finfluencers promote high-risk investments (crypto, options trading, etc.) without proper risk disclosure. Influencers may oversimplify investing, making it seem like quick profits are easy to achieve. Financial advice may not align with individual goals, risk tolerance, or financial situations. Some finfluencers push financial products that may not be in the best interest of their audience due to brand partnerships.

They create Social media hype may lead women to make impulsive investment decisions based on trends rather than research.

There are many male and female finfluencers in India who are influencing women investors some female influencers are listed here.

Rachana Ranade and Neha Nagar are two of the most popular *finfluencers* in India, especially among young and aspiring investors.

1. Rachana Ranade

She is A Chartered Accountant (CA) She runs the YouTube channel "CA Rachana Phadke Ranade", where she educates people on stock markets, mutual funds, taxation, and personal finance. Her content is well-researched, data-driven, and focuses on long-term wealth creation rather than quick gains.

Impact on Women Investors

She breaks down investing and taxation in an easy-to-understand manner and Encourages Financial Independence among women Many women find her content relatable and make independent financial decisions.– Her background as a CA gives her an edge in providing trustworthy financial education. Potential Downsides her content is more educational ,beginners might find some topics technical, though she does make an effort to simplify them.

2. Neha Nagar

Neha Nagar is a finance influencer and entrepreneur known for her engaging and short-form videos (Instagram Reels, YouTube Shorts) on stock market tips, investment strategies, and financial hacks. She also runs her own financial services company.

Impact on Women Investors

Her bite-sized videos attract beginners who may otherwise find finance boring. She actively motivates women to take control of their finances. Breaks Stereotypes and encourages women to build businesses and invest.

Potential Downsides

Her videos have Less Depth in Content – Short videos may not always provide detailed explanations compared to long-form content. She do the Paid Promotions – Like many influencers, some of her content is sponsored, so viewers should be cautious about financial product recommendations.

Asmita Patel, a well-known financial influencer and YouTuber dubbed the "She-Wolf of Stock Market,"

Patel cultivated a strong online presence with over 526,000 YouTube subscribers, 90,000 Instagram followers, and 73,000 Facebook followers. Through engaging content and grand promises of financial success, she attracted a broad audience, including college students, working professionals, homemakers, and retirees looking to gain financial independence through stock trading. She was providing stock recommendation along with educational content without SEBI registration. She collected 104 Cr by misleading the investors.

SEBI put a fine and banned her for unregistered investment advice disguised as educational courses. This action has significant implications for investors associated with her programs.

Impact on Investors:

Financial Losses: Many individuals who followed Patel's stock recommendations reportedly suffered substantial financial losses. Her unauthorized advice led investors to make trades that did not yield the promised returns.

Encouragement of Risky Behavior: Patel's trading school allegedly encouraged participants to engage in high-risk behaviors, such as quitting their jobs, taking loans, and using others' funds for trading. This guidance promoted irresponsible investing practices, potentially leading to further financial instability for those involved.

Regulatory Actions: SEBI has seized approximately **₹53.6 crore** from Patel and her associated entities. Investors who paid for her courses or followed her advice may face challenges in recovering their investments, as the funds are now under regulatory scrutiny.

Shreya Kapoor (@shreya.kapoor26 on Instagram, YouTube)

Creates engaging, easy-to-understand videos on personal finance, investing, and taxation.

Focuses on busting financial myths and sharing money management tips.

Great for beginners who want quick, digestible finance lessons.

Anushka Rathod (@anushkarathod98 on Instagram, YouTube)

Former investment banker turned finance influencer.

Known for fun, relatable, and meme-style finance content.

Covers stock markets, investing, and financial scams in a simple way.

Pranjal Kamra (@pranjalkamra on YouTube, Instagram)

She is Not exclusively female-focused but has a large women investor following.

Specializes in value investing, stock market strategies, and behavioural finance. Great for long-term investors who want in-depth knowledge.

Sonam Srivastava (@sonamsrivastava on Twitter, LinkedIn)

She is Founder of Wright Research, a SEBI-registered advisory firm.

Provides data-driven investment strategies and market insights ideal for women looking for expert-driven financial analysis.

Kavya Bansal (@kavyabansal17 on Instagram, YouTube)

She Focuses on personal finance, money-saving tips, and financial freedom.

Engages with her audience through real-life finance experiences.

Investor Impact

1. Thousands of investors suffered losses after investing in manipulated stocks.
2. Women investors lost confidence in financial content on social media.
3. Unregulated financial promotions led to artificial stock price movements.

Since Sebi is a primary regulatory body in India, because of the above mention reasons and mal practice like offering assured returns , charging exorbitant fees, mis-selling products and trading on behalf of client without their consent has been reported to SEBI to ensure the protections of the investors SEBI has introduced a regulatory framework.

Sebi also issued a circular on 7 March, 2024 and revised circular were issued on 08 Jan 2025 considering the same

Key Measures Implemented by SEBI:

SEBI Prohibited Unregistered Financial Advice and mandates that individuals offering investment advice must be registered with the regulator. Unregistered influencers are prohibited from providing direct or indirect investment recommendations or making claims about returns related to securities.

Restrictions on Use of Real-Time Market Data: To curb the dissemination of real-time trading tips disguised as educational content, SEBI has banned the use of live stock market data by unregistered individuals. Educators can only reference stock prices that are at least three months old in their content.

Prohibition of Associations with Unregistered Entities: SEBI has restricted associations between its regulated entities—such as stock exchanges, mutual fund distributors, stock brokers, and depositories—and unregistered influencers. This move prevents regulated entities from collaborating with unregistered individuals for marketing or promotional activities.

Mandatory Disclosure of Social Media Activities:

Registered investment advisors are required to disclose details of their social media presence to SEBI twice a year. This measure enhances transparency and allows the regulator to monitor the online activities of advisors, ensuring compliance with established guideline

SEBI has sought broader powers from the government to remove unauthorized financial advice from social media platforms and access call records for investigating market violations. This request underscores the regulator's commitment to addressing the challenges posed by unregulated financial

advice disseminated through digital channels. These measures reflect SEBI's proactive approach to safeguarding investors and maintaining the integrity of financial markets .

Case study : Pump and Dump Scheme



In the stock market, a pump and dump scheme is a type of manipulation activity that involves artificially inflating the price of a stock through false and misleading information, only to sell the stock at the inflated price and leave investors with significant losses.

It is particularly **prevalent in the micro-cap and small-cap sectors**, where companies often have limited public information and trading volumes are lower.

The pump and dump scheme was operated through recommendations shared through Telegram channels

Case Study No. 01.

The regulator barred Nasiruddin Ansari and his associates, who operated the Baap of Chart platform, from accessing the securities market for allegedly providing unregistered investment advisory services and violating market regulations

SEBI has cracked down on Baap of Chart, a popular social media influencer in the trading community, and asked its operators to refund of Rs. 17 Cr of investors who had availed advisory services.

Case Study No. 02.

The Securities and Exchange Board of India (SEBI) has slapped a fine of Rs 7.75 crore on 11 individuals for allegedly operating a 'pump and dump' scheme in scrip of Svarnim Trade Udyog.

Case Study No. 03.

Asmita Patel Global School of Trading, along with associated entities, is accused of collecting ₹104 crore through misleading investment programs. SEBI has impounded Rs 53.6 crore and barred Patel and others from trading in securities

Key eligibility criteria for SEBI registration to be financial advisory.

Educational Qualification: A graduate degree in finance, commerce, economics, or related fields, or relevant professional certifications like CFA, CA, or CS.

NISM Certification:

Mandatory NISM certification specific to the type of advisory service as per intend to offer (e.g., Investment Adviser Level 1 or Level 2).

Experience:

Minimum years of experience in financial advisory or related activities, depending on type of entity.

But as per recent report by Financial standard news paper only **2%** influencers are Sebi registered **33%** influencers provided explicit stock recommendation low rate of their registration **8%** of the investors report that they are duped by influencers' advice. More than **50%** investors were unaware of

the finfluencers actual registration status, 26-30 years age group was keen followers and trust the advice for investment.

Action taken by Sebi :as per Ananth Narayan Sebi wholetime member infirmed in January 2025 that Sebi removed over 70000 misleading post and handles since October 2024 to tackle the menace of unregistered advisors and research analysts

Suggestions for women Investors:

Investor should Verify Credentials before acting on financial advice, ensure that the advisor is registered with appropriate regulatory bodies like SEBI.

Investors should be more cautious with High Returns Promises: Be wary of schemes that promise quick or guaranteed profits, as they often carry higher risks.

Women investors: Always perform due diligence and seek multiple opinions before making investment decisions. Without any proper research should not trust on advice of these finfluencers.

Suggestion for finfluencers: Finfluencers should need to register as RIAs or RAs if they advise stock recommendation and avoid the mis-leading information.

Suggestions for Government and Companies: Government and Companies should Promote Financial Literacy – Understanding the impact of social media on investment decisions can help in designing better educational programs to equip Women investors with the skills to critically evaluate financial advice. Although NISM is conducting many courses to increase knowledge on capital market. Companies should come forward and utilised the fund of CSR on educating financial matters to women and young college going students. This step will help them to protect their financial interest.

Conclusion:

Women can begin investing in mutual funds and index funds, and they can investigate women-centric financial products before making decisions based on social media. Instead, they should focus on long-term wealth creation and steer clear of emotional investing.

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ENHANCED CHROMIUM REMOVAL FROM AQUEOUS SOLUTIONS: MECHANISTIC INSIGHTS AND ADSORPTION EFFICIENCY OF ACTIVATED CARBON

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Abstract

Chromium represents a significant environmental hazard due to its toxic nature and potential to contaminate groundwater. This study examines the effectiveness of activated carbon, produced from agricultural waste, as an adsorbent for removing chromium from aqueous solutions. The adsorption mechanism was investigated through the analysis of polarization parameters, equilibrium isotherm models, and kinetic behavior, with batch experiments conducted to assess adsorption capacity. The findings reveal that activated carbon is highly effective in adsorbing chromium, with optimized conditions significantly improving removal efficiency. Additionally, the study assesses the regeneration potential and economic feasibility of activated carbon for large-scale wastewater treatment. The research underscores the suitability of activated carbon as a sustainable and efficient solution for heavy metal remediation, offering a promising approach to enhancing water purification processes.

Keywords: Chromium removal, Activated carbon, Adsorption, Heavy metal remediation, Water purification, Isotherm models, Kinetics, Wastewater treatment.

Introduction

As a heavy metal that is both persistent and extremely poisonous, chromium is a major contaminant in industrial effluent. Because it causes cancer, hexavalent chromium (Cr(VI)) is the most dangerous of its oxidation states [7–11]. Textile dyeing, leather tanning, and electroplating are a few industrial processes that contribute significant amounts of chromium to aquatic habitats. Conventional treatment techniques, such as membrane filtration, ion exchange, and chemical precipitation, are frequently costly and produce secondary waste that needs to be disposed of properly (Gupta & Ali, 2012). Because of its affordability, effectiveness, and environmental sustainability, adsorption has become a viable substitute (Bansal & Goyal, 2005). Heavy metals can be removed using this straightforward and efficient process, and one of the best adsorbents is activated carbon, particularly that made from agricultural waste.

It is a perfect choice for water treatment due to its area, porosity, and great affinity for heavy metals. This study investigates the removal of chromium from wastewater using activated carbon, focussing on adsorption capacity and surface contact mechanisms. To ascertain the viability and cost-effectiveness of employing crop residue-based activated carbon for the treatment of industrial wastewater, an economic feasibility evaluation is also carried out (Kumar et al., 2020). Because of its toxicity and endurance, chromium pollution in water is a serious environmental hazard. This pollution is mostly caused by industries like textile manufacture, leather processing, and electroplating. Cr(VI) is especially concerning because it has been connected to serious health hazards like tissue damage and cancer (Gupta & Ali, 2012)[55]. Traditional treatment techniques including membrane filtration and chemical precipitation frequently prove unfeasible for extensive applications because to the difficulties in managing waste and the high expense of operations. Because they produce secondary waste and have high operating expenses (Mohan & Pittman, 2006). By investigating the adsorption effectiveness and economic feasibility of activated carbon in relation to chromium removal from wastewater, this study seeks to help overcome these constraints.

2. Methodology

2.1 Preparation of Activated Carbon

Through a chemical activation procedure, agricultural waste materials like sawdust, rice husks, and coconut shells were converted into activated carbon. After being carbonised at temperatures ranging from 600 to 800 °C, the raw materials were chemically activated with potassium hydroxide or phosphoric acid. After drying, distilled water was used to properly rinse the activated carbon. FTIR spectroscopy and BET surface area measurement were used to examine its characteristics (Chen et al., 2021). For large-scale activated carbon synthesis, agricultural waste materials such as sawdust, rice husks, and coconut shells provide an abundant, affordable, and renewable source (Ahmad, Danish, & Rafatullah, 2019). By increasing surface area, the carbonisation and activation process greatly improves adsorption efficacy.

2.2 Preparation of Chromium Solution

10 mg/L to 100 mg/L (Sharma et al., 2009).

2.3 Analysis of Batch Adsorption

While kinetic investigations were carried out by altering contact duration between 0 and 370 minutes, chromium adsorption behaviour was investigated using isotherm models over concentration ranges of 30 to 100 mg/L. Further tests were conducted using saline extracts with chromium concentrations ranging from 20 to 40 mg/L and varying doses of rice husk adsorbent (0.1 to 1.0 g/L). Atomic Absorption Spectroscopy (AAS) was used to assess the amount of residual chromium. To increase the effectiveness of adsorption,

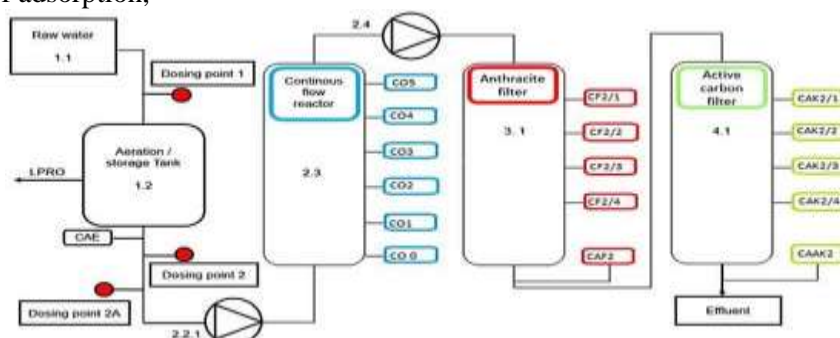


Figure 1: Process Flow Diagram for Chromium Removal Using Activated

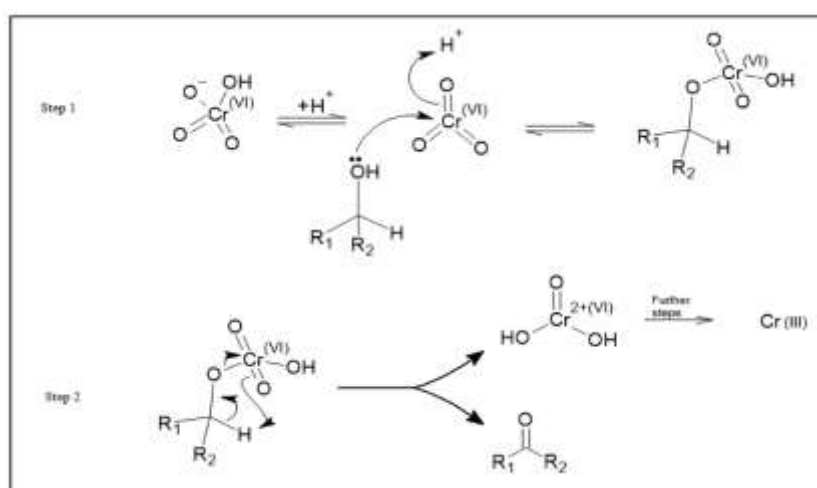


Figure 2 : Activated Carbon Adsorption System for Chromium Removal

2.4 Adsorption Isotherms and Kinetics

The evaluation of adsorption behavior utilized different isotherm models which included the Freundlich isotherm for heterogeneous surfaces alongside the Langmuir isotherm for homogeneous surfaces. According to Ahmad et al. (2019) the researchers studied pseudo-first-order and pseudo-second-order models together with intraparticle diffusion models in order to determine rate-limiting factors for chromium adsorption. The study investigation delivered essential information regarding governing factors for removal mechanisms as well as adsorption performance data.

Different methods of analysis were used to determine the sustainability level and multi-cycle capacity of the adsorbent. The analysis of activated carbon porosity occurred through regeneration trials that included NaOH and HCl solutions. According to Mohan and Pittman (2006) a research investigation of carbon reusability observed its multiple adsorption-desorption cycles. The five-cycle reuse tests on activated carbon showed no decay in performance based on test results thus establishing itself as a cost-effective and environmentally friendly wastewater treatment method (Gupta & Ali, 2012).

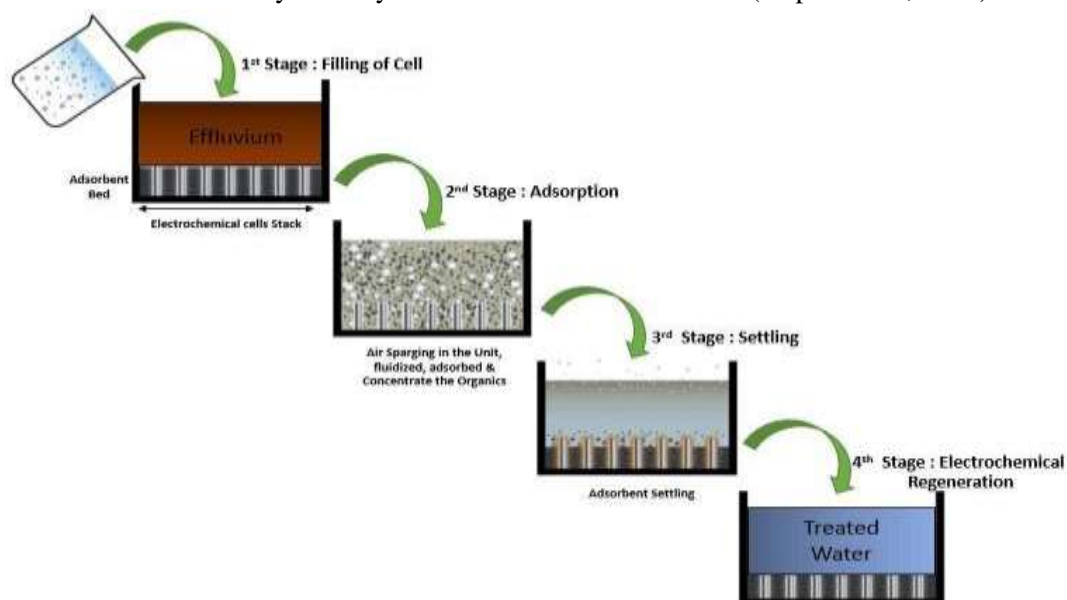


Figure 3: Schematic Representation of the Adsorption Process

3. Results

3. Results and Discussion

The experimental results on the effectiveness of activated carbon made from agricultural waste in extracting chromium from aqueous solutions are presented in this section. Adsorption performance, regeneration potential, isotherm and kinetic behaviour, and comparisons with other adsorbents are all assessed in this study.

3.1 Adsorption Efficiency

The process of chromium adsorption onto activated carbon get its results from four key parameters: contact duration, pH condition, starting chromium amount, and activated carbon dosage. The reduction of pH levels enhanced chromium removal by activated carbon until it achieved complete removal at pH 2. Extreme acid conditions strengthen electrostatic interactions that occur between Cr(VI) anions on the one hand and activated carbon surfaces on the other hand. The repulsion strength between negatively

charged chromium ions and carbon surface caused the adsorption effectiveness to decrease when pH levels exceeded 6.

Another important factor influencing adsorption efficiency was contact time. After 120 minutes, equilibrium was attained, and there was no discernible rise in removal efficiency. As the chromium content increased, the adsorption capacity (mg/g) increased until saturation, which meant that all of the carbon matrix's adsorption sites were taken. Adsorption was not improved by raising the chromium content any further.

Adsorption effectiveness was also affected by the dosage of activated carbon. Higher chromium removal was achieved by increasing the dosage above 0.1 g/L; nevertheless, adsorption effectiveness plateaued above 0.5 g/L. Particle aggregation, which lowers the effective surface area available for adsorption, could be the cause of this tendency.

3.2 Adsorption Isotherms and Kinetics

Experimental results underwent analysis through application of Temkin, Freundlich and Langmuir isotherm models. The highest accuracy came from the Langmuir isotherm model because it demonstrated adsorption occurring on a well-defined surface with homogeneous site availability. The maximal capacity of activated carbon as chromium adsorbent reached 55 mg/g. The monolayer adsorption process of chromium adsorbing onto activated carbon showed strong validation through an excellent correlation coefficient value of ($R^2 = 0.9977$).

The Freundlich isotherm assessed the adsorption behavior on surfaces featuring varying energy distributions. The measured data exhibited better correlation with the Langmuir model despite the existence of other models. Studies showed that the adsorption procedure delivered better results as the chromium concentration decreased based on the value of K_F . The Temkin isotherm showed inferior fit to Freundlich and Langmuir models due to its inability to provide noteworthy additional insights about adsorption energy variation.

Table1 : *Adsorption Parameters for Chromium Removal*

Parameter	Optimal Value
Ph	2
Contact Time (min)	120
Initial Cr(VI) Concentration (mg/L)	50
Activated Carbon Dosage (g/L)	0.5
Temperature ($^{\circ}\text{C}$)	30
Maximum Adsorption Capacity (mg/g)	55

3.3 Adsorption Kinetics

Pseudo-first-order, pseudo-second-order, and intraparticle diffusion models were used for kinetic analysis. The pseudo-second-order model outperformed the others in terms of alignment with the adsorption kinetics data, as evidenced by its greatest correlation coefficient ($R^2 > 0.98$). This suggests that the primary method of chromium removal is chemisorption, which involves the adsorbent and adsorbate forming chemical bonds. The chemisorptive nature of the adsorption process was further confirmed when the parameters of the pseudo-second-order model were established. This revealed a significant correlation between the model predictions and the empirically measured adsorption capacity.

3.4 Regeneration Results

Activated carbon's capacity for regeneration and reusability is one of its main benefits in the elimination of chromium. Seven adsorption-desorption cycles were used in this investigation to assess the regeneration potential of activated carbon. NaOH and HCl solutions were used to regenerate the activated carbon, and the effectiveness of the adsorption process was assessed during the cycles.

According to the data, the overall removal effectiveness decreased by only 10% after five cycles, while the activated carbon's adsorption capacity stayed at about 90% of its starting value. This indicates that activated carbon for chromium extraction has a high degree of reusability, which makes the procedure profitable for large-scale water cleaning. The loss of active adsorption sites or the buildup of contaminants on the carbon surface could be the cause of the modest decrease in efficiency over several cycles. Regeneration condition optimisation may help reduce these impacts even more.

3.5 Comparison with Other Adsorbents

The effectiveness of activated carbon was evaluated by contrasting it with other inexpensive adsorbents such as chitosan, zeolites, and biochar. Although zeolites showed lesser adsorption capabilities than activated carbon, they were found to be effective in removing chromium from aqueous solutions (Kumar et al., 2020). In this investigation, activated carbon was more successful than zeolites in removing chromium overall, despite the fact that some of them showed selectivity for particular metal ions.

Agricultural waste-derived activated carbon also demonstrated superior adsorption and regeneration capabilities compared to biochar. Beyond its high performance, activated carbon derived from agricultural residues offers significant environmental benefits by utilizing waste materials such as coconut shells and rice husks, which would otherwise be discarded. This approach contributes to sustainable waste management while providing an eco-friendly and efficient method for chromium removal in industrial-scale applications (Chen et al., 2021).

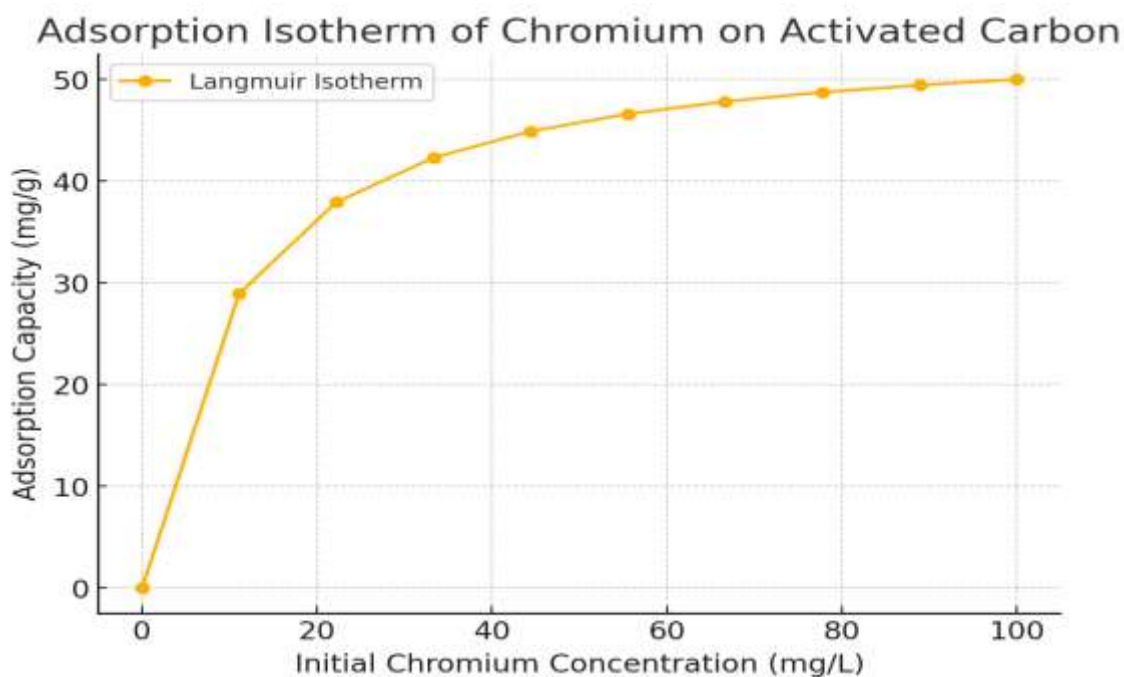


Figure 4: Adsorption Isotherm of Chromium on Activated Carbon

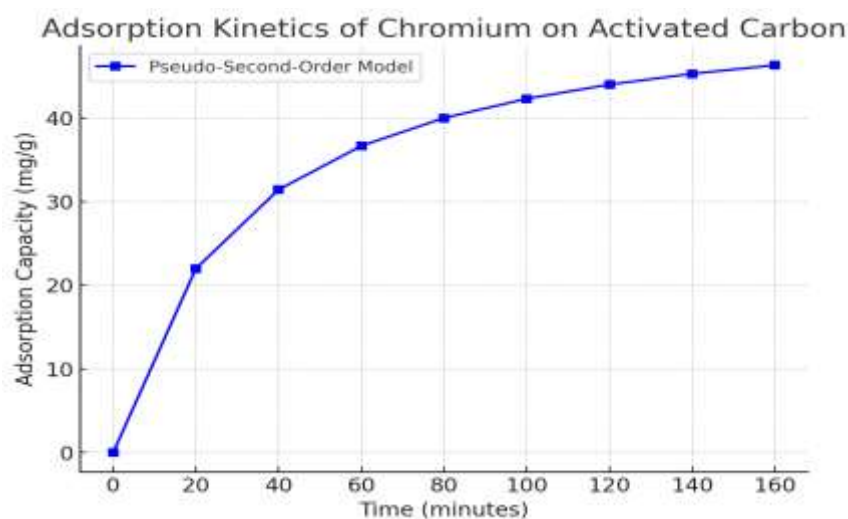


Figure 5: Adsorption Kinetics of Chromium on Activated Carbon

4. Discussion

In this study, the effectiveness of activated carbon made from agricultural waste in removing chromium from aqueous solutions under ideal circumstances was investigated. Important variables influencing adsorption efficacy included pH, contact duration, and dosage of activated carbon; the maximum chromium removal was attained at pH 2. Although pseudo-second-order kinetics indicated that chemisorption was a major factor in determining the adsorption rate, the adsorption behaviour was consistent with the Langmuir isotherm model, suggesting monolayer adsorption.

Activated carbon's feasibility as an affordable choice for extensive industrial applications was supported by regeneration tests, which showed that it could be recycled with little loss of adsorption capability. Activated carbon made from agricultural waste shown better adsorption effectiveness and reusability than other adsorbents such as charcoal and zeolites. By recycling agricultural wastes, its use also mitigates waste disposal issues and promotes sustainability. To assess its effectiveness in treating actual industrial effluents and to improve the regeneration procedure for widespread use, more study is necessary.

5. Future Directions

Future research could investigate the creation of composite adsorbents by combining materials like metal oxides and clays to improve the removal effectiveness of comparable adsorbents. Furthermore, hybrid treatment approaches that combine adsorption with cutting-edge procedures like membrane filtration, electrocoagulation, or others may increase the effectiveness of chromium removal while lowering operating expenses. The viability of adopting continuous-flow systems for chromium remediation using activated carbon is another exciting area for future research. This could improve process efficiency and scalability in industrial wastewater treatment applications.

6. Conclusion

For the removal of chromium from aqueous solutions, activated carbon made from agricultural waste has shown great promise as an economical and ecologically beneficial option. The best elimination happens at pH 2 within 120 minutes, and the adsorption process is affected by variables like pH, contact time, chromium concentration, and activated carbon dosage. Although the pseudo-second-order kinetics

point to chemisorption as the rate-determining phase, the process is consistent with the Langmuir isotherm model, which suggests monolayer adsorption. Activated carbon is a sustainable choice for industrial applications since regeneration tests verify that it retains its adsorption capacity over several cycles. Activated carbon has a greater adsorption capacity and regenerates more quickly than other adsorbents like charcoal and zeolites. This method not only offers a practical way to remove chromium, but it also helps to environmental sustainability and trash valuation. To evaluate its practicality and refine regeneration techniques for industrial-scale deployment, more study is required.

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EMERGING TECHNOLOGIES IN SOCIAL MEDIA

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Abstract

Social media has evolved beyond simple networking platforms and now plays a crucial role in communication, commerce, and information dissemination. This research explores four emerging technologies—Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), and Blockchain—and their impact on social media. AI has transformed content creation, personalization, and moderation, while AR and VR create immersive user experiences. Blockchain enhances security, transparency, and user control over data. Despite challenges such as AI bias, high costs of AR/VR, and blockchain scalability, these technologies collectively shape the future of social media. This paper provides an in-depth analysis of these technologies, highlighting their current applications, benefits, challenges, and future implications for the social media landscape.

Keywords: Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), Blockchain Technology, Social Media Transformation.

Introduction

The rapid evolution of social media is driven by technological advancements. AI, AR, VR, and blockchain have reshaped how users engage with content and interact within digital spaces. These technologies have transformed social media into an intelligent, immersive, and decentralized platform that offers dynamic user experiences. AI personalizes content recommendations, AR/VR creates interactive digital environments, and blockchain enhances security and user control. However, their integration also presents various challenges, including ethical concerns, financial constraints, and governance issues. This paper explores the influence of these technologies, their benefits, challenges, and prospects in greater detail.

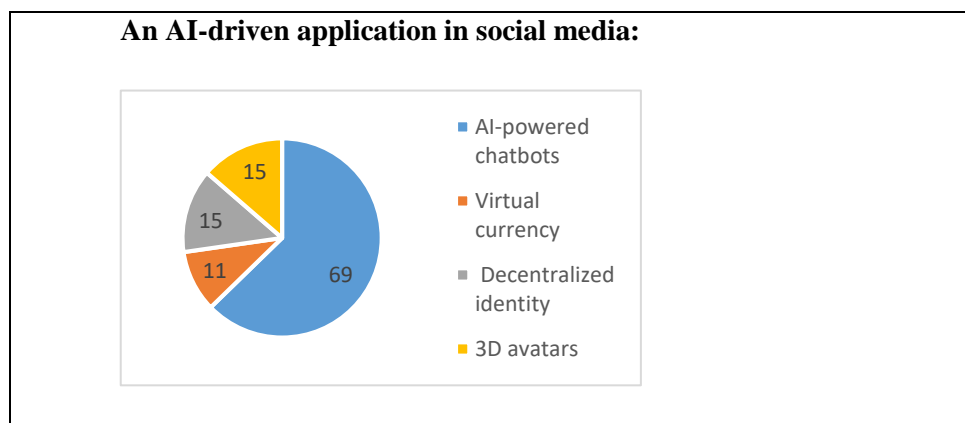
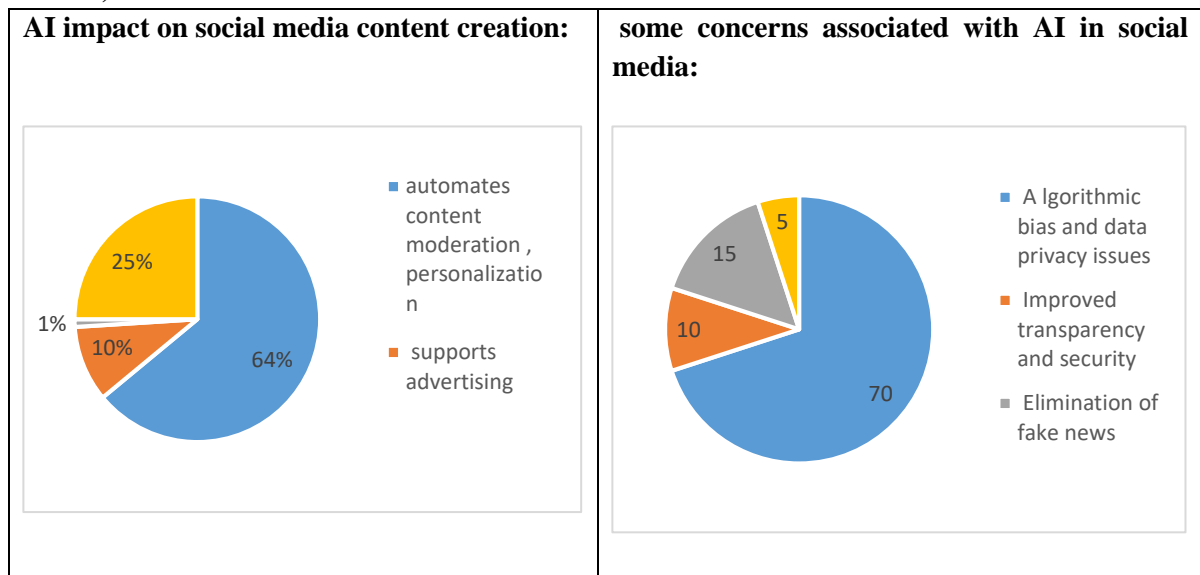
Research Methodology

This study employs a mixed-methods research approach to analyse the impact of AI, AR, VR, and blockchain on social media. A combination of qualitative and quantitative research methods was used to explore the influence of emerging technologies on social media. The study involved data collection through literature reviews, surveys, and a structured questionnaire was designed to assess user knowledge, perceptions, and opinions regarding the role of AI, AR, VR, and blockchain in social media. The questionnaire included:

- Questions on the fundamental concepts of AI, AR, VR, and blockchain.
- Queries about user experience with emerging technologies in social media.
- Questions assessing potential concerns such as privacy, bias, and accessibility.

A combination of qualitative content analysis and quantitative statistical techniques was used to interpret the data:

- **Descriptive statistics** were employed to summarize questionnaire responses and identify user perspectives.
- **Thematic analysis** was conducted on literature review findings to categorize emerging trends and challenges.
- **Comparative analysis** was performed to assess differences in perceptions among different user groups.

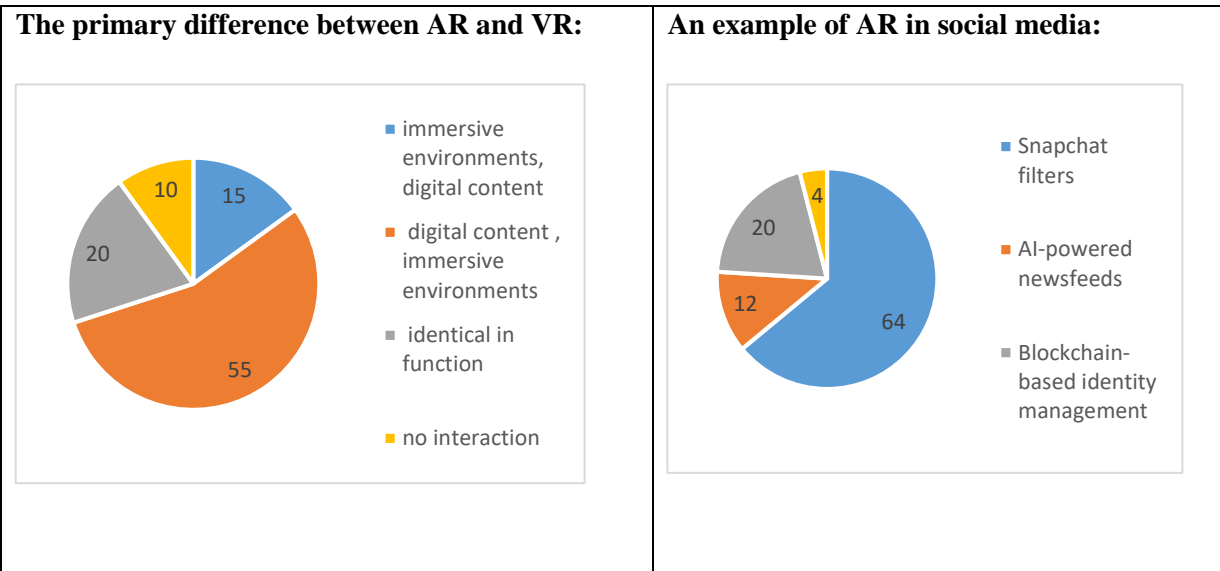
Analysis and Interpretation of data:**Chart 1,2 and 3:**

AI significantly impacts social media by automating content personalization, targeted advertising, and content moderation. AI-driven algorithms analyse user behaviour to tailor content, increasing engagement and satisfaction. Social media platforms like Facebook, Instagram, and TikTok use AI to enhance user experience by recommending personalized content and filtering spam or harmful material. AI chatbots are another crucial application, providing real-time customer support and engagement. Brands and businesses leverage AI-powered bots to interact with users, answer queries, and provide assistance efficiently. AI also plays a role in detecting hate speech, misinformation, and inappropriate content, ensuring a safer online environment for users.

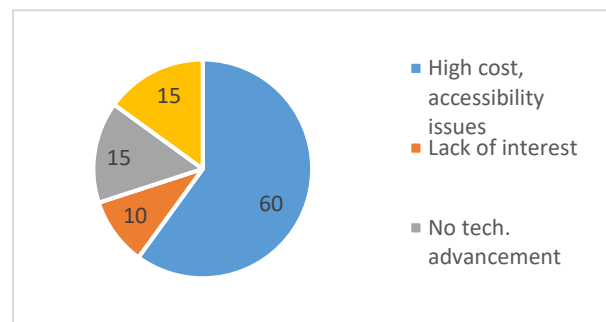
However, concerns arise regarding AI's role in social media. Algorithmic bias can reinforce societal inequalities, leading to discriminatory content recommendations. AI's reliance on vast user data raises privacy concerns, as data breaches and misuse can compromise personal information. Additionally, AI-generated misinformation, such as deepfake videos and fabricated news, threatens digital credibility

and influences public opinion. Addressing these issues requires enhanced regulatory measures, ethical AI practices, and user education on digital literacy.

Chart 4,5 and 6:



A major challenge of AR and VR in social media:



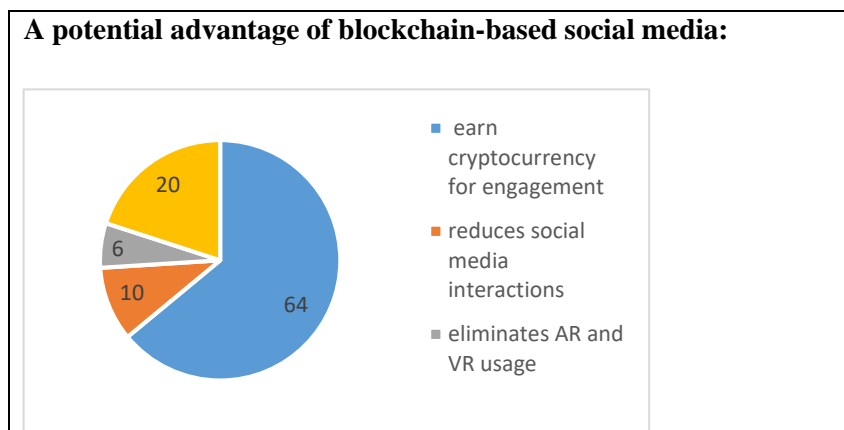
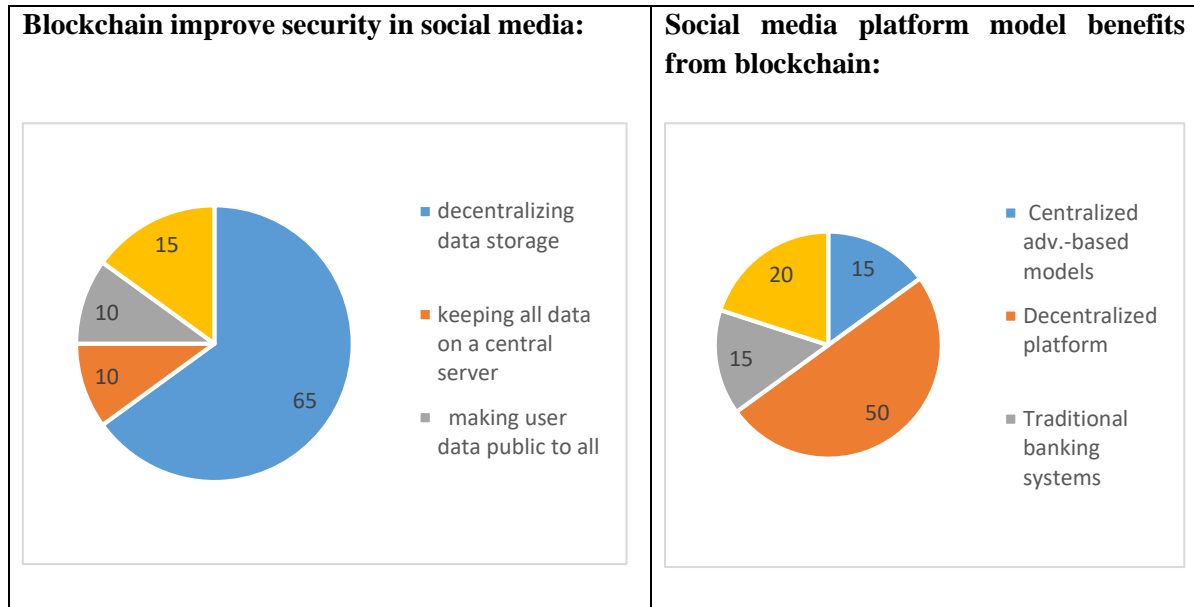
AR and VR enhance user engagement by blending digital elements with real-world experiences. AR overlays digital content onto the real world through smartphone cameras and wearable devices, creating interactive filters, virtual try-ons, and location-based enhancements. Popular applications of AR in social media include Snapchat filters, Instagram effects, and Pokémon GO-style experiences.

VR, on the other hand, offers fully immersive experiences by transporting users into virtual spaces. VR applications in social media enable virtual events, 360-degree video interactions, and collaborative digital environments. Companies like Meta (formerly Facebook) are developing VR-driven social platforms like Horizon Worlds, where users can meet, socialize, and interact in a fully digital realm.

Despite these advancements, challenges exist in AR/VR adoption. High costs of VR headsets and AR-capable devices limit accessibility. Additionally, technical constraints, such as hardware compatibility and internet speed requirements, hinder widespread implementation. Privacy concerns also emerge as these technologies collect vast amounts of user data to create personalized experiences. Overcoming

these challenges requires ongoing research, innovation, and investment in affordable, user-friendly AR/VR solutions.

Chart 7,8 and 9:



Blockchain introduces a decentralized approach to social media by improving data security, transparency, and user autonomy. Unlike traditional platforms that store data in centralized servers, blockchain distributes data across a network, reducing risks of hacking and censorship. This decentralized model ensures that users have greater control over their content, minimizing exploitation by social media corporations.

Blockchain-based social media platforms, such as Steemit and Minds, allow users to earn cryptocurrency rewards for content creation and engagement. This monetization model shifts power from advertisers and centralized corporations to individual users, fostering a more democratic digital economy. Furthermore, smart contracts in blockchain technology allow content creators to set their own terms for monetization and content usage.

However, blockchain integration in social media faces significant challenges. Scalability remains a primary concern, as processing transactions on a decentralized network requires high computational power and energy consumption. Regulatory uncertainties also hinder widespread adoption, as policymakers struggle to define legal frameworks for blockchain-based platforms. Additionally, user adoption of decentralized platforms is limited due to the technical expertise required for seamless participation. Addressing these challenges requires collaborative efforts between technologists, regulators, and social media users.

Conclusion

The convergence of AI, AR, VR, and blockchain is shaping the future of social media. These technologies enhance user engagement, security, and transparency while introducing innovative monetization models and interactive experiences. However, addressing challenges such as AI bias, AR/VR accessibility, and blockchain scalability is crucial for successful integration. Further research and investment in these fields are essential to unlock their full potential and create a more inclusive, transparent, and engaging social media ecosystem.

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INVESTIGATING MOBILE PAYMENT APPS USES WITH REFERENCE TO NAVI MUMBAI

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Abstract

E-wallets are merely a means of making instant payments using a mobile device. Thanks to IT industry technology and the appropriate software, payments may now be made via smartphones, tablets, iPhones, and other devices. Investigating how respondents who reside in and around Mumbai utilise mobile apps to make quick and easy payments is the aim of the study. Nowadays, it's becoming more and more normal to pay using a mobile device when making any kind of purchase. Secondary data is gathered via newspapers, news articles, smartphone updates, and advertisements; primary data is gathered from structured data filled out in the form of a consumer questionnaire.

While structured data collected through a consumer questionnaire is utilised to collect primary data, secondary data is gathered from newspapers, news articles, smartphone updates, and advertisements. Two hundred and five people have responded. The use of mobile wallets, along with their unique features, advantages, and other facets of mobile payments, are covered in the study's results.

Keywords: Mobile Apps, digital payments. E- Wallet, Mobile Payment.

INTRODUCTION:

These days, practically everyone owns a smartphone, and because of its incredible features and extensive use, utilising it to make payments has become normal. The client can use cellphones to make digital payments with the help of the many apps, such as PayPal, Google Pay, and many more. The advantage of this is that the customer can make payments without carrying cash, cheques, or credit cards. To utilise the features of the payment apps, users only need to enter their bank account details into the payment gateways.

Anyone who has downloaded such an app can easily and securely use a UPI Pin to access this transactional capability at any time and from any location. When compared to other digital payment methods like Net banking, the main benefit of using these apps—which are provided by the mobile payment sectors—is that they are free.

THE MOBILE PAYMENT CONCEPT

The resolution of any payments or transactions conducted through mobile applications (Apps) on smartphones, tablets, iPhones, or other portable devices designed with payment functionality in mind. Without paying any fees to the bank or app payment providers, the payments are made for friend money transfers, mobile phone recharges, necessary utility bills, and a variety of other services.

COMMONLY USED APPS IN INDIA:

1. Google Pay

Google Pay, also known as Android Pay, was once known as Tez in India, where young people strongly like it. It is the simplest type of app available to smartphone users at the moment. Google Pay requires NFC scanners and has multiple security levels.

2. Amazon Pay

With Amazon Pay, you may pay for goods, services, and donations on third-party websites and in apps using the payment methods that are already linked to your Amazon account.

3. PhonePe

PhonePe is a payment utility app that makes it simpler and safer for customers to pay for services by utilising the Unified Payment Interface (UPI). In order to encourage smartphone users to make digital payments, the corporation also offers a variety of coins, discounts, and coupons.

4. Mobikwik

Mobikwik, an online wallet, was created to facilitate smartphone payments. The company also provides account-based credit creation and loan facilities. The newest feature on Mobikwik is a quick financing facility.

5. PayPal

PayPal is another important and popular payment app in India. This dependable mobile program enables customers to transfer money from their smartphones with ease by utilising multi-security technology.

6. Paytm

Paytm is renowned for providing a mobile payment service that is customised for users to utilise on their phones. Everyone may use the features to make payments easily because it is available in eleven different languages. It is used to pay for a number of goods, such as visiting pharmacies, purchasing groceries, paying hotel bills, and recharging cell phones. Once again, this software is very popular for these types of mobile payments in India.

7. JioMoney

JioMoney, an app created by Reliance Industries, is widely used for utility payments, particularly cellphone recharges, as Jio is a well-known Reliance-based company. The procedure for adding money to this wallet is comparable to that of other apps that let you use a debit card, credit card, or even Netbanking.

8. WhatsApp Pay

WhatsApp is the newest mobile payment app available in India. The customer can send and receive payments to registered phone numbers, acquaintances, or relatives. There is absolutely no cost involved. Young people and students are already accustomed to WhatsApp's payment structure because it is already commonly used for sending free messages.

Many more similar options are available as mobile digital payment systems, including BHIM, Freecharge, Airtel Money, Pockets by ICICI Bank, and others.

IN THE WORLD OF MOBILE PAYMENT, WHAT'S NEXT?

NFC (near field communication) technology is the newest idea in the world of digital wallets. By managing and bringing the two NFC devices closer together to finish the transaction, this technology streamlines the payment process. Apple Pay and Samsung Pay are well-known companies that utilise this feature. The technology allows the two portable devices to link automatically, doing away with the requirement for a human connection.

Review of Literature:

Suma Vally and Hema Divya (2018)

They have attempted to comprehend the acceptance of digital payments in India from the standpoint of the consumer. Additionally, authors have tried to determine how consumers' use of digital payments is influenced by their educational attainment and income position. Descriptive approaches were used in the study to investigate customers' perspectives regarding the use of digital payment systems. In the end, the authors have concluded that the use of technology for digital payments has improved the performance of the banking sector.

Preeti Garg and Manvi Panchal (2016)

The article entitled “Study on Introduction of Cashless Economy in India 2016: Benefits and Challenge's”.

People's perceptions on India's cashless economy were investigated in this study. Coordinated polling was used to gather data for the study, which was carried out in the Delhi area. The fundamental rate approach was used for analysis. A cashless economy can help detect black money and counterfeit currency, combat illegal intimidation, lower the number of burglaries involving money, and improve our nation's financial development, according to respondents' comments. Notable obstacles including digital extortion, a high percentage of illiteracy, individual disposition, and an inefficient digital payment system could interfere with the approach's implementation.

According to the inquiry, India's introduction of a cashless economy might be seen as a step in the right direction. It helps in development and advancement of economy in India.

Moses-Ashike, H. (2011), —Cashless Economic can Reduce Risk of Carrying Huge Cashl, [Online] Available: <http://www.businessdayonline.com/.../22217>. [6].

The study, impact of cashless economy in Nigeria, focused on the three major categories by which Nigerians can be divided – traders, students and civil servants. Due to their greater interest in business and financial transactions, traders were sampled in greater numbers than students and civil personnel. Furthermore, the fact that more respondents were between the ages of 18 and 25 indicates that many young Nigerians are involved in commerce in addition to being students. This study demonstrates that Nigeria's adoption of a cashless economy can be viewed as a positive move. It is expected to have an impact on the modernisation of Nigeria's payment system, the reduction of high security and safety issues, and the cost of financial services. It must also make it easier for Nigerians to use banking services.

Heinonen & Standvik (2003) [5]

According to research, individuals consider mobile media to be more intimate than email and traditional methods. The author also pointed out that customers have high expectations, which include expecting to be totally disappointed when they receive unsolicited messages in addition to marketing communications messages on one side. This leads to a skewed perspective.

OBJECTIVES OF THE STUDY:

1. To determine the prevalence of mobile payments among smartphone owners.
2. To investigate the various popular apps available for mobile payments.

RESEARCH METHODOLOGY:**Research Design:**

Data collection sources: As part of an online survey, primary data is gathered using Google Forms and standardised questionnaires.

Newspapers, smartphone updates, and websites are sources of secondary information.

Sampling:

Sampling size was 244 and Convenience Sampling method was used.

Table no. 1

DATA ANALYSIS AND INTERPRETATION:

Type of Respondents	Frequency	%
Labours: Organised sectors	78	31.96
Labours: unorganised sectors	40	16.39
Households	45	18.44
Students/learners	61	25
Entrepreneurs	09	3.69
Others	11	4.51
Total	244	100

Table no. 2
Apps for mobile devices are popular among smartphone users

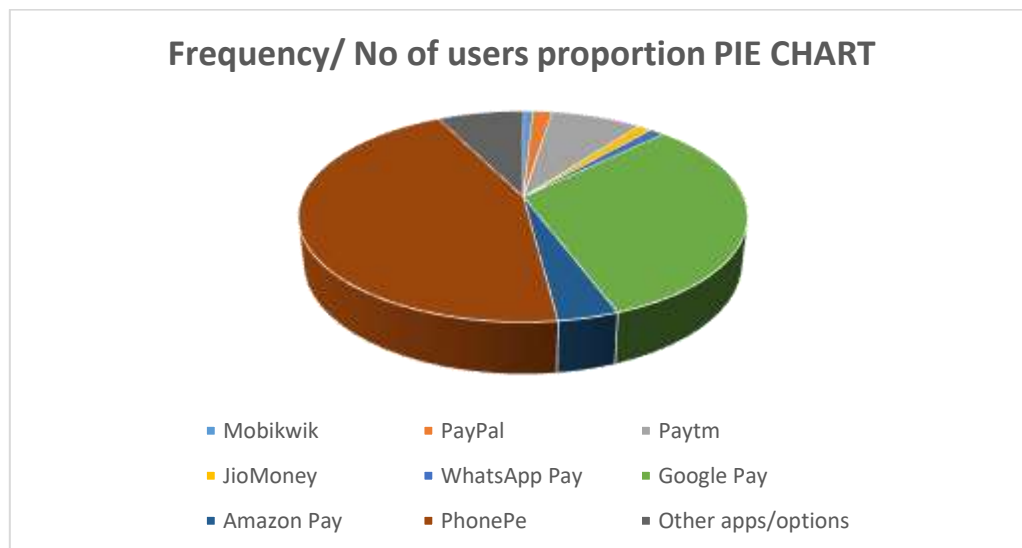
S.NO.	Name of Payment App	Frequency/ No of users	%
1	Mobikwik	2	0.81
2	PayPal	4	1.64
3	Paytm	19	7.79
4	JioMoney	3	1.23
5	WhatsApp Pay	3	1.23
6	Google Pay	77	31.55
7	Amazon Pay	9	3.69
8	PhonePe	109	44.67
9	Other apps/options	18	7.38
	Total	244	100

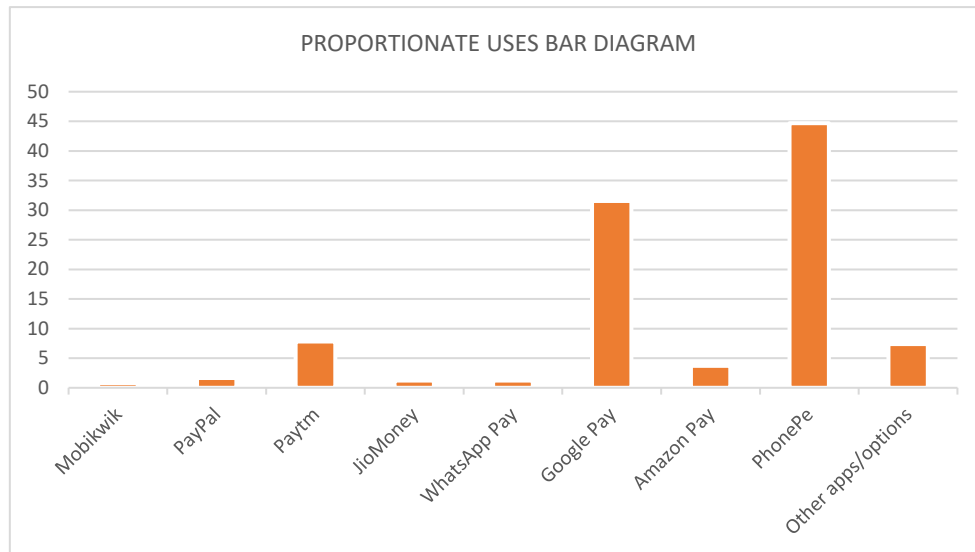
Source: Tabulation using primary data and a structured questionnaire.

INTERPRETATION OF RESEARCH CONDUCTED:

It is observed that 31.55% of respondents to the poll stated they make payments using Google Pay, 3.69% use the Amazon app, 44.67% of respondents use the PhonePe App on average, 0.81% of consumers use the Mobikwik App, 1.64% of consumers utilize PayPal, 7.79% use the Paytm App as their e-wallet, 1.23% of consumers are using JioMoney App, 1.23% use WhatsApp as their digital payment App and other payment options share is 7.38%.

The major market share is dominated by PhonePe and Google Pay which comes to almost 76.23% of total samples collected for the digital mobile transactions..





FINDINGS AND FUTURE:

Mobile online payment apps appear to be playing a major role in the country's drive towards a cashless and digital economy, with widespread acceptance and room to grow regionally. Additionally, it is evident that many facets of society have widely accepted the digital payment system. Researching the newest features or updates for mobile payment apps is the responsibility of the researchers. The disadvantages that smartphone users experience when using mobile wallet services can also be investigated.

LIMITATION OF THE STUDY:

The study's limiting factors include its budget and time constraints. In addition, people's reluctance to divulge personal information related to mobile payments was another factor contributing to the study's shortcomings.

CONCLUSION:

According to the study's findings, mobile payment apps are becoming more and more common due to their ease of use, security features, and currency immobility. Furthermore, there are very few additional costs related to utilising the payment option for portable devices. With new features added to different apps and a convenient geographic location for using online mobile payment apps, it is also easy to use and hassle-free. At the same time it has few concerns like OTP scams and network issues which are reported by many of respondents while data collection was done.

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ETHICAL IMPLICATIONS OF AI-GENERATED CONTENT AND DEEPPAKES ON SOCIAL MEDIA

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Abstract

Deepfake technology, powered by artificial intelligence, is revolutionizing digital media but also poses significant ethical and security challenges. This study aims to raise awareness about deepfake content on social media and its impact on individuals and society. As deepfakes become increasingly sophisticated, misinformation, identity theft, and reputational damage are growing concerns.

To address these risks, this research highlights key strategies, including enhancing public awareness, improving deepfake detection skills, and promoting digital literacy. Users must be educated on identifying manipulated content by analyzing facial inconsistencies, unnatural movements, and audio mismatches. Additionally, the study advocates for stronger legal frameworks, AI-driven detection tools, and responsible content moderation by social media platforms to curb the spread of harmful deep fakes. By equipping users with the knowledge and tools to critically evaluate online content, this study aims to foster responsible digital engagement. Encouraging ethical AI use and implementing precautionary measures can help mitigate the dangers associated with deepfake technology in an era of rapidly evolving digital media.

Keywords: Deepfakes, misinformation, digital literacy, AI ethics, identity theft, fraud, content moderation, detection tools.

Introduction:

The rise of artificial intelligence (AI) has revolutionized digital content creation, making it easier than ever to generate highly realistic images, videos, and audio. One of the most debated advancements in this area is deepfake technology, which uses AI to create synthetic media that can convincingly mimic real people. While this technology has creative and educational potential, it also raises significant ethical concerns, especially when integrated into social media platforms.

Deepfakes and other AI-generated content can be used to manipulate public perception, spread misinformation, and violate privacy. Social media, with its vast reach and rapid information sharing, makes it even harder to distinguish between real and fake content. Ethical concerns include issues of transparency, consent, privacy, and the potential harm caused by deception. Many users may not even realize when they are interacting with AI-generated content, leading to a loss of trust in digital communication.

This paper explores the ethical challenges of AI-generated content and deepfakes on social media. It examines how these technologies affect user trust, personal autonomy, and online safety. Additionally, it discusses possible solutions, including better regulation, improved detection tools, and responsible AI development. As AI continues to shape digital interactions, it is crucial to find a balance between innovation and ethical responsibility.

Objective of the Study

The Primary Objective of this study is to raise awareness about deepfake content on social media and its potential risks. As deepfake technology advances, it is essential to educate users on identifying and preventing misinformation. This study focuses on:

1. Raising Awareness: Educating about deepfakes and their impact.
2. Identifying Risks: Highlighting dangers like misinformation and identity theft.
3. Detecting Deepfakes: Spotting facial inconsistencies and unnatural movements.
4. Boosting Digital Literacy: Encouraging critical thinking and fact-checking.
5. Promoting Responsibility: Supporting stricter content moderation on platforms.

Statement of the Problem

Deepfake technology is making it harder to tell real content from fake on social media. While it has creative uses, it is also being misused to spread misinformation, damage reputations, and commit fraud. Many people are unaware of how deepfakes work and how to detect them, making them vulnerable to manipulation.

The lack of strict regulations and effective detection tools allows deepfake content to spread quickly, influencing public opinion and trust. This study aims to raise awareness, help users identify deepfakes, and promote responsible digital behavior to prevent the spread of false information.

Types of Deepfakes

Deepfakes come in various forms, depending on the type of content being manipulated and the purpose of their creation. Below are the main types of deepfakes:

1. Video Deepfakes

Video deepfakes manipulate recorded footage to swap faces, mimic actions, or alter expressions and speech. These are commonly used to replace one person's face with another's in movies, interviews, or viral videos.

2. Audio Deepfakes

Audio deepfakes use AI to mimic a person's voice. By analyzing voice patterns and speech, the technology creates realistic fake audio clips that sound like the original speaker. These are often used in scams or impersonations.

3. Image Deepfakes

Image deepfakes involve altering or generating still images. For example, AI can swap faces in photographs or create entirely new, non-existent people. These are often used in memes, social media posts, or advertising.

4. Text Deepfakes

Text deepfakes involve generating text that mimics a person's writing style or conversational tone. This type of deepfake is often used in email scams, fake articles, or online chats.

5. Live Deepfakes

Live deepfakes manipulate video and audio in real-time. They are used during live streams or video calls, where one person's face and voice are transformed into another's instantly.

6. Synthetic Media Deepfakes

These involve creating entirely new content—videos, images, or voices—that does not exist in reality. They are used in creative fields like movies, games, and advertising, as well as in generating virtual influencers or avatars.

While deepfakes have innovative applications in entertainment and education, their misuse for fraud, misinformation, and identity theft has raised ethical concerns.

Most Common Targets of Deepfake Technology

Deepfake technology has become a growing concern as it is increasingly used to manipulate video and audio content, often with harmful intentions. Some of the most common targets of deepfakes include:

1. Celebrities and Public Figures: High-profile individuals, such as actors, politicians, and influencers, are frequent targets of deepfake videos. These videos can be used to create fake endorsements, spread false statements, or damage reputations.

2. Women: Deepfakes are particularly used to exploit and harm women, with a significant number of manipulated videos involving non-consensual content. Many women have fallen victim to deepfakes, often in the form of pornographic content or videos meant to harass or intimidate them.

3. Politicians: Politicians are often targeted by deepfakes to manipulate public opinion or create fake scandals. Deepfakes can be used to generate misleading statements or portray them as saying things they never did, impacting their careers and public trust.

4. Corporate Leaders and Business Executives: Deepfakes are sometimes used to manipulate the public image of corporate leaders, either to harm their reputation or in some cases, to impersonate them for fraudulent purposes, such as convincing employees or business partners to take malicious actions.

4. Ordinary Citizens: Although less common, deepfake technology can also target regular individuals, with malicious actors creating fake videos to harass or defame people in personal or professional settings. This can include revenge porn, extortion, or falsely accusing someone of criminal activity.

Case Study: Deepfake Technology in India

The Rashmika Mandanna Incident

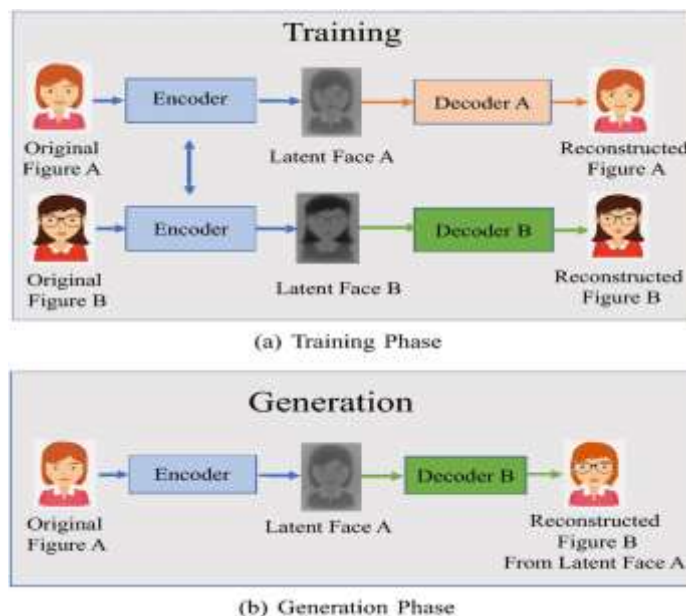
In India, deepfake technology has recently gained attention, with the viral incident involving actress Rashmika Mandanna serving as a prime example. A manipulated video of the actress was circulated widely on social media, misleading viewers and damaging her reputation. This case highlights the increasing prevalence of deepfake videos in India, posing significant ethical concerns related to privacy, consent, and the spread of misinformation. The incident emphasizes the urgent need for legal frameworks and ethical practices to address the malicious use of AI-generated content in the country. The Delhi police on Saturday arrested a 24-year-old B.Tech. graduate from Andhra Pradesh's Guntur district for creating the viral deepfake video of actor Rashmika Mandanna.

**Fig. 1**

Deepfake technology, which uses artificial intelligence to create hyper-realistic but fake videos, has become a growing concern globally, and India is no exception. It allows malicious individuals to manipulate videos, images, or audio recordings to create content that appears authentic, often with harmful intentions. The use of deepfakes for cyberbullying, defamation, and spreading misinformation poses a significant threat to individuals' privacy and security. As this technology advances, it has the potential to disrupt social media platforms, where content is shared at an alarming speed, exacerbating the damage. The rise of such deepfake incidents underscores the need for stricter regulations, AI-powered detection tools, and greater public awareness to combat its misuse.

simplified form called a latent face. These latent faces are then reconstructed using separate decoders, Decoder A for "Figure A" and Decoder B for "Figure B." This step ensures the model learns to accurately map and reconstruct the features of both faces.

Understanding the Process of Deepfake Creation

**Fig. 2**

Deepfake creation involves two key phases: the training phase and the generation phase, as shown in the figure. In the training phase, the neural network learns to process two different faces, "Figure A" and "Figure B." First, each face is passed through an encoder, which converts it into a

In the generation phase, the real manipulation happens. The face to be altered, like "Figure A," is encoded into its latent form. Instead of being reconstructed by its original decoder (Decoder A), it is passed through Decoder B. This swaps the facial features of "Figure A" with those of "Figure B," creating a new face that looks like "Figure B" but retains the expressions and movements of "Figure A."

The process is highly effective because the model learns detailed features, such as facial structure and expressions, during training. By swapping encoders and decoders, it can seamlessly create realistic, manipulated images.

Legal and Regulatory Framework for Deepfakes in India

India is increasingly becoming aware of the potential risks and harmful effects of deepfakes, which include misinformation, privacy violations, and cybersecurity threats. As a result, there are growing calls for stronger legal and technological measures to regulate deepfake content. Several legal provisions in India already address deepfake-related issues:

1. Information Technology Act, 2000

Section 66E (Violation of Privacy): Criminalizes unauthorized use and sharing of private images or videos.

Sections 67 & 67A (Obscenity & Sexually Explicit Content): Prohibits transmission of obscene or explicit deepfakes.

Section 69A (Blocking Powers): Allows the government to block harmful deepfake content.

2. Indian Penal Code (IPC) / Bhartiya Nagarik Sanhita (BNS)

Defamation (Sections 499/356(1) & 500/356(4)): Covers reputation-damaging deepfakes.

Criminal Intimidation (Sections 503/351(1)): Targets deepfakes used for threats or blackmail.

Cheating by Personation (Sections 419/319(1)): Addresses fraudulent deepfake identity misuse.

Voyeurism & Stalking (Sections 354C/77 & 354D/78): Penalizes non-consensual or harassing deepfakes.

3. Indecent Representation of Women (Prohibition) Act, 1986

Criminalizes manipulating or distributing exploitative deepfake content involving women.

4. Digital Personal Data Protection Act, 2023

Requires consent for using personal images or likeness in deepfakes. Grants individuals' rights to access, correct, and delete personal data misused in deepfakes.

5. Cybersecurity Framework in India

CERT-In & Cyber Crime Cells: Handle deepfake-related cybercrimes but struggle with limited resources.

Intermediary Guidelines, 2021: Mandate social media platforms to remove harmful deepfake content when reported.

Overall, India's legal framework for deepfakes is evolving, with existing laws offering some protection against their harmful effects. However, enforcement remains challenging, especially given the global nature of the internet and the rapid spread of deepfake content. For more effective regulation, India could benefit from international collaborations and further legislative reforms that focus specifically on deepfake technology and its societal risks. make this lightly short

Hypothesis for the Study

Null Hypothesis (H_0):

The presence of deepfake technology and AI-generated content does not significantly impact public trust in social media, the spread of misinformation, or concerns regarding fraud and identity theft.

Alternative Hypothesis (H_1):

Deepfake technology and AI-generated content significantly impact public trust in social media, contribute to the spread of misinformation, and raise concerns about fraud and identity theft.

Data Collection

a. Primary Data: Primary data has collected through well-structured questionnaire from respondents.

b. Secondary Data: Secondary data has collected from books, journals, magazines, newspapers and internet for this study.

Data Collection Tool: Structured questionnaire was asked to respondents using Google form platform.

Sample: Total 101 sample of male and female respondents were collected that the researcher to draw conclusion.

Sampling Technique: Non probability Convenient Sampling method is used for this research.

Data Analysis & interpretation

Data analysis and interpretation is the process of giving meaning to collect data and determining interferences, meaning and conclusions.

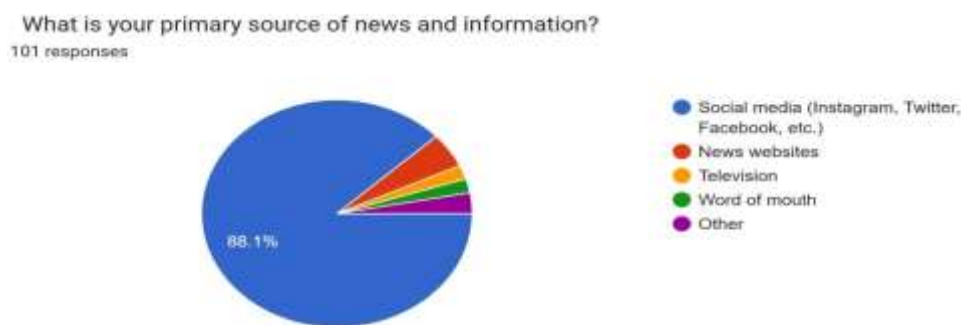


Fig 1.1. Preferred Sources of News and Information

Out of **101 responses**, most of the respondents rely on **social media (Instagram, Twitter, Facebook, etc.)** as their primary source of news and information, accounting for **88.1%**. **News websites** are used by **5%** of respondents, while **television** and **word of mouth** are each preferred by **2%**. Additionally, **3%** of respondents rely on other sources for their news and information.

Do you follow influencers or pages that discuss tech ethics or AI-related topics?
101 responses

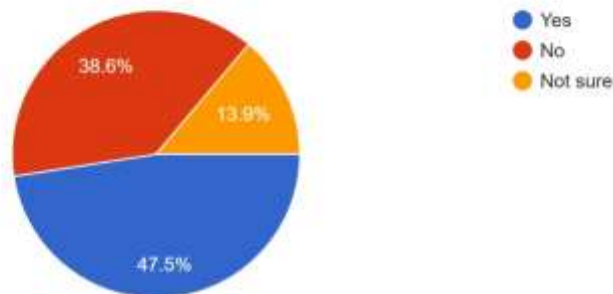


Fig 1.2. Engagement with Tech Ethics and AI-Related Content

Out of **101 responses**, **47.5%** of respondents follow **influencers or pages** that discuss **tech ethics or AI-related topics**. Meanwhile, **38.6%** do not follow such content, and **13.9%** are **unsure** about their engagement with these topics.

Have you ever heard of deepfake technology?
101 responses

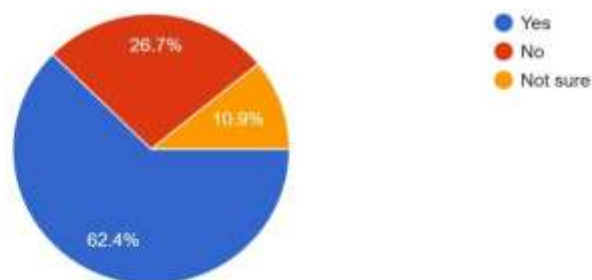


Fig 1.3. Awareness of Deepfake Technology

Out of **101 responses**, **62.4%** of respondents have heard about **deepfake technology**, indicating a moderate level of awareness. However, **26.7%** of respondents are **not familiar** with deepfakes, while **10.9%** are **unsure** about their knowledge of this technology.

Have you ever come across AI-generated content (e.g., fake images, videos, or text) on social media?
101 responses

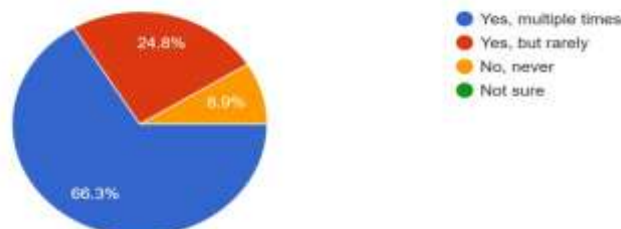


Fig 1.4. Exposure to AI-Generated Content on Social Media

Out of 101 responses, a significant 66.3% of respondents have encountered AI-generated content multiple times on social media. Additionally, 24.8% have come across such content but only rarely. Meanwhile, 8.9% of respondents have never encountered AI-generated content, and none were unsure.

How confident are you in identifying deepfake videos or AI-generated content?
101 responses

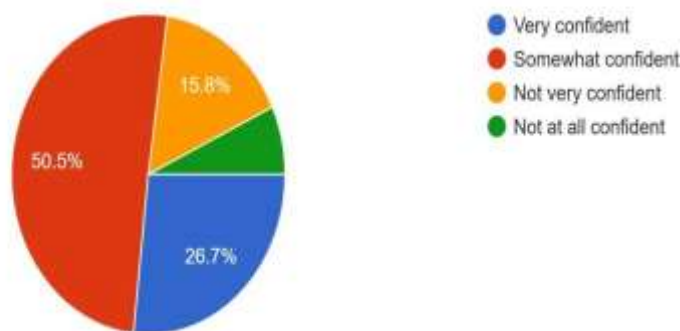


Fig 1.5. Confidence in Identifying Deepfake or AI-Generated Content

Out of 101 responses, respondents showed varying levels of confidence in identifying deepfake videos or AI-generated content: 26.7% are very confident in detecting deepfakes, 50.5% are somewhat confident, indicating they have some awareness but may struggle with more advanced deepfakes, 15.8% are not very confident, suggesting a need for better understanding and training, 6.9% are not at all confident, meaning they may be easily misled by AI-generated content.

Do you think deepfakes can be used to spread misinformation?
101 responses

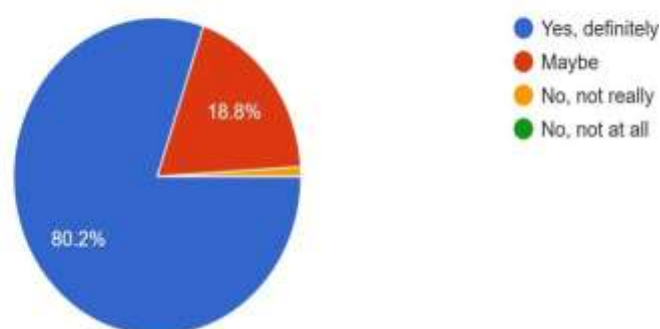


Fig 1.6. Potential of Deepfakes in Spreading Misinformation

Out of **101 responses**, a vast majority of respondents believe that **deepfakes can be used to spread misinformation: 80.2%** answered **"Yes, definitely,"** highlighting strong concerns about the misuse of deepfake technology, **18.8%** responded with **"Maybe,"** indicating some uncertainty about the extent of its impact, **1%** believe **deepfakes are not really a threat**, while **0%** completely dismiss the possibility.

How concerned are you about deepfakes being used for fraud, scams, or identity theft?
101 responses

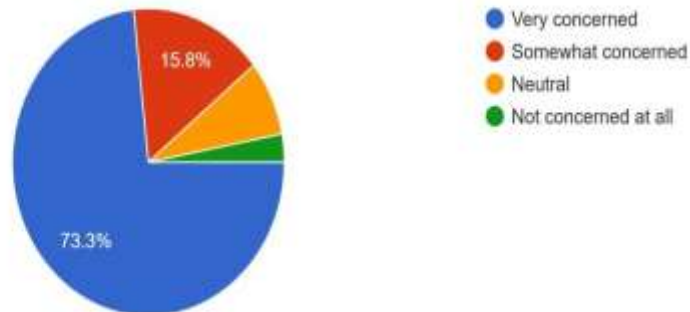


Fig 1.7. Concerns About Deepfakes in Fraud, Scams, and Identity Theft

Out of 101 responses, a majority of respondents express concern about deepfakes being used for fraudulent activities: 73.3% are very concerned, highlighting significant awareness of the risks, 15.8% are somewhat concerned, indicating a moderate level of worry, 7.9% are neutral, meaning they neither see it as a major threat nor dismiss it entirely, 3% are not concerned at all, suggesting they do not perceive deepfake-related fraud as a significant issue.

Do you believe social media companies should take stronger action against AI-generated fake content?
101 responses

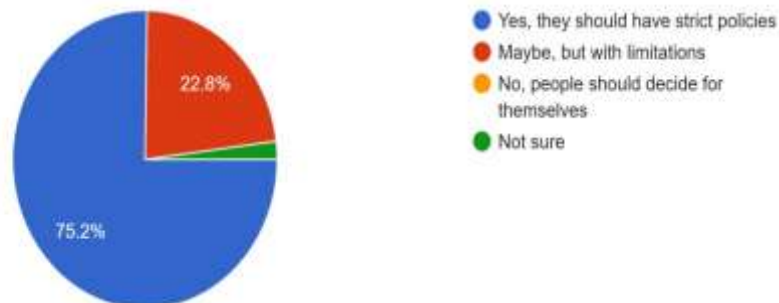


Fig 1.8. Role of Social Media in Regulating AI-Generated Fake Content

Out of 101 responses, the majority of respondents believe that social media companies should take stronger action against AI-generated fake content: 75.2% believe strict policies should be enforced to combat deepfakes, 22.8% think action should be taken but with limitations, indicating concerns about overregulation or free speech, 0% believe users should decide for themselves, showing a strong preference for platform accountability, 2% are not sure, suggesting a lack of clarity on the effectiveness of such measures.

Have you ever been fooled by an AI-generated image, video, or news story?
101 responses

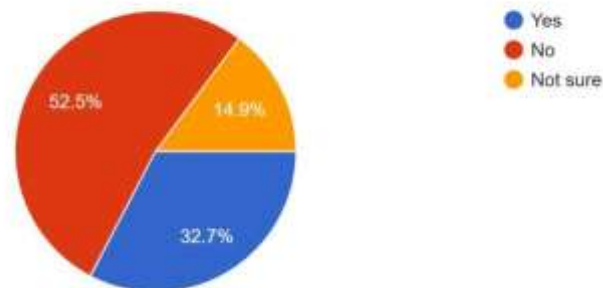


Fig 1.9. Experience of Being Fooled by AI-Generated Content

Out of 101 responses, respondents shared their experiences with AI-generated deception: 32.7% admitted to being fooled by an AI-generated image, video, or news story, 52.5% said they have never been deceived by such content, 14.9% were not sure, indicating uncertainty about whether they had encountered AI-generated misinformation.

If you found out a viral video was AI-generated or deepfake, how would it affect your trust in social media?
101 responses

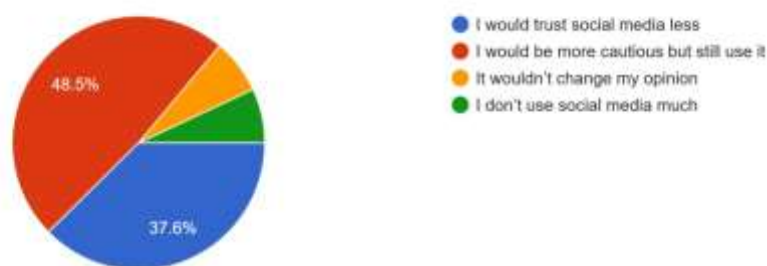


Fig 1.10. Impact of AI-Generated Content on Trust in Social Media

Out of 101 responses, 37.6% would trust social media less due to misinformation concerns, while 48.5% would remain cautious but still use it. Meanwhile, 6.9% said their opinion wouldn't change, and 6.9% don't use social media much, making deepfake exposure less impactful for them.

What should be done to stop the spread of deepfake misinformation? (Select all that apply)
101 responses

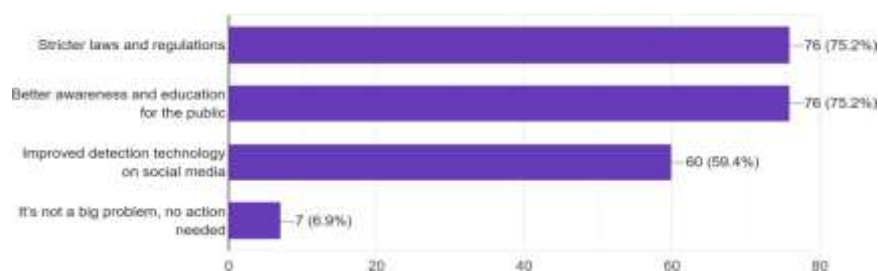


Fig 1.11. Measures to Stop the Spread of Deepfake Misinformation

Out of 101 responses, respondents shared their views on how to combat deepfake misinformation: 75.2% support stricter laws and regulations, emphasizing the need for legal action, 75.2% believe in better public awareness and education, highlighting the role of media literacy, 59.4% advocate for improved detection technology on social media, suggesting AI tools for early identification, 6.9% think no action is needed, indicating they don't perceive deepfakes as a major issue.

Results & Discussions

1. Out of 101 responses, 88.1% of respondents rely on social media (Instagram, Twitter, Facebook, etc.) as their primary source of news and information. Only 5% use news websites, while 2% prefer television and word of mouth each, and 3% rely on other sources.
2. 62.4% of respondents have heard about deepfake technology, while 26.7% are unaware and 10.9% are unsure of its existence.
3. 66.3% of respondents have come across AI-generated content multiple times, whereas 24.8% have rarely seen it, and 8.9% have never encountered such content.
4. Only 26.7% feel very confident in identifying deepfakes, while 50.5% are somewhat confident, 15.8% are not very confident, and 6.9% are not confident at all.
5. 80.2% believe deepfakes can definitely be used to spread misinformation, while 18.8% think it's a possibility. Only 1% think deepfakes are not a real concern.
6. 73.3% of respondents are very concerned about deepfakes being used for fraud, scams, or identity theft, while 15.8% are somewhat concerned, and only 3% are not concerned at all.
7. 37.6% said they would trust social media less if they found out a viral video was a deepfake, while 48.5% would be more cautious but still use it.
8. 75.2% believe social media companies should have strict policies against deepfake content, while 22.8% support action with some limitations. Only 2% are unsure.
9. 32.7% admitted to being fooled by an AI-generated image, video, or news story, whereas 52.5% said they haven't, and 14.9% were unsure.
10. 75.2% of respondents support stricter laws and regulations to combat deepfake misinformation, while 75.2% also advocate for better public awareness and education. Additionally, 59.4% believe improved AI detection tools on social media are necessary.

The study finds that deepfake technology is a major threat to misinformation, fraud, and public trust in digital content. Since most people rely on social media for news, they are more exposed to AI-generated misinformation. While awareness of deepfakes exists, many struggle to identify them, making it easier for false content to spread. The Alternative Hypothesis (H_1) is supported, confirming that deepfakes significantly impact trust in social media and raise concerns about misinformation and fraud.

The Null Hypothesis (H_0) is rejected, proving that deepfakes are a real and serious issue. To tackle this problem, stricter rules, better digital education, and improved AI detection tools are needed. Social media platforms must take stronger action to limit deepfake content and educate users to reduce its harmful effects.

Combating Deepfake Threats: Solutions for a Safer Digital World

1. Detection Tools:

Investing in advanced AI-powered detection tools is crucial for accurately identifying deepfake content. These technologies can analyze facial features, movements, and audio to flag manipulated media, providing an effective defense against the growing deepfake threat.

2. Education and Awareness:

Raising public awareness about deepfakes is essential. Educating individuals on how deepfakes work and how to spot them can help people recognize manipulated content before believing or sharing it. This knowledge empowers users to make informed decisions about the media they encounter.

3. Legal Frameworks:

Stronger laws are needed to address the creation and distribution of harmful deepfakes. Governments should implement strict penalties for those who use deepfakes for fraud, defamation, or other malicious purposes, helping to deter the misuse of this technology.

4. Platform Responsibility:

Social media platforms must take proactive measures to monitor and remove harmful deepfakes. By adopting AI-based detection systems and enforcing strict content moderation policies, platforms can significantly reduce the spread of misleading media.

5. Public Awareness Campaigns:

Promoting critical thinking and responsible sharing is key to reducing the impact of deepfakes. Public campaigns should encourage individuals to verify content before sharing and engage in fact-checking practices, helping to combat the rapid spread of misinformation online.

How to Spot a Deepfake: A Simple Guide

Deepfake technology is getting so advanced that fake faces can look more real than actual people! A study published in Proceedings of the National Academy of Sciences USA found that AI-generated faces are nearly impossible to distinguish from real ones. But don't worry—there are still ways to spot them.

1. Blinking Patterns

A natural blink rate is hard to replicate in deepfakes. Fake videos often show unnatural blinking or even moments where the person doesn't blink at all.

2. Face & Body Mismatch

Many deepfakes only swap faces, not full bodies. Look for mismatched proportions, odd facial expressions that don't fit body movements, or unnatural posture.

3. Video Length

Creating a high-quality deepfake takes time and computing power. That's why most fake videos are usually short—just a few seconds long.

4. Sound & Lip-Syncing Issues

If the lips don't sync perfectly with the voice, or if the video has no sound at all, it could be a sign of a deepfake. Some AI struggles to match speech with mouth movements.

5. Unnatural Mouth Details

AI-generated faces often struggle with realistic teeth, tongues, and the inside of the mouth. If these areas look blurry or strange, the video might be fake.

6. Odd Skin & Facial Features**Look for unusual details like:**

- Shadows that don't look right
- Skin that is either too smooth or too wrinkled
- Strange moles or facial hair that seem unrealistic
- Oddly colored lips

7. Use Technology to Verify

There are tools available to detect deepfakes, including AI-based software and live verification methods like real-time selfies or video calls.

Conclusion of the study

The study highlights the growing impact of deepfake technology on misinformation, public trust, and cybersecurity. With social media being the primary news source for most individuals, the risk of exposure to AI-generated misinformation is significantly high. While awareness of deepfakes is moderate, many struggle to identify them, making it easier for false information to spread.

A majority of respondents recognize deepfakes as a tool for misinformation and fraud, expressing concerns over identity theft and online scams. Despite this, trust in social media remains, though users are becoming more cautious. The demand for stricter regulations, improved AI detection tools, and better digital literacy is evident, with most respondents advocating for stronger policies by social media companies to tackle deepfake-related threats.

India's legal framework provides partial protection against deepfakes through laws like the IT Act, IPC, and Digital Personal Data Protection Act, but enforcement challenges persist due to the rapid evolution of technology. Strengthening legal measures, international collaborations, and proactive interventions by regulatory bodies are crucial in addressing deepfake threats.

Overall, combating deepfake misinformation requires a multi-faceted approach, including legal reforms, technological advancements, and public awareness campaigns. By enhancing media literacy and strengthening cybersecurity measures, the risks associated with deepfakes can be effectively mitigated, ensuring a more secure and trustworthy digital environment.

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AN ANALYTICAL STUDY ON HOW DIGITAL MARKETING INFLUENCES GENERATION Z CONSUMERS' CHOICES IN THE FOOD INDUSTRY

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Abstract

This study examines the impact of digital marketing on Generation Z consumers' choices in the food industry. With the increasing reliance on digital platforms such as Instagram, TikTok, and YouTube, Gen Z engages with brands through influencer marketing, AI-driven recommendations, and online promotions. This research explores how digital marketing strategies shape consumer preferences, trust, and purchasing behavior.

The study utilizes primary data collected through a structured survey of 66 respondents within the 18-26 age group. It analyzes consumer trust in digital marketing, the effectiveness of influencer endorsements, and the role of personalized marketing in decision-making. Findings reveal that Gen Z prioritizes user-generated content, with 43.9% trusting peer reviews over official brand communication. While interactive content and influencer marketing significantly impact engagement, skepticism toward misleading advertisements remains a concern.

Key insights suggest that brands should prioritize authenticity, transparency, and engaging digital experiences to build consumer trust. The study contributes to understanding Gen Z's digital consumption patterns and provides recommendations for businesses to optimize digital marketing strategies.

1. Introduction

1.1 Overview of the Study

Digital marketing has emerged as a key driver of consumer choices, especially among Generation Z. As a tech-savvy and socially connected demographic, Gen Z extensively relies on digital platforms for discovering, evaluating, and purchasing food products. The increasing adoption of social media, AI-driven personalization, and influencer marketing has fundamentally reshaped the way food brands engage with Gen Z consumers.

The food industry has transitioned to a digital-first approach, leveraging platforms like Instagram, TikTok, and YouTube for marketing campaigns. Unlike traditional advertising, digital marketing offers an interactive and highly personalized experience, making it particularly appealing to Gen Z. This study analyzes the influence of digital marketing on Gen Z's food consumption behavior, focusing on social media trends, influencer credibility, AI-driven recommendations, and brand transparency.

1.2 Background of the Problem

Generation Z, the first digital-native generation, increasingly relies on digital content for decision-making. The food industry, in response, has adapted by shifting focus from traditional advertising to digital strategies. However, issues such as brand authenticity, misleading advertising, and data privacy concerns present challenges. Understanding how digital marketing impacts Gen Z's food choices is essential for brands seeking to build trust and long-term engagement.

1.3 Significance of the Study

This study is significant for consumers, marketers, digital platforms, and policymakers. It provides insights into Gen Z's digital behavior, helping businesses craft effective marketing strategies. Additionally, it highlights the need for ethical advertising and transparency in influencer partnerships.

1.4 Research Gap

Despite substantial research on digital marketing, limited studies focus on its specific influence on Gen Z's food choices. There is also a lack of research on how authenticity, trust, and AI-driven marketing

influence decision-making. This study addresses these gaps by exploring Gen Z's engagement with digital food content.

2. Literature Review This section examines existing research on digital marketing's influence on consumer behavior, focusing on:

- **Consumer Trust and Credibility:** Studies indicate that Gen Z values peer reviews over brand advertisements.
- **Influence of Positive and Negative Reviews:** Negative reviews impact decisions more than positive reviews.
- **The Growing Concern of Fake Reviews:** AI-driven fraud detection systems are critical in maintaining authenticity.
- **Theoretical Frameworks:** The study applies the Theory of Planned Behavior and Social Cognitive Theory to understand digital influence on Gen Z's decision-making.

3. Research Methodology

3.1 Research Design

The study adopts a descriptive research design, incorporating quantitative and qualitative methods to analyze digital marketing's impact on Gen Z's food choices.

3.2 Data Collection Methods

- **Primary Data:** A structured survey was conducted among 66 Gen Z respondents, utilizing multiple-choice and open-ended questions.
- **Secondary Data:** Information was sourced from academic journals, industry reports, and digital marketing studies.

3.3 Scope of the Study

The study focuses on Gen Z consumers engaging with digital food marketing across platforms like Instagram, YouTube, and food delivery apps. The research does not analyze traditional marketing methods.

4. Data Analysis and Findings

Age Group of Respondents

- 92.37% of respondents belong to the 18-26 age group, showing that young adults are the most engaged in online reviews and digital shopping.
- 7.63% of responses fall under N/A (Not Applicable), indicating that some participants either preferred not to disclose their age or the data was not recorded.

The dominance of the 18-26 age group highlights the strong influence of Gen Z consumers in digital marketing. This demographic actively seeks online reviews before making purchasing decisions, making them a crucial audience for brands leveraging digital engagement. The N/A responses suggest that some respondents may not have found the age question relevant or preferred privacy, but their inclusion does not significantly impact the primary insights from the survey.

Gender Distribution of Respondents

- 39.4% of the respondents are male, indicating that a significant portion of Generation Z males engage with digital marketing strategies when making food-related purchase decisions.
- 60.6% of the respondents are female, showing a higher level of interaction with digital marketing in the food industry.

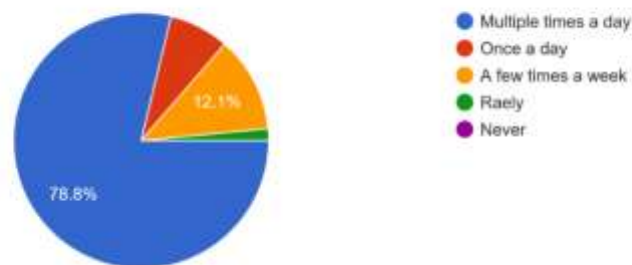
The survey highlights that female Generation Z consumers engage more actively with digital marketing strategies in the food industry compared to males. This suggests that marketing campaigns targeting

food-related products should prioritize strategies that appeal to female preferences, such as influencer marketing, visually appealing content, health-conscious promotions, and brand trust-building initiatives.

However, the 39.4% male participation indicates that a considerable portion of men also respond to digital marketing, possibly favouring discount-driven promotions, product reviews, and convenience-based marketing (e.g., fast delivery options and meal deals).

These insights suggest that brands in the food industry should craft gender-inclusive marketing strategies, balancing engagement techniques that resonate with both male and female consumers in Generation Z.

1). How often do you come across food-related advertisements on social media platforms?
66 responses



a) Frequency of Encountering Food-Related Advertisements on Social Media

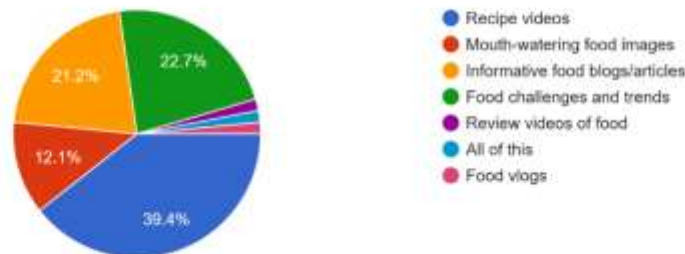
- **78.8%** of respondents come across food-related advertisements **multiple times a day**, indicating a high frequency of exposure to digital marketing in the food industry.
- **12.1%** of respondents see such advertisements **once a day**, showing that daily exposure to food-related promotions is common.
- A smaller percentage of respondents view these ads **a few times a week**, while very few **rarely or never** come across them.

The data suggests that **food-related advertisements have a strong presence on social media platforms**, ensuring that Generation Z consumers frequently engage with digital marketing efforts in the food industry. The high percentage of respondents encountering ads multiple times a day highlights the **intensive use of targeted advertising, influencer collaborations, and AI-driven recommendations** by food brands.

This insight reinforces the importance of **consistent and engaging digital marketing strategies**, as **frequent exposure** can enhance brand recall and influence purchasing decisions. Brands should focus on **creative, visually appealing, and interactive content** to stand out in a competitive digital space and maintain consumer interest.

2).What type of digital content (videos, images, blogs, etc.) related to food do you engage with the most?

66 responses



b) Type of Digital Food Content Engaged With the Most

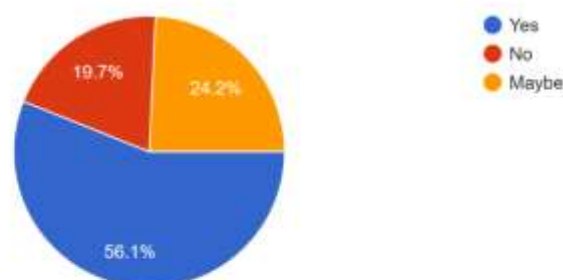
- **39.4%** of respondents engage most with **recipe videos**, indicating a strong preference for step-by-step cooking content.
- **22.7%** prefer **food challenges and trends**, showing that interactive and viral food content attracts a significant audience.
- **21.2%** engage with **informative food blogs/articles**, suggesting that many consumers rely on digital content for nutritional insights and industry trends.
- **12.1%** are drawn to **mouth-watering food images**, highlighting the impact of visually appealing food content in marketing.
- A smaller percentage of respondents engage with **review videos, food vlogs, or all types of food content**.

The data suggests that video content dominates consumer engagement in digital food marketing, with recipe videos and food trends being the most popular. This emphasizes the need for brands and food influencers to focus on high-quality video production, engaging storytelling, and interactive content to capture consumer interest.

Additionally, the popularity of informative food blogs indicates that consumers also seek educational content about food, including health benefits, recipes, and industry insights. Marketers should blend entertainment with information to maximize reach and influence purchasing decisions effectively.

3).Have you ever made a food purchase influenced by an online advertisement?

66 responses



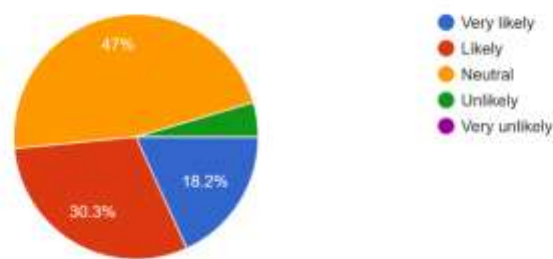
c) Influence of Online Advertisements on Food Purchases

- **56.1%** of respondents stated **"Yes"**, indicating that they have made a food purchase influenced by an online advertisement.
- **24.2%** responded **"Maybe"**, suggesting that while they may not consciously acknowledge the influence, online ads likely play a role in their purchasing decisions.
- **19.7%** of respondents answered **"No"**, showing that a smaller portion of consumers do not rely on digital marketing for food-related purchases.

The data clearly demonstrates that a majority of Generation Z consumers (56.1%) are directly influenced by digital marketing in their food purchases, emphasizing the effectiveness of online advertisements. The 24.2% who answered "Maybe" further indicate that even those who are unsure could be subtly influenced by digital marketing strategies.

This highlights the critical role of social media promotions, targeted advertising, and influencer marketing in shaping food consumption choices. Brands should leverage engaging visual content, personalized ads, and interactive campaigns to strengthen their impact on Gen Z consumers.

4).How likely are you to try a new food product that you discovered through a digital ad?
66 responses

**d) Likelihood of Trying a New Food Product Discovered Through a Digital Ad**

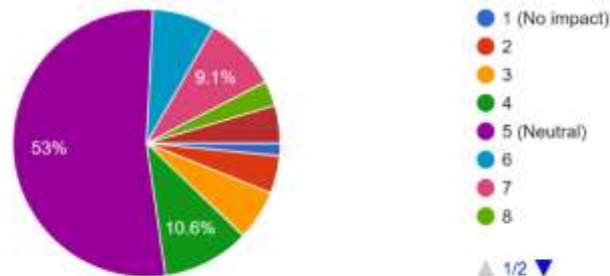
- **18.2%** of respondents are **"Very likely"** to try a new food product they discovered through a digital ad.
- **30.3%** are **"Likely"**, showing a strong inclination towards trying new products based on online promotions.
- **47%** are **"Neutral"**, indicating that while they do not actively seek out products from digital ads, they might consider trying them under the right circumstances.
- A **small percentage** of respondents fall under the **"Unlikely"** and **"Very unlikely"** categories, suggesting minimal resistance to digital food advertisements.

The data shows that a significant portion of Generation Z consumers (48.5%) are likely or very likely to experiment with new food products based on digital advertising. The 47% neutral responses suggest an opportunity for brands to further engage and persuade hesitant consumers through appealing promotions, influencer endorsements, and compelling content.

This highlights the effectiveness of digital ads in generating curiosity and influencing food choices among Gen Z, making it essential for food brands to focus on eye-catching visuals, authentic testimonials, and interactive ad formats to drive conversions.

5). On a scale of 1 to 10, how much do influencer endorsements impact your food choices?

66 responses



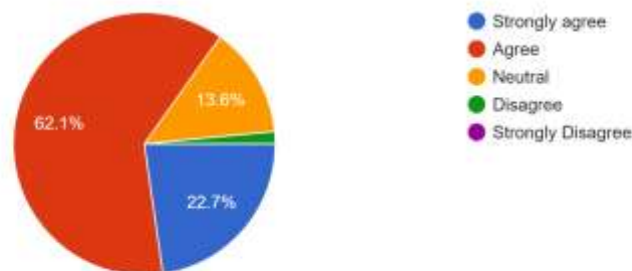
e) Impact of Influencer Endorsements on Food Choices

- **53% of respondents rated their influence level as 5 (Neutral)**, indicating that influencers neither strongly impact nor completely fail to affect their food choices.
- A **small percentage** rated 1-4, suggesting **low influence** of endorsements on their choices.
- **Higher ratings (6-8) make up around 19.7%**, showing that a portion of respondents are **significantly influenced by influencers** in their food-related decisions.

The data suggests that while a majority of Gen Z consumers remain neutral, there is a considerable portion that is influenced by food influencers. This means influencer marketing still holds relevance in digital food advertising, but brands must choose credible and relatable influencers to drive stronger engagement and trust.

6). Do you feel that digital marketing makes you more aware of different food options available in the market?

66 responses

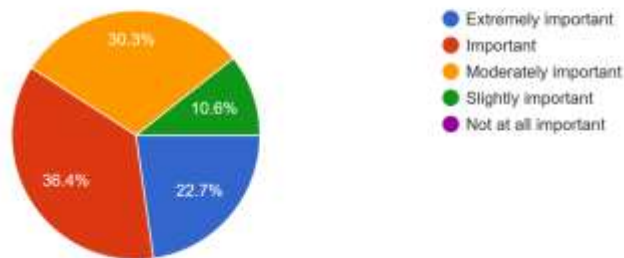


f) Impact of Digital Marketing on Food Awareness

- **62.1% of respondents agree** that digital marketing helps them discover new food options.
- **22.7% strongly agree**, reinforcing that **a significant majority (84.8%)** find digital marketing beneficial in increasing awareness.
- **13.6% remain neutral**, indicating they might not actively notice digital marketing's role.
- Only a **very small percentage disagrees**, showing **minimal resistance** to digital food marketing.

The data highlights that digital marketing is highly effective in informing Generation Z about food choices. This suggests that brands should leverage targeted ads, engaging content, and influencer collaborations to enhance visibility and consumer interest in food-related products.

7).How important is the visual appeal of food images in digital ads when it comes to influencing your decisions?
66 responses



f) Impact of Digital Marketing on Food Awareness

- **62.1% of respondents agree** that digital marketing helps them discover new food options.
- **22.7% strongly agree**, reinforcing that **a significant majority (84.8%)** find digital marketing beneficial in increasing awareness.
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The data highlights that digital marketing is highly effective in informing Generation Z about food choices. This suggests that brands should leverage targeted ads, engaging content, and influencer collaborations to enhance visibility and consumer interest in food-related products.

8).Are you more likely to trust user reviews or official brand content when considering a food product?
66 responses



h) Trust in User Reviews vs. Official Brand Content

- **43.9% of respondents trust user reviews** more than official brand content.
- **36.4% equally trust both** sources, indicating that while they value peer opinions, they also consider brand messaging.

- **13.6% rely more on official brand content**, suggesting that a small segment still prefers direct communication from brands.
- **A very small percentage (shown in green) does not trust either source**, highlighting skepticism towards digital marketing claims.

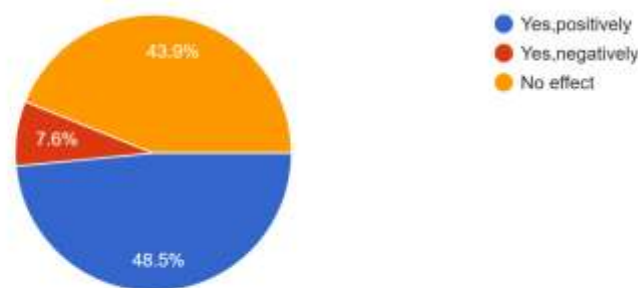
This data reinforces that Generation Z consumers prioritize peer recommendations over branded advertisements when making food choices. Social proof, such as customer testimonials, influencer recommendations, and online ratings, plays a vital role in influencing decisions.

To build trust, brands should:

- **Encourage authentic user reviews and testimonials** on platforms like Zomato, Swiggy, or Instagram.
- **Leverage influencer marketing** to add credibility while maintaining transparency.
- **Engage in two-way communication** with customers to foster trust

9). Do interactive online experiences (e.g., quizzes, polls) by food brands affect your perception of their products?

66 responses



i) Impact of Interactive Online Experiences on Brand Perception

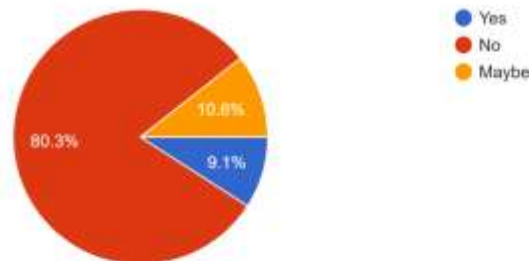
- **48.5% of respondents feel positively influenced** by interactive experiences like quizzes and polls.
- **43.9% believe these interactions have no effect** on their perception.
- **Only 7.6% feel negatively impacted**, showing minimal resistance toward such engagement strategies.

This indicates that interactive content is an effective tool for food brands to engage Generation Z consumers. While nearly half of the respondents appreciate such experiences, a significant portion remains indifferent.

Key Takeaways for Digital Marketing Strategies:

- Brands should **continue incorporating interactive elements** in their digital marketing campaigns to foster engagement and positive brand association.
- **Personalized quizzes and polls** can enhance consumer experience and make them feel more connected to the brand.
- To convert the **neutral segment**, brands can ensure that interactions provide **real value, such as discounts or personalized recommendations**.

10). Have you ever participated in a social media challenge or contest related to food products?
66 responses



j) Participation in Social Media Challenges or Contests Related to Food Products

- **80.3% of respondents have never participated** in a social media challenge or contest related to food.
- **9.1% have participated**, showing a small but engaged audience.
- **10.6% are unsure**, indicating a potential opportunity for brands to create more awareness.

This suggests that social media food challenges and contests are not yet widely adopted among Generation Z consumers. While some engagement exists, the majority have not participated, possibly due to a lack of awareness, interest, or incentives.

Key Takeaways for Digital Marketing Strategies:

- **Brands should focus on increasing visibility** of social media challenges through targeted promotions and engaging content.
- **Incentivizing participation** (e.g., giveaways, discounts, or exclusive rewards) could encourage more users to engage.
- **User-generated content campaigns** featuring food challenges could help boost brand awareness and create a viral effect.

11). Does the use of trends or hashtags related to food influence your perception of a brand's relevance?
66 responses



k) Influence of Trends and Hashtags on Brand Relevance

- **45.5% believe trends and hashtags influence their perception to some extent.**
- **16.7% feel significantly influenced** by the use of trends and hashtags.
- **27.3% are not really influenced**, indicating that for some consumers, brand relevance isn't dependent on social media trends.

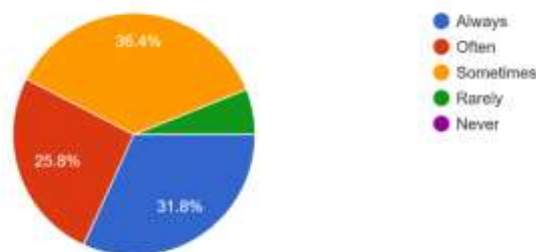
- **10.6% are unsure**, suggesting a neutral or indifferent stance.

This data highlights that trends and hashtags play a crucial role in shaping brand perception for many Gen Z consumers. While nearly 62.2% (combined total of significant + some extent) acknowledge their influence, a notable portion remains indifferent.

Key Takeaways for Digital Marketing Strategies:

- Brands should **leverage trending hashtags and viral content** to stay relevant and connect with Gen Z.
- A strategic mix of **authenticity and trend adoption** can maximize engagement without seeming overly promotional.
- Additional research into the types of hashtags that resonate most with the audience could further refine content strategies.

12).How often do you research a food product or brand online before making a purchase decision?
66 responses



I) Frequency of Researching a Food Product or Brand Online Before Purchase

- **31.8% always research** a food product or brand before making a purchase.
- **25.8% often conduct research**, showing a high level of digital engagement.
- **36.4% sometimes research**, indicating a selective approach based on interest or necessity.
- **A small 6% rarely research**, and none selected "Never," meaning almost all respondents engage in some level of online research.

A combined 57.6% (Always + Often) actively seek information before purchasing, confirming that online presence and credibility are crucial for food brands targeting Gen Z.

- The **36.4% who research sometimes** may be influenced by other factors like word-of-mouth, offline experiences, or impulsive buying behaviour.
- **Since no respondents selected 'Never,'** it reinforces the fact that digital marketing and online brand reputation significantly impact purchase decisions.

Key Takeaways for Brands:

- **Enhancing digital visibility** through SEO, reviews, and influencer endorsements can increase consumer trust.
- **User-generated content and online reviews** can be leveraged to appeal to the large percentage of researchers.
- Brands should focus on **engaging content, transparent communication, and strong social proof** to convert potential buyers.

4.1 Key Survey Findings

- **Trust in User Reviews vs. Brand Content:** 43.9% of respondents trust peer reviews over official brand communication.
- **Influence of Interactive Content:** 48.5% of respondents reported a positive perception of brands utilizing interactive content.
- **Engagement with Social Media Challenges:** 80.3% have never participated in food-related social media contests.
- **Impact of Online Advertisements:** 56.1% of respondents have purchased food influenced by digital ads.

4.2 Interpretation of Findings

- **Authenticity and Transparency:** Consumers prioritize real user experiences over paid promotions.
- **Influencer Marketing:** While influencers impact purchasing decisions, skepticism exists toward paid partnerships.
- **AI-Driven Recommendations:** Personalized recommendations enhance engagement but raise concerns about data privacy.

5. Recommendations

5.1 For Consumers

- Cross-check brand credibility through multiple sources.
- Be mindful of influencer bias and paid promotions.
- Avoid impulse purchases driven by digital ads.

5.2 For Businesses

- Enhance transparency in digital marketing strategies.
- Leverage AI-driven personalization while ensuring ethical data use.
- Foster engagement through interactive and educational content.

5.3 For Digital Marketing Platforms

- Strengthen ad quality control and transparency.
- Implement robust fraud detection systems to eliminate fake reviews.

5.4 Future Research Directions

- Investigate AI and AR's role in digital food marketing.
- Assess the long-term impact of digital marketing on Gen Z's food preferences.
- Explore regional and cultural differences in digital marketing engagement.

6. Conclusion

This study underscores the profound impact of digital marketing on Generation Z's food choices, emphasizing the growing reliance on social media engagement, personalized recommendations, and influencer marketing in shaping consumer behavior. The findings highlight that Gen Z consumers place significant trust in peer reviews (43.9%) over official brand content, reinforcing the need for brands to prioritize authenticity and transparency in their marketing efforts. Furthermore, interactive content has been shown to positively influence consumer perceptions (48.5%), while online advertisements have a direct impact on purchasing decisions (56.1%). However, skepticism remains regarding paid promotions and influencer endorsements, underscoring the importance of ethical digital marketing practices.

The study also sheds light on the increasing role of AI-driven recommendations in enhancing engagement, albeit with growing concerns about data privacy. Businesses must strike a balance between leveraging AI for personalization and maintaining ethical standards in consumer data usage. To foster long-term brand loyalty, companies should implement strategies that enhance transparency, engage users through interactive content, and incorporate strong social proof mechanisms.

For consumers, it is crucial to remain discerning when interacting with digital marketing content, verifying brand credibility through multiple sources and being cautious of potential biases in influencer promotions. Digital marketing platforms, on the other hand, must strengthen ad quality control measures and implement robust fraud detection systems to eliminate deceptive marketing practices.

Looking ahead, future research should explore the evolving role of AI and augmented reality in digital food marketing, assess the long-term implications of digital advertising on Gen Z's food preferences, and examine the influence of regional and cultural differences on digital marketing engagement. As the digital landscape continues to evolve, businesses that align their strategies with Gen Z's expectations—prioritizing authenticity, ethical marketing, and consumer trust—will be best positioned for sustained success in the competitive food industry.

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A STUDY OF IMPACT OF MARKETING OF E-BANKING SERVICES ON CUSTOMERS**Dr. Abdul Wahid Farooqi¹, Dr. Md. Moazzam Nazri², & Dr. Mazhar Iqbal Thakur³**

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Abstract

The present paper deals with the analytical study of Impact on E-Banking Services on customers. Electronic banking now a days growing rapidly in the field of Information Technology. The main aim of the present study is to analyse the present scenario of E-Banking in India and its implication in the usage of ATM- Cum debit Card, Credit Card, Mobile Banking and Internet Banking. This paper is basically concerned with Customer perspective of e-banking. An attempt is made to cover both public sector banks and private sector banks for the purpose of satisfaction of customers financial needs. Marketing of banking services are the crux of e-banking. The delivery of banking services and its marketing by electronic channels are known as electronic banking. The Chief elements of electronic banking includes ATM, Credit Card, Debit Card, Electronic funds Transfer, Mobile Banking, Internet Banking and Telephone Banking.

Keywords: Automated Teller Machine, Electronic Funds Transfer, Electronic Clearing System, Internet Banking, Credit Card, Debit Card etc.

INTRODUCTION:

To compete in an economy which is opening up, it is imperative for the Indian banks to observe the latest technology and modify it to suit their environment. With the entry of foreign banks and the continuous innovation that is taking place in the realm of information technology, it has become a necessity for banks in India to make increasing use of the electronic mode for transacting their business. Information technology has increased the financial control and has made collation of information much easier. Not only banks need greatly enhanced use of technology to the customer friendly, efficient and competitive existing services and business, they also ix-ed technology for providing newer products and newer forms of services in an increasingly dynamic and globalized environment. E- banking has come to be recognized as a virtual necessity to face the imminent challenge/competition that is glowingly felt in modem days, owing to globalization and liberalization of the Indian economy. A wide range of services are being offered by banks using the electronic media.

Internet banking is the latest wave in information technology. It is another electronic delivery channel. In simple terms internet banking means any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions (electronic delivery of services). There is no human operator present in a remote location to respond to his needs such as in telephone banking, in a call centre. The bank has a centralized database that is web-enabled All the services that the bank has permitted on the internet are displayed in menu. Any service can be selected and further interaction is dictated by the nature of service.

The traditional branch model of bank is now giving place to an alternative delivery channel with ATM network. Once the branch offices of bank are interconnected through terrestrial or Satellite links, there would no physical identity for any branch *per se*. It would a borderless entity permitting anytime,

anywhere and anyhow banking.

The basic goal of banks is to create connectivity between each and every branch of the bank. The network which connects the various locations and gives connectivity to the central office within the organisation is called intranet. These networks are limited to organizations for which they are set up. These intranets can be connected to other intranets forming internet.

Intranet based online banking service is to aid dissemination and sharing of information in a closed group aiding better and faster flow. Intranet eliminates duplication of databases and inconsistencies thereof. There is centralized data which the users can download and find out what they want. SWIFT is a live example of intranet application. The contribution of Indian banks to SWIFT is negligible.

With electronic banking, clients are able to dial into banks and get a host of requests serviced through their desktop computers. For the client, it means direct and immediate access to his account in the bank, without having to physically visit the branch. They can transmit messages, all from their homes or offices. For banks, the administration cost are lesser.

The quality, range and price of these electronic services decides a bank's competitive position in industry. Technology banking helps banks in four major ways : (i) to handle a greatly expanded customer base, (ii) to reduce the real cost of handling payments, (iii) to liberate banks from the traditional constraints on time and place and (iv) to introduce new products and services.

STATEMENT OF PROBLEM

The study focusses the customer perspectives of e-banking of Indian Overseas Bank (IOB) and ICICI Banks in Delhi region. All the Banks are introducing the e- banking facility since its inception and today in the bank having largest number of e-banking in the country. As the use of internet banking is increasing day-by-day, it is important to study the insight about the level of customer satisfaction with respect to various aspects of Bank and to identify the problem areas and proposed recommendation leading to improvement. This study will also help to gain knowledge about the e-banking to the customers

OBJECTIVES OF THE STUDY

The present study aims to examine the progress of banking in India, In this broader framework, an attempt is made to achieve the following specific objectives:

- *To analyze the present e-banking scenario concerned with ATM, Internet banking, Mobile banking and Credit cards in India,*
- *To examine the impact of ATM, Internet banking, Mobile banking and Credit cards on customer satisfaction by analyzing the problems faced by the customers.*

REVIEW OF LITERATURE

- ❖ **(Rose and Hudgins, 2005)** The use of paper cheques has been supplemented step-by-step with e- cheques (i.e., electronic images) allowing banks to have more storage capacity, reduce costs, and improve customer services
- ❖ **Rajesh Kumar Srivastava (2007)** The growth in e-banking with the increase in the range of interface options available to access online banking solutions has resulted in a steady increase in the number of customers interacting through remote channels to a greater extent than before. In a climate of increasing online competition, banks that have chosen to retain extensive branch networks are re-aligning the roles of staff in these branches and moving towards a relationship-driven sales culture

- ❖ **Arasli, H., Mehtap-Smadi, S. and Katircioglu, S. T. (2005)** Banks have realized that in order to remain competitive, they need to restructure their services to make use of rapid technology as well as to offer diverse service portfolio.
- ❖ **Hwang et al., 2007** E-banking has emerged as a significant and rapidly growing component of the world economic exchange. Through e-banking the world economic exchange has been reduced to a tiny global village in terms of its information capacity and the resources it holds which can be accessed by anybody from anywhere in the globe.

RESEARCH METHODOLOGY

Data Collection

The present study is of analytical and exploratory nature. Accordingly, the use is made of primary data. The primary data is collected with the help of pre-tested structured questionnaires from a sample of 200 respondents from Delhi region town using the services provided by the various branches of IOB and ICICI Banks. A sample of 200 respondents/ customers is taken (100 respondents from each group) with the help of judgment or purposive sampling method. The survey also focused on covering all the demographic factors in the conveyance sample itself.

Data Analysis

The collected data in the present study are analyzed through descriptive and inferential statistical techniques. The analysis has been in conformity with the objectives of the study and the hypotheses formulated to achieve those objectives. In order to examine the level of customer satisfaction regarding various e-banking services and their interplay in different banks, various statistical techniques have been applied like frequency distribution, percentage, chi-square test. The application of normal distribution has been followed in order to categorize the different variables.

ANALYSIS AND INTERPRETATION

E-banking scenario is analyzed regarding four major e-banking products i.e. ATMs, Internet Banking, Mobile Banking and Credit Cards in terms of customer satisfaction level on the basis of various variables like length of the use of service, information about change, frequency of complaints problems faced, reliability of service and level of satisfaction for the service, etc.

Period of Use

The present scenario of ATMs, Internet Banking, Mobile Banking and Credit Cards is measured in terms of the length of the period the respondents are using a particular service. For this purpose, time is divided into five sub-heads i.e. less than 6 months, 6 months to 1 year, 1 to 2, 2 to 3 and more than 3 years.

Table -1: Period of Use

Period of use	ATMs	Internet Banking	Mobile Banking	Credit Cards
Less than 6 months	11	03	01	00
6 months to 1 year	23	14	08	00
1 year to 2 years	41	21	14	13
2 years to 3 years	56	36	29	23
More than 3 years	59	46	43	29
Total	190	120	95	65

Source: Questionnaire cum Interview Schedule

Table 1 envisages that ATM is the oldest service in use. Out of **200** respondents, maximum

190 respondents are using ATMs, 120 of them are having internet banking facility, and also 95 respondent having mobile banking facility and 65 respondents having credit card facility. Majority of respondent are using it for more than 3 years.

Complaints Regarding Services

To find out the frequency with which customers are having complaints against their banks with regard to these services, five parameters of complaints are considered which are very often, often, sometimes, rarely and never.

Table-2: Complaints Regarding Services

Complaints	ATMs	Internet Banking	Mobile Banking	Credit Cards
Very often	23	07	26	14
Often	65	16	21	18
Sometimes	61	13	32	23
Rarely	41	45	16	09
Never	00	39	00	01
Total	190	120	95	65

Source: Questionnaire cum Interview Schedule

Table 2 reveals that maximum no of respondents are feels that the problems may be arise in sometimes in respect of ATM, Internet Banking, Mobile banking and credit cards services rendered by the banks. Grievance Settlement System

The information has been collected from the respondents about the grievance settlement system for these products in banks to know whether this system is satisfactory or not.

Table-3: Grievance Settlement System

Grievance Settlement	ATMs	Internet Banking	Mobile Banking	Credit Cards
Highly satisfactory	75	63	49	29
Satisfactory	51	36	28	18
Moderate	34	14	15	15
Unsatisfactory	21	7	3	3
Highly Unsatisfactory	09	0	0	0
Total	190	120	95	65

Source: Questionnaire cum Interview Schedule

The table 3 shows that out of the total respondents having problems, maximum number of respondents, i.e. 75 and 39% are highly satisfied and satisfied respectively with the grievance settlement system of ATM, whereas this percentage is 63 and 53% in case of Internet banking, 49 and 52% in case of Mobile banking and 29 and 45% in case of credit cards.

Reliability of Services

Reliability of e-banking products is another dimension, which constitute the present status of e-banking and is analyzed on the basis of three parameters i.e. very reliable, reliable and unreliable.

Table-4: Reliability of Services

Reliability	ATMs	Internet Banking	Mobile Banking	Credit Cards
Very reliable	63	39	31	19
Reliable	123	72	51	40
Unreliable	04	09	13	6
Total	190	120	95	65

Source: Questionnaire cum Interview Schedule

Table 4 depicts that out of the four services ATM is the very reliable with maximum number of respondents, i.e. 63 and credit card is at the minimum with 19 respondents. The table also shows that reliability is highest in ATM Services and lowest in Credit cards with 123 and 40 respondents respectively. In this table shows that the unreliability of services is highest in mobile banking and lowest in ATM services.

Level of Satisfaction

Level of satisfaction after using a particular product has also been examined to find out the clearer picture regarding their status on the basis of five parameters i.e. highly satisfied, satisfied, moderate, dissatisfied and Highly dissatisfied.

Table-4: Level of Satisfaction

Satisfaction Level	ATMs	Internet Banking	Mobile Banking	Credit Cards
Highly satisfied	96	56	43	32
Satisfied	53	31	32	16
Moderate	21	23	15	9
Dissatisfied	13	08	3	5
Highly dissatisfied	07	02	2	3
Total	190	120	95	65

Table 5 present that satisfaction level, which is highest in case of ATM as all the respondents are highly satisfied/satisfied, followed by Internet banking, credit cards and M-banking. The table also reveals that dissatisfied level is highest in case of ATM and Credit card.

Customer Satisfaction Level of ATMs

Table 6 project that out of the total 54% respondents have high CSL. On the other hand, only 33% have in medium level of customer satisfaction and 13% in low CSL.

Table 6: CSL of ATMs

CSL	Frequency	Percentage
Low	25	13
Medium	63	33
High	102	54
Total	190	100

Customer Satisfaction Level of Internet Banking

Combined Customer Satisfaction Level of All E-Banking Products

Table 10 depicts that, in total 200 no of respondents is maximum in case of ATM with 95% and minimum in case of Credit Card with 33% respondents. Internet banking and mobile banking are at 2nd and 3rd position with 60% and 47% CSL respectively. The table also shows that 13% respondents have low CSL in ATM services. High CSL is highest in Internet banking.

Table 10: Combined CSL of E-Banking Products

Products	Low	Medium	High	Total
ATM	25 (13%)	63 (33%)	102 (54%)	190 (100%)
Internet Banking	41 (34%)	53 (44%)	26 (22%)	120 (100%)
Mobile Banking	26 (27%)	48 (51%)	21 (22%)	95 (100%)
Credit Card	20 (31%)	32 (49%)	13 (20%)	65 (100%)

The analysis also shows that among all the e-banking products, CSL of ATM is highest and the number of users of ATM is also highest as compared to other services. Internet banking and mobile banking services are at second and third position as far as CSL is concerned but the credit card services are get the lowest position in terms of CSL as compared to other services.

CHI-SQUARE ANALYSIS

Relationship between the customer variables of and respondents satisfaction regarding e-banking.

Table No.-11 shows the Satisfaction of respondents on e-Banking

	Satisfaction of respondents on e-banking in chi-square values			
Factors	Service Provided by e-Banking	Calculate Value	Chi-Square Value	Results
Period of use	ATM Service (F1)	19.02	24.3223	Accepted
Complaints Regarding Services	Internet Banking (F2)	21.53	13.3544	Rejected
Grievance settlement system	Mobile Banking (F3)	16.25	22.2123	Rejected
Reliability of services	Credit Card Service (F4)	22.13	24.9654	Accepted

The above table reveals that there is a relationship between the respondent's opinion on Service provided by e- banking and the variables like period of use, complaints regarding services, Grievance settlement system and reliability of services.

HO: There is no relationship between demographic variables and respondents satisfaction regarding internet banking

H1 There is a relationship between demographic variables and respondents satisfaction regarding

internet banking.

FINDINGS:

1. There is no significance between the period of use and ATM Service due to null hypothesis was accepted
2. There is significance between the complaints regarding services and internet banking service due to null hypothesis was rejected,
3. There is significance between the Grievance settlement system and Mobile banking due to null hypothesis was rejected.
4. There is no significance between the reliability of services and Credit card service due to null hypothesis was accepted

SUGGESTIONS

The customers should be very careful while carrying out online transactions that are transfer of account etc. The most common fear in e-banking or net banking is that of security. Most people avoid Net banking because they fear their account will be broken into by hackers. Customers should never share personal

The opinion of respondents obtained in the following factors denoted as F1 - F4 F1. ATM Service F2. Inter net Banking F3. Mobile banking F4. Credit card information like PIN numbers, passwords etc with anyone, including employees of the bank. PIN and/or passwords should be changed immediately. Customers should properly sign out their login after usage. It is to be suggested to prevent online banking from remaining customers to prompt this service through advertising company and also Bank should provide the services in different languages. The bank should extend their tie-up contracts with other various institutions whether financial or non-financial for convenience of its customers

CONCLUSION

On the basis of the analysis, it can be concluded that usage of banking services is still not wide open. In a country like India, where majority of population is less educated an uneducated, the utility of banking services is not properly realized. It is found that only educated, well to do persons, and male forms the majority of the users. Housewives, small businessmen and persons from unorganized sector still feel shy and keep themselves away from the banking services. Even though a majority of Indian and Foreign banks have introduced the advance e-banking facilities, but it is observed that a large numbers of bank users do not proper to use these services. This may be due to the ignorance of the system of e-banking or because of the distrust in the computer system.

From the above, this can be concluded that there is an urgent need of spreading the awareness among the common people. The small business men, the farmers, the housewives, the person's working in unorganized sector be convinced to use banking and e-banking services. They should feel that their money is more safe and secure with the banks. However the present study also points towards the lack of faith on the part of a sizable population.

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AN EVALUATIVE STUDY ON IMPACT OF INSURTECH PLATFORMS ON CONSUMER EXPERIENCE

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Abstract

The insurance industry has experienced a fundamental change in the way the consumers participate in the services provided by the companies. This change was possible due to rapid development of insurtech platforms. Innovative technology like artificial intelligence (AI), statistics, and machine learning, these platforms seek to improve consumer experiences by offering more effective, personalized, and easily available services. The study evaluates how Insurtech platforms affect customer understanding by looking at how technology developments influence customer satisfaction and decision-making of the insurance industry. The study aims to measure important aspects like personalization, convenience, and minimalism in order to assess how insurtech platforms affect customer satisfaction. With data collected via surveys, the study is predicated on a sample size of 150 respondents. A descriptive research methodology is used, analyzing relationships between many variables through graphical representation and hypothesis testing using correlation. According to the report, when compared to traditional insurance methods, digital insurance services offer a noticeably higher customer experience and satisfaction. The study highlights the necessity for the insurance sector to keep coming up with new ideas and resolving customer issues.

Keywords: *Insurtech, Digitalization, Traditional Insurance, Digital Efficiency*

INTRODUCTION

The insurance industry is one of several sectors that have changed as a result of the quick development of digital technologies. Accessing, purchasing, and managing insurance services has been completely transformed by the rise of Insurtech, a combination of technology and insurance. By combining blockchain, artificial intelligence (AI), and data analytics, digital insurance systems provide customers with a smooth experience that improves policy management, claims processing, and customer relations. When compared to conventional insurance practices, these innovations seek to increase accessibility, transparency, and efficiency. Insurtech and other digital financial services have become more popular in Mumbai, one of India's financial centers. Nonetheless, there is still much to learn about Mumbai consumers' familiarity with and usage of digital insurance services. Determining the elements impacting the adoption of digital insurance requires an understanding of consumer behavior and usage trends. Furthermore, customer choices are greatly influenced by elements including demographics, security concerns, and convenience of use.

Furthermore, policyholder satisfaction is a crucial metric for evaluating the effectiveness of insurtech platforms. Consumer satisfaction may be impacted by worries about trust, data protection, and customer assistance, even if digital insurance services provide convenience, quicker claims processing, and cost effectiveness. It will be possible to determine if digitalization improves the customer experience or whether certain customers still prefer old techniques by comparing Insurtech platforms with traditional insurance services.

This study is to determine how well-versed Mumbai customers are in digital insurance services, how often they use them, and how satisfied policyholders are with Insurtech platforms in comparison to conventional insurance approaches. The results will help insurers improve their digital strategy to improve customer happiness and service delivery by offering insightful information about consumer preferences.

REVIEW OF LITERATURE

Matthias de Ferrieres, (2021) in the research paper titled *“The Rise of the Digital Economy: Estimating the Impact of a New Generation of Entrepreneurs as Disruptive Entrants in the Insurance Industry in Singapore”* analyzes the aggressive growth of digital startups that aim to disrupt the conventional operating model. This article, which focuses on the insurance market in Singapore, challenges the characteristics of digital entrepreneurs who enter the market and the fundamentals of the sector to explain why it is difficult for new entrants to effectively disrupt the insurance paradigm. The study employed a mixed-methods approach and is inductive with a pragmatic mindset. An online survey and several in-person, standardized, semi-structured interviews were used to gather the data. In May and June of 2020, a quantitative survey was conducted, and it was able to gather 37 replies from 34 distinct insurtech companies and 25 responses from 18 different incumbents. In July 2020, a qualitative research was conducted including 14 experts from both insurtech and incumbent companies. The study demonstrates that insurance is a complicated sector that requires more than just computer skills. According to the report, this paradigm slows down the industry's digital transition and delays potential disruption.

Mounir El Khatib, Samer Hamidi, Ishaq Al Ameer, Hamad Al Zaabi, Rehab Al Marqab, (2022) in their research paper titled *“Digital Disruption and Big Data in Healthcare - Opportunities and Challenges”* attempts to determine the possible advantages and difficulties of comprehensive data analysis in the healthcare industry. It also tries to evaluate the approaches that may be used to examine large medical data. For this purpose, the data was obtained by using a qualitative research design where 25 interviews were collected including two global organizations. The collected data was analyzed by using digital databases but mostly analyzed manually. The study's findings show that healthcare has been slow to embrace digital disruption and transformation. In most areas, it is still in the initial stages.

Jie Liu, Shujun Ye, Yujin Zhang, and Lulu Zhang, (2023) in their research paper titled *“Research on InsurTech and the Technology Innovation Level of Insurance Enterprises”* analyses using the fixed effect model and the intermediary effect model, this study experimentally investigates the relationship between enterprise technological innovation level and InsurTech, as well as the mechanism of action. This study uses panel data from Chinese insurance firms from 2011 to 2020 for empirical research. Following sorting, 77 sample firms were chosen for this study (of which 40 were life insurance companies and 37 were property insurance companies), yielding 770 valid sample data points. The research conclusion of this article has implications for China's insurance companies to aid in the formulation of digital transformation policies and the promotion of the "sustainable development" of technology empowerment insurance strategies, in addition to enriching the literature on InsurTech and the technological innovation level of insurance companies.

OBJECTIVES OF STUDY

1. To evaluate the level of awareness of insurtech platforms among consumers in Mumbai.
2. To Identify key factors affecting consumer confidence, including security, data privacy, and claim processing efficiency in insurtech services

3. To assess the degree of satisfaction among the consumers using Insurtech platforms compared to traditional insurance methods.
4. To identify the challenges faced by consumers while using Insurtech platforms.

HYPOTHESIS

The following are the hypothesis based on the objectives of study:

H1: The consumers are aware of the Insurtech Platforms.

H2: Consumers' confidence in Insurtech services is significantly influenced by factors such as security, data privacy, and trust.

H3: There is a significant positive correlation between the perceived ease of use of Insurtech Platforms and consumer satisfaction.

H4: There is a significant level of challenges faced by consumers while using Insurtech Platforms.

RESEARCH METHODOLOGY

The study employs the following Research Methodology

Research Design: The study follows a structured research design to analyze the impact of Insurtech platforms on consumer experience and satisfaction in Mumbai City.

Data Collection Method: The research study is based on Primary data collected through a structured Questionnaire, which includes both Close-ended and Likert Scale based Questions. The questionnaire is divided into sections covering demographic details, usage patterns, consumer experience, and satisfaction levels.

Sampling Method and Participants: Convenience Sampling Method is used to gather data from 150 participants.

Data Analysis: Graphical representation is used to visualize numerical data interpretation.

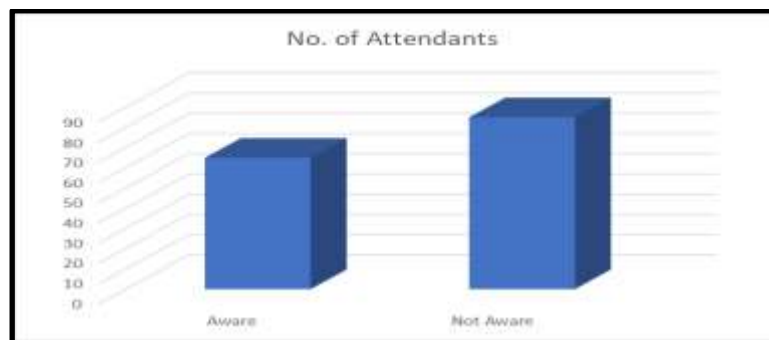
DATA ANALYSIS AND INTERPRETATION

The results of the data analysis are as follows:

A systematic questionnaire is used to gather data from **150** respondents. To establish the significance test, the data was collected and examined using visual graphical representations.

H1: The consumers are aware of the Insurtech Platforms.

Consumer Awareness	No. of Attendants
Aware	65
Not Aware	85



The data provided shows that out of a total of 150 attendants, 65 individuals are aware of a particular product, service, or issue, while 85 are not aware. This indicates that a majority of the group (56.67%) is unaware of the subject in question, and only 43.33% of the people have knowledge or understanding of it. This imbalance suggests that awareness efforts may not be reaching a significant portion of the target audience, highlighting a potential need for improved communication and education strategies. Hence we reject the Alternate Hypothesis.

H2: Consumers' confidence in Insurtech services is significantly influenced by security, data privacy, and trust.

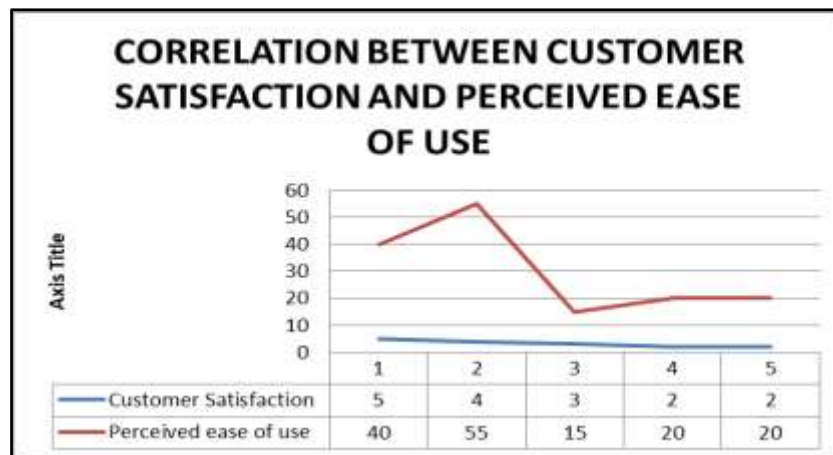
Factors influencing Consumer Confidence	Consumer Confidence Level
Security and Privacy	60
Perceived Risk	35
Complexity	20
Lack of Support for Regulatory	35



The data provided highlights the factors influencing consumer confidence, with each factor impacting confidence levels to varying degrees. Security and Privacy is the most significant factor, with 60 individuals citing it as a primary concern, suggesting that consumers place a high value on the safety of their personal information when making decisions. Perceived Risk and Lack of Support for Regulatory both influence 35 individuals, indicating that consumers are concerned about potential risks and the lack of regulatory backing in their purchasing decisions. Complexity is the least influential factor, affecting only 20 individuals, which suggests that while some consumers may find processes complicated, it is not as substantial a barrier to confidence as security or risk. **Hence we accept the alternate hypothesis H2**

H3: There is a significant positive correlation between the perceived ease of use of Insurtech Platforms and consumer satisfaction.

Customer Satisfaction Level	Perceived Ease of Use
5	40
4	55
3	15
2	20
2	20



The Pearson correlation coefficient $r \approx 0.735$ which indicates a **positive correlation** between **Perceived Ease of Use** and **Customer Satisfaction Level**. This suggests that as the perceived ease of use of the system increases, the customer satisfaction level tends to increase as well. **Hence we accept the alternate hypothesis H3**

LIMITATIONS OF THE STUDY

- A sample size of 150 may not be large enough to generalize the findings to the entire population of Mumbai or other regions.
- The study captures responses at a single point in time, rather than tracking consumer behavior over time to see if preferences change.
- The study is restricted to Mumbai, meaning the findings may not be applicable to other cities or rural areas where digital adoption rates differ.

FINDINGS OF THE STUDY

- When compared to traditional insurance consumers, a sizable percentage of digital insurance users expressed greater levels of satisfaction.
- Digital platforms improve the client experience by providing ease, speedy policy issuance, and simple claims processing.
- According to the report, consumers are increasingly choosing digital insurance platforms because of their effectiveness, ease of use, and quick claim processing.
- Traditional insurance is still relevant, nevertheless, for clients who would rather deal with agents in person.

CONCLUSION

According to the report, when compared to traditional insurance methods, digital insurance services offer a noticeably higher customer experience and satisfaction. While traditional insurance systems are sometimes criticized for their complicated paperwork, longer processing times, and reliance on agents, digital insurance platforms are chosen for their accessibility, speedy claim processing, and user-friendly interfaces. Nevertheless, despite the benefits of digital insurance, obstacles including worries about data security, a lack of digital literacy, and trust difficulties continue to prevent full implementation. Although the results show an increasing trend toward digital insurance, traditional approaches are still useful for customers who want individualized support. Insurance firms must concentrate on enhancing cybersecurity protocols, digital trust, and hybrid service models that combine human assistance with

digital efficiency in order to increase customer acceptance. In order to guarantee a smooth transition to digital insurance solutions, the study highlights the necessity for the insurance sector to keep coming up with new ideas and resolving customer issues.

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ANALYSING THE INFLUENCE OF INFLATION ON MILLENNIAL WEALTH-BUILDING STRATEGIES AND LONG-TERM FINANCIAL OUTCOMES

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Abstract

Millennials' wealth generation strategies and financial results have been greatly impacted by the rising economic difficulties brought on by inflation. With an emphasis on investments, savings, and long-term wealth generation, this study investigates the connection between inflationary pressures and millennial financial behaviour. While dealing with stagnating income and growing living expenses, recent trends show that millennials are diversifying their portfolios more and more into inflation-resistant assets like gold, cryptocurrency, and real estate. A structured survey was carried out with 150 millennials as the sample size. Stratified random selection was used to choose respondents in order to assure representation from a range of professional backgrounds and income levels. A comprehensive questionnaire was used to gather data on investment preferences, inflation perceptions, and saving behaviours. To find significant correlations between financial behaviour, inflation awareness, and demographic factors including income level, education, and employment type, the chi-square test was used to analyse the collected data.

Keywords: Financial Literacy, Wealth Generation, Wealth-building.

INTRODUCTION

One of the most significant economic issues affecting how people handle their money and accumulate wealth is inflation. As they navigate through their most financially active years while struggling with growing living expenses and unstable economic situations, millennials—those born between 1981 and 1996—are particularly affected by inflation. Wealth creation is more difficult for this generation due to their particular problems, which include high housing expenses, student loan debt, and slow income growth. Millennials are looking at new ways to safeguard their money from inflation, according to recent trends. Many are turning to investments that are resistant to inflation, such gold, real estate, and cryptocurrencies, while others prioritise savings or conservative assets. The success of these strategies, however, frequently centres on financial literacy—the understanding and abilities required to make wise financial decisions. Millennials with greater financial literacy are more inclined to take proactive steps, whereas those with less financial literacy can find it difficult to keep up with growing expenses. The goal of this study is to know how millennials' wealth-building techniques are impacted by inflation. It seeks to examine how financial literacy influences their choices and examine the trends and results of their attempts to establish financial security. This knowledge can also assist financial institutions and regulators in creating initiatives that promote millennials' financial stability in inflationary times.

OBJECTIVES OF STUDY

1. To examine how inflation affects the investing and saving habits of millennials.
2. To determine which inflation-resistant assets millennials prefer and how quickly they are being embraced.

HYPOTHESIS

H0: There is no significant relationship between the rate of inflation and millennials' choice of wealth-building strategies

H1: There is a significant relationship between the rate of inflation and millennials' choice of wealth-building strategies.

REVIEW OF LITERATURE

Gupta, S., & Martinez, H. (2022) in their research paper titled, "Inflation's Role in Shaping Millennials' Real Estate Aspirations" This research examines how inflation and housing market fluctuations affect millennials' aspirations to purchase property. The study focuses on whether inflation-related increases in real estate prices influence decisions regarding homeownership. A sample of 500 millennials actively saving for homeownership was selected through purposive sampling. Chi-square tests and regression models were applied to analyze the data. The findings showed that higher inflation delayed homeownership for most millennials, as increased property prices outpaced income growth. However, those with substantial savings shifted to smaller or suburban properties as a compromise, underscoring the varying degrees of financial resilience within this demographic.

Johnson, M., & Patel, R. (2020) in their research paper titled, "The Role of Financial Literacy in Shaping Millennials' Investment Behaviour During Inflationary Periods" investigates the impact of financial awareness on millennials' investing choices during inflationary times. How knowledgeable millennials modify their wealth-building tactics in response to inflation is the main subject of the study. Stratified random selection was used to choose 450 individuals between the ages of 25 and 40, guaranteeing representation across educational levels. To find trends, statistical techniques including regression analysis and chi-square testing were used. The findings showed that millennials who were more educated about finance were more inclined to diversify their holdings and choose assets like equities and real estate that are resistant to inflation. On the other hand, those with less financial literacy tended to use less-than-ideal tactics, such holding money in low-interest savings accounts."

Rodriguez, T., & Kim, S. (2021) in their research paper titled, "The Impact of Economic Uncertainty on Millennial Savings Habits" This research explores the influence of economic uncertainty, including inflation, on the saving patterns of millennials. It investigates whether heightened inflationary pressures lead to increased or reduced savings behaviours. Data were collected from 500 millennials in both urban and semi-urban areas through purposive sampling. Statistical analysis using t-tests was conducted to determine trends. The findings revealed that while some millennials increased their savings during inflation to mitigate uncertainty, others diverted funds toward immediate consumption or investment in tangible assets, citing concerns about the declining value of money."

Ahmed, K., & Singh, P. (2019) in their research paper titled, "This study investigates how inflation, combined with rising interest rates, impacts millennials' financial planning and debt management strategies. The research collected data from 400 millennials with active loans or credit accounts, using snowball sampling to capture individuals across income levels. Chi-square and correlation analysis were employed to analyse the relationship between inflation perceptions and financial responses. The results showed that higher inflation and interest rates prompted millennials to prioritize paying off variable-rate debts and reconsider new loans. Many shifted from fixed deposits to instruments like government bonds, highlighting the need for financial institutions to offer more inflation-protected savings options."

Thompson, J., & Carter, L. (2018) in their research paper titled, "This study explores the trade-off between spending and investing during inflationary periods among millennials. It seeks to understand how inflation influences the allocation of income toward consumption or wealth-building activities. A sample of 550 employed millennials was chosen using random sampling methods. Statistical tools such

as chi-square tests and ANOVA were used to analyse the data. The study found that inflation led to a decrease in discretionary spending and an increase in investing, particularly in mutual funds and equities, among individuals with higher disposable incomes. Conversely, those with lower disposable incomes were more likely to cut back on both spending and investing.”

RESEARCH DESIGN AND METHODOLOGY

This study used a descriptive research methodology to investigate how millennials' wealth-building practices relate to inflation. Millennials between the ages of 25 and 40 who were actively involved in investing or financial planning were part of the target demographic. The quantitative survey included 150 respondents as its sample size. Using stratified random sampling, representation was guaranteed across educational backgrounds, geographic locations, and economic levels. Purposive sampling, on the other hand, was used to pick interview subjects, with an emphasis on those who had substantial expertise in wealth-building techniques. structured questionnaires were used to gather primary data. In order to get quantifiable data on financial behaviours, savings patterns, investment choices, and inflation perceptions, the survey had both closed-ended and Likert-scale items. A standardised survey questionnaire was part of the study tool. Chi-square test was used to analyse the data. Statistical analysis was performed on the set of data using Excel based on the obtained data.

DATA ANALYSIS

The results of the data analysis showed that:

A systematic questionnaire is used to gather data from 150 respondents. To establish the significance test, the data was collated and examined using the Chi-square test. The significance level (α) for the test was set at 0.05.

Hypothesis testing:

H0: There is no significant relationship between the rate of inflation and millennials' choice of wealth-building strategies.

Independent variable: Inflation

Dependent Variable: Wealth Creation

Observed Data

Inflation Rate Perception	Savings	Stock Market Investment	Real estate investment	Total
Low	25	10	15	50
Moderate	30	35	15	80
High	5	10	5	20
Total	60	55	35	150

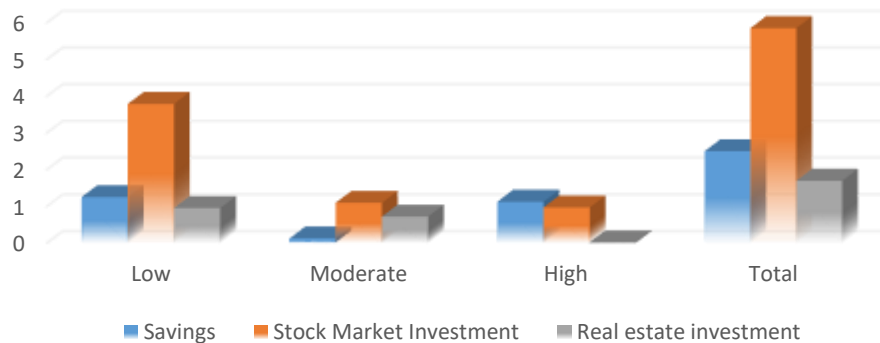
Expected Data

Inflation Rate Perception	Savings	Stock Market Investment	Real estate investment	Total
Low	20	18.3333333	11.6666667	50
Moderate	32	29.3333333	18.6666667	80
High	8	7.3333333	4.6666667	20
Total	60	55	35	150

Chi-Square Test - $\chi^2 = \frac{(O-E)^2}{E}$

Inflation Rate Perception	Savings	Stock Market Investment	Real estate investment	Total
Low	1.25	3.78787879	0.952380952	5.99026
Moderate	0.125	1.09469697	0.720238095	1.939935
High	1.125	0.96969697	0.023809524	2.118506
Total	2.5	5.85227273	1.696428571	10.0487

GRAPHICAL REPRESENTATION OF CHI-SQUARE TEST



Degree of freedom (df) = (Row – 1) (Column – 1)

= (3-1) (3-1)

= 4

The critical value derived from the chi-square distribution table is **9.488** for df = 4 and a **significance level (α) of 0.05**.

The calculated chi-square statistic is $\chi^2=10.04$ - which is **greater** than the critical value of **9.488**. **Thus, we reject the null hypothesis** i.e. There is no significant relationship between the rate of inflation and millennials' choice of wealth-building strategies.

LIMITATIONS

- The small sample size of the study could not accurately reflect the range of financial practices among millennials.
- The findings' application to other economic and cultural situations is limited by their regional emphasis.
- Results may contain biases or errors due to self-reported data.

FINDINGS

The study looked into the connection between millennials' wealth-building tactics and their views of inflation. The key findings are:

- According to a chi-square test, millennials' opinions of inflation and the wealth-building tactics they have selected are significantly correlated.
- The null hypothesis was rejected since the computed chi-square value was higher than the critical threshold.
- The results imply that millennials' views of inflation have an impact on their financial behaviours, such as their priorities for savings and investment decisions.

- Perhaps as a result of rising prices and borrowing rates, millennials who thought inflation was high were less inclined to invest in real estate.
- A significant percentage of millennials made stock market investments while inflation was mild, indicating that they believed returns would be better at that time.
- Across all inflation perception categories, saving remained a top priority, underscoring its significance as a universal wealth-building tactic for millennials.

CONCLUSION

The study demonstrated how economic conditions influence financial decisions by revealing a substantial correlation between millennials' perceptions of inflation and the wealth-building tactics they use. Although emergency savings were always a top concern, opinions on inflation affected people's choices for stock and real estate investments. This suggests that millennials use flexible and dynamic tactics to lessen the effects of inflation. In order to provide customised products and financial education programs that promote millennials' long-term wealth-building objectives, financial institutions and governments should take these behavioural tendencies into account.

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INFLUENCE OF SOCIAL MEDIA DURING ELECTIONS: A CASE STUDY OF THANE CITY

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Abstract

Social media is emerging as an important tool during elections by the political parties to influence, connect and express the political party's vision and agenda to help to gain votes. Social media has become one of the pillars of modern society that has a significant impact on the political participation all over India including Thane city. Social media helps political parties and candidates in more effectively reach large number of voters in a short time. This research paper examines the multifaceted of social media in Indian elections, including its potential to enhance democratic participation, its challenges to electoral integrity. Through a survey, this research examines how social media platforms serves as an important instrument in elections with the case study of Thane city.

Keywords: *Social media, Political parties, voters, Thane city.*

Introduction

Elections are the bedrock of democracy. Media, the fourth pillar of democracy, plays an important role in overall election process. Social media is a 21st century platform and a tool to help nation and its societies to create, express, exchange their thoughts and ideas widely. The rapid digital transformation in India has made social media a cornerstone of electoral strategy. With platforms like Facebook, Twitter, Instagram, and WhatsApp becoming important, their influence on Indian elections cannot be undermined.

With over 82 crore active internet users in India, social media has become a key battleground for political campaigns. In the digital age, social media has emerged as a double-edged sword. On one hand, it empowers political parties and citizens with unprecedented access to information and platforms for engagement. On the other hand, it raises significant concerns about data manipulation and electoral malpractices. The role of social media in Indian elections is not merely about technology; it is about ethics and democratic values too.

Social media, emerging as a hottest promotion tool during elections by the political parties to influence, connect and express their vision, objective to help them increase their visibility, or to gain majority. Today people live on social media, where even political parties want to reach out to hit them where they live. Social media technology is wide enough, in which today people are enjoying to utilize it to communicate with each other and also stimulate themselves to innovate more ideas and expressions.

Objectives of the Research:

1. To examine the role of social media in Indian elections.
2. To understand the influence of social media during elections in Thane
3. To give recommendations thereon in the research area.

Research Methodology

This research study is descriptive analytical which highlights the Influence of Social Media during Elections in Thane city.

Primary Method : A questionnaire was made use of for collecting primary data. A survey was conducted to understand influence of social media.

Secondary Method : The researcher has referred various books, articles and journal. Local and National newspaper reports were explored for more information.

Research gap

Many research studies have been done earlier such use and rise of social media in election campaign, media and Indian elections. A critical research gap in exploring the impact of social media during elections with reference to Thane city was not done. Bridging this gap would provide a more nuanced understanding of how social media platforms uniquely shape and influence the political behaviors diverse voters in Thane, enabling tailored strategies to enhance their sustained engagement in democratic processes. This research aims to fill this research gap and give recommendation thereon.

Area of study : The area of study is Thane city

Sample Size

The researcher survey and received 97 responses from Thane city within the age group of 18 to 40 years.

Research Design

Research is based on descriptive analytical study which show influence of social media on people in Thane city. Social media also makes it easier for voters to stay informed, express their opinions, and take part in political discussions. Overall, it gives them a powerful voice and encourages them to be active in shaping the political landscape.

Influence of Social Media in Elections in Thane City

Thane, a bustling metropolis in the Mumbai Metropolitan Region, is experiencing a rapid transformation in its political economy. Located near Mumbai, Thane has always been a key seat in the state's political landscape. These hubs are where teams work around the clock, leveraging social media and data analytics to shape grassroots strategies and ensure their candidates stay ahead in the digital race. Each and every political party exclusively reach out the voters through its social media strategies. Politicians in Thane use the social media as an effective tool of publicity. Especially in the election times, politicians are most active in using publicity. They were targeting the voters to attract towards their party candidates. In the days of election, candidates are more concentrating on the voters and to get them attracted towards them. In 2014 general elections the social media was utilized by the young voters in an excellent manner. Political parties used social media for political campaigning during the assembly elections of Thane in 2024. Voters received many important informations and updates about the party manifesto especially about the split in Shiv Sena and NCP.

While social media offers numerous benefits, its role in elections is not without challenges. Fake news and propaganda spread rapidly on social media, influencing voter behavior. In 2019 and 2014 General and Assembly elections, Social Media was a hotbed for misinformation, with fake videos and messages targeting specific communities in Thane. Similar concerns have been raised in Thane about voter data being exploited.

Social media plays an important role in shaping the personality of today's youth. The media acts as bridge between politics and youth voters. Social media has significantly impacted political engagement among youth voters. It provides a platform for easy information sharing, mobilization, and discussion of political issues. Overall, its role is complex, influencing both positive and

negative aspects of citizens political participation.

Survey Analysis

The researcher survey around 97 respondent from Thane city within the age group of 18 to 40 years. The survey included both male and females. Questionnaire was also given to few volunteers from different political parties in Thane to gauge their views on social media and elections.

The survey revealed social media's role in shaping political engagement among voters has several impacts on society: Social media provides quick and widespread access to political information. 98% respondents of Thane viewed that Social media citizens to stay informed about current events and political issues. 96 % respondent believe that Social media encourages political involvement and help Political parties to engage with citizens. Around 84 % viewed that social media potentially influence political agendas It amplifies the voices of young voters, allowing them to share their perspectives and ideas on a global scale. Social media fosters communities of politically engaged voters, enabling the formation of networks that can drive collective action and social change. About 90% respondents also agree that always risk of misleading information, which can influence opinions and decisions of voters. 86% respondents in Thane believe that BJP in Thane have extensively spending on social media networks and mobile phone in advertising. Almost 96 % agree that social media influence voters and saves the time and money, resources of political parties in campaigning and canvassing.

Suggestion

Based on the study and research analysis, the researcher intend to give following suggestions. The political parties fan page post should be analyzed it should not contain any favoritism or biasedness about any political party by which the youth voter gets influenced. Political parties and candidates must disclose their official social media accounts. Content that violates the MCC should be subjected to scrutiny and removal. Platforms like Facebook, Whatsapp , Instagram Twitter, and Google have committed to self-regulation during elections by removing harmful content and ensuring transparency in political banners ,brochures and advertisements.

Assessing the effectiveness of social media-based civic education programs in enhancing youth political participation is equally necessary. The voters should get the civic education about the politics and should not influence by the fan page post. The vote should be given on the basis of their work not by the individual personality. Assess the effectiveness of social media-based civic education programs in enhancing political participation. Effective voter education campaign should be started. That would help the voters to give vote to right person who are educated and who are going to work for the country rather than the misinformation post.

Conclusion

In conclusion, social media has deep influence in mislead and confuse voters. Social networks have been a vital tool for youth voters in shaping their political consciousness and in influencing the political landscape, and their importance is expected to grow in the future. It is important for young people to critically evaluate the information they consume on social media and consider diverse prescriptive.

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SUSTAINABLE MARKETING PRACTICES AND THEIR IMPACT ON BRAND METRICS: INSIGHTS FROM MAMAEARTH

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Abstract

Sustainability has become a crucial factor in modern marketing, influencing consumer preferences and brand perceptions. This study examines the impact of Perceived Environmental Sustainability (PES) on key brand-related outcomes, specifically Brand Image (BI), Brand Loyalty (BL), Brand Awareness (BAW), and Brand Acceptance (BACC), using Mamaearth as a case study. A quantitative research approach was employed, with data collected from 250 respondents through a structured questionnaire. The results of regression analysis indicate that PES significantly influences all four brand-related variables, highlighting the importance of sustainable marketing in shaping consumer attitudes. The study underscores how environmentally sustainable practices enhance a brand's image, foster consumer trust, and drive competitive advantage in the beauty and skincare industry. These findings offer valuable insights for marketers and business practitioners looking to integrate sustainability into branding strategies. The research contributes to the growing body of knowledge on sustainable marketing and consumer behavior.

Keywords: Brand Acceptance, Brand Awareness, Brand Image, Brand Loyalty

INTRODUCTION: Sustainability has become a key concern in today's society, with the growth and long-term success of businesses increasingly relying on their ability to collaborate with the community. The growing importance of sustainability in marketing is driven by factors such as rising consumer demand for environmentally and socially responsible products, the need for businesses to remain competitive, regulatory requirements, and the benefits of resource efficiency. Consequently, marketing practices have gradually shifted towards promoting environmental sustainability. As awareness of environmental and social issues grows, consumers are leaning towards brands that prioritize sustainable practices. This shift has encouraged marketing professionals to focus on meeting consumers' ethical and social expectations, encompassing cultural preservation, environmental protection, and disaster relief activities. Companies adopting sustainable practices stand out in the marketplace, building stronger relationships with their customers and gaining a competitive advantage.

In today's world, consumers are more conscious of global challenges and aspire to live sustainable lives. This presents businesses with a unique opportunity to gain consumer trust by incorporating sustainable initiatives. According to Foroudi (2019), sustainability is no longer just an optional practice but an essential component of business strategies for companies aiming to thrive in the highly competitive and ever-changing market environment. In addition to maintaining financial growth, businesses must assess their societal and environmental impact, ensuring they fulfill their responsibilities to stakeholders such as customers, employees, partners, government bodies, and the general public (Arenas-Torres et al., 2021). Corporate social responsibility (CSR) plays a vital role in sustainable development from two perspectives. First, actively engaging in CSR helps businesses enhance their reputation and build societal goodwill, enabling them to accumulate valuable resources that contribute to long-term competitiveness. Second, companies that embrace social responsibility gain an early advantage in the journey toward sustainability (Vrabcova and Urbancova, 2021). According

to Song et al. (2019), an organization's credibility directly impacts its reputation—while credible efforts can improve a company's image, failing to maintain credibility can damage its reputation. Marin et al. (2009) emphasize that integrating CSR initiatives into business practices can help companies build a trustworthy and ethical brand image, thereby improving perceived customer loyalty. Furthermore, communicating CSR efforts effectively can raise customer awareness and create a positive brand reputation. Foroudi et al. (2019) argue that sustainable marketing practices not only improve customer interest but also help companies develop stronger customer connections and enhance their competitive position. Research by Mohammed et al. (2015) supports this view, highlighting how companies can attract greater customer attention by adopting sustainability-focused strategies.

Choi and Sung (2013) observed that modern marketing efforts aim to meet consumers' social and ethical needs by promoting cultural diversity, safeguarding the environment, and offering assistance during emergencies. Lee and Sung (2016) emphasize that sustainability-focused marketing creates a favorable brand image and strengthens the bond between the brand and consumers, resulting in a competitive advantage based on brand equity. Effective sustainable marketing requires balancing three essential pillars—economic, social, and environmental factors. According to Sun and Ko (2016), the concept of sustainable marketing extends beyond production and sales decisions to incorporate business ethics and the impact on consumers and local communities. Economic marketing activities aim to allocate financial benefits to various stakeholders—customers, employees, business partners, and the community—while ensuring business growth and profitability. Profits generated through innovation, value creation, and efficient management can be shared with the local community, promoting inclusive economic development (Streimikiene and Ahmed, 2021). Social marketing activities, on the other hand, focus on giving back to society by prioritizing social welfare over profit generation. Thanh et al. (2021) note that companies engaged in social contribution activities, such as organizing free health check-ups and providing food to local communities, can cultivate stronger connections with their customers while transitioning into social enterprises. Environmental marketing practices aim to meet consumer needs while minimizing environmental damage. These actions might include producing eco-friendly products, utilizing recycled materials, and participating in green growth initiatives (Leal et al., 2021). Streimikiene and Ahmed (2021) emphasize that these efforts should adopt a holistic approach, addressing all aspects of the triple-bottom-line framework—economic, social, and environmental.

Brand image, which reflects consumers' perceptions and beliefs about a brand, plays a crucial role in determining a company's market success. A positive brand image improves brand recognition and recall, strengthens customer loyalty, boosts employee motivation, and enhances the company's reputation among competitors (Almeida and Coelho, 2019). Engaging in CSR initiatives is an effective way for businesses to build a favorable brand image and cultivate a positive attitude among consumers, contributing to a significant competitive edge (Chavalittumrong and Speece, 2022).

The objective of this study is to explore how Mamaearth's sustainable marketing practices are perceived by consumers and how these efforts influence the company's image. The study presents a theoretical overview of sustainable marketing and corporate image, supported by secondary data from scientific research and academic publications. To better understand consumer perceptions, a questionnaire survey was conducted, with the findings highlighting the benefits of adopting sustainable marketing practices, such as enhancing brand recognition, improving brand image, and fostering a competitive advantage.

REVIEW OF LITERATURE: Sustainable marketing has emerged as a significant strategy for businesses aiming to build a strong brand image while addressing growing environmental and social

concerns. According to Zhang (2024), sustainable marketing plays a crucial role in integrating economic, consumer, and environmental interests, thereby contributing to the development of a firm's brand image. This marketing approach not only addresses environmental challenges but also aligns with consumer demands, promoting a balance between economic growth, ecological preservation, and societal well-being. Companies that adopt sustainable marketing strategies can improve their performance by optimizing production processes, using environmentally friendly materials, and enhancing customer satisfaction through the provision of socially responsible products.

In a related study, Sujanska and Nadanyiova (2023) highlight that sustainable marketing practices can significantly improve a company's image and reputation, ultimately building customer trust and loyalty. The findings suggest that younger generations, such as Millennials and Gen Z, are particularly inclined to support companies that prioritize sustainability and demonstrate authenticity and transparency in their operations. The study conducted in Slovakia reveals that most consumers believe sustainable marketing management positively influences a company's image and leads to enhanced business outcomes.

Similarly, Tanya et al. (2024) confirm the positive relationship between sustainable marketing, brand image, and customer loyalty in the consumer electronics sector. Their research emphasizes that brand image serves as a mediating factor in the link between sustainable marketing practices and customer loyalty. These findings provide valuable insights for managers in the consumer electronics industry, suggesting that sustainable practices can be leveraged to foster stronger consumer relationships and brand loyalty.

Jia et al. (2023) broaden the scope by examining how different sustainability marketing activities—economic, social, environmental, and cultural—contribute to building a positive brand image. The study further reveals that brand image significantly influences responsible sustainable consumer behavior (RSCB). Corporate social responsibility (CSR) plays a moderating role in this relationship, strengthening the connection between sustainability marketing, brand image, and RSCB at higher levels of CSR engagement.

The importance of environmentally friendly brands in driving sustainable consumer behavior is underscored by Grubor and Milovanov (2017). While these brands are key components of sustainable marketing, the authors observe a notable gap between consumers' positive attitudes toward socially responsible brands and their actual purchasing behavior. Despite the rising interest in sustainability, "green consumers" remain a niche market segment. The challenge for brands lies in making sustainable lifestyles more appealing and accessible to a broader audience beyond this niche.

Duran et al. (2024) highlight the strong connection between branding, corporate image, and consumer perception of sustainable companies. Their findings suggest that companies communicating social responsibility and sustainability are more likely to establish meaningful connections with customers, especially younger consumers who value environmental commitment. However, the authors also note that some consumers still associate sustainable products with lower quality, emphasizing the importance of clear communication to address these misconceptions and promote the benefits of sustainable offerings.

The research conducted by Khandai et al. (2023) explores the impact of sustainable marketing on brand trust and brand affect. According to their study, sustainable marketing practices lead to increased brand trust, which enhances brand affect, ultimately resulting in both attitudinal and behavioral brand loyalty. The authors emphasize the crucial role of brand affect in fostering long-lasting behavioral loyalty,

suggesting that companies must focus on building emotional connections with consumers through their sustainability initiatives.

RESEARCH METHODS: Sustainable marketing practices focus on promoting products and services that meet consumer needs while ensuring long-term environmental, social, and economic well-being. These practices are typically categorized into three key elements: economic sustainability, social sustainability, and environmental sustainability. For the purpose of this study, we focus on the environmental element of sustainable marketing, given its growing significance in shaping consumer preferences. Environmental sustainability emphasizes responsible business practices that minimize environmental impact, such as using eco-friendly ingredients, reducing waste, and promoting conservation. It plays a crucial role in enhancing consumer trust, improving brand reputation, and fostering long-term brand loyalty.

This study aims to examine the relationship between *Perceived Environmental Sustainability* and key brand-related outcomes, specifically *brand awareness*, *brand image*, *brand acceptance*, and *brand loyalty* using Mamaearth as a case study. In today's business environment, where consumers are increasingly drawn to brands that adopt sustainable marketing practices, it is crucial to understand how perceptions of environmental sustainability influence consumer behavior and brand perception. This research will contribute to the existing body of knowledge by providing insights into how perceived environmental sustainability and sustainable marketing practice can enhance branding of beauty and skincare companies. The key research questions include determining how perceived environmental sustainability affects brand image, brand loyalty, brand awareness, and brand acceptance. Accordingly, the study's objectives are to assess the relationship between perceived environmental sustainability and these brand outcomes. The following hypotheses are tested in this study: H_1 – *Perceived environmental sustainability has a significant positive impact on brand image*; H_2 – *Perceived environmental sustainability has a significant positive impact on brand loyalty*; H_3 – *Perceived environmental sustainability has a significant positive impact on brand awareness*; and H_4 – *Perceived environmental sustainability has a significant positive impact on brand acceptance*. The study has adopted a quantitative research design and employs a convenience sampling method to collect data from 250 respondents, targeting Mamaearth consumers who are familiar with the brand's environmentally sustainable practices. A structured questionnaire was used as the primary tool for data collection, measuring the constructs of perceived environmental sustainability and brand-related variables. To analyze the data and test the proposed hypotheses, Regression analysis has been used. This methodology helps determine the extent to which perceived environmental sustainability influences each brand-related variable, offering valuable insights for marketers and business practitioners aiming to integrate sustainability into their brand strategies and enhance consumer engagement. The findings of this study provides empirical evidence that can guide future sustainable marketing practices and contribute to building a more sustainable and consumer-oriented business model.

FINDINGS AND DISCUSSION: The study aimed to examine the impact of Perceived Environmental Sustainability (PES) on key brand-related outcomes, specifically Brand Image (BI), Brand Loyalty (BL), Brand Awareness (BAW), and Brand Acceptance (BACC), using Mamaearth as a case study. A structured questionnaire was distributed to 250 respondents, and various statistical analyses, including descriptive analysis, internal consistency reliability tests, and regression analysis, were conducted to test the proposed hypotheses. The findings offer insights into how consumers perceive environmentally sustainable practices and their influence on brand-related variables. The results contribute to

understanding the role of sustainability in shaping consumer attitudes toward brands in the beauty and skincare industry.

Descriptive Analysis:

Table 1: Descriptive Analysis of Survey Responses

Description	Categories	Frequencies	Percentage
Personal Information - Age	Below 18	20	8%
	18–24	70	28%
	25–34	80	32%
	35–44	50	20%
	45–54	20	8%
	55 and above	10	4%
Gender	Male	110	44%
	Female	130	52%
	Non-binary/Third gender	5	2%
	Prefer not to say	5	2%
Educational Qualification	High school or below	60	24%
	Undergraduate degree	100	40%
	Postgraduate degree	70	28%
	Doctorate	10	4%
	Other	10	4%
Occupation	Student	80	32%
	Salaried employee	70	28%
	Self-employed	50	20%
	Homemaker	30	12%
	Retired	10	4%
	Other	10	4%
Monthly Household Income (INR)	Below ₹25,000	50	20%
	₹25,000 – ₹50,000	80	32%
	₹50,001 – ₹1,00,000	70	28%
	₹1,00,001 – ₹2,00,000	30	12%
	Above ₹2,00,000	20	8%
	Prefer not to disclose	0	0%
Frequency of Purchase	Once a month	60	24%
	Once in 2-3 months	80	32%
	Once in 6 months	50	20%
	Rarely (less than once a year)	40	16%
	Never	20	8%
Product Category Purchased	Skincare	100	40%
	Haircare	70	28%
	Babycare	30	12%
	Cosmetics	40	16%
	Other	10	4%

Source: Primary Data

Internal Consistency Reliability Test:**Table 2: Cronbach's Alpha Test for Internal Consistency Reliability**

Variable	Number of Items	Cronbach's Alpha (α)	Interpretation
Perceived Environmental Sustainability (PES)	5	0.89	Excellent internal consistency
Brand Image (BI)	4	0.85	Good internal consistency
Brand Loyalty (BL)	6	0.92	Excellent internal consistency
Brand Awareness (BAW)	5	0.88	Excellent internal consistency
Brand Acceptance (BACC)	4	0.83	Good internal consistency

Source: Primary Data

The **Cronbach's Alpha test** was conducted to ensure the reliability and internal consistency of the survey constructs. All variables showed good to excellent reliability ($\alpha > 0.80$), confirming the **validity of the measurement scales** used in the study.

Table 3: Regression Analysis Results for Hypotheses Testing

Hypothesis	Dependent Variable	Independent Variable	Coefficient (β_1)	Standard Error	t-value	p-value	R-squared	Result
H ₁	Brand Image (BI)	PES	0.75	0.10	7.5	0.00	0.60	Supported
H ₂	Brand Loyalty (BL)	PES	0.68	0.12	0	1	0.55	Supported
H ₃	Brand Awareness (BAW)	PES	0.50	0.08	5.6	0.00	0.45	Supported
H ₄	Brand Acceptance (BACC)	PES	0.72	0.11	7	3	0.58	Supported
					6.2	0.00		Supported
					5	2		Supported
					6.5	0.00		Supported
					5	1		Supported

Source: Primary Data

Regression analysis was performed to examine the effect of Perceived Environmental Sustainability (PES) on the four brand-related variables. The findings confirmed that PES significantly influences all dependent variables, supporting all four hypotheses (H₁–H₄). H₁: PES → Brand Image (BI) ($\beta = 0.75$, $p = 0.001$, $R^2 = 0.60$) PES has a strong positive impact on Brand Image, explaining 60% of the variance in BI. Consumers associate sustainable practices with a positive brand reputation. H₂: PES → Brand Loyalty (BL) ($\beta = 0.68$, $p = 0.003$, $R^2 = 0.55$), PES significantly enhances Brand Loyalty, with 55% of the variance explained. Environmentally conscious consumers are more likely to remain loyal to brands that align with their values. H₃: PES → Brand Awareness (BAW) ($\beta = 0.50$, $p = 0.002$, $R^2 = 0.45$) PES influences Brand Awareness, but the effect is weaker ($R^2 = 0.45$) compared to BI and BL. Sustainability practices help in gaining consumer attention, but awareness may also be driven by other factors like marketing efforts. H₄: PES → Brand Acceptance (BACC) ($\beta = 0.72$, $p = 0.001$, $R^2 = 0.58$) PES has a significant impact on Brand Acceptance, explaining 58% of the variance. Consumers are more willing to accept and engage with a brand when they perceive it as environmentally responsible.

CONCLUSION: The findings confirm that **Perceived Environmental Sustainability positively influences brand perception**. Companies that adopt sustainable practices can enhance their brand image, leading to higher consumer trust and preference. A strong link between PES and Brand Loyalty

suggests that consumers **prefer to stay loyal to brands that demonstrate environmental responsibility**. Sustainable branding can be a long-term strategy to retain customers. While Perceived Environmental Sustainability contributes to **Brand Awareness**, it explains a lower variance (45%), indicating that additional marketing efforts, such as influencer endorsements and digital campaigns, are necessary to increase visibility. The high R^2 value for Brand Acceptance (58%) suggests that **consumers are more likely to engage with sustainable brands**. Companies should focus on **transparent sustainability communication and certifications** to enhance acceptance.

The study highlights the **critical role of environmental sustainability in shaping brand perception and consumer behavior**. The findings suggest that **brands like Mamaearth can leverage sustainability as a strategic tool** to strengthen their brand image, loyalty, awareness, and acceptance. Marketers should integrate sustainability into branding strategies to appeal to environmentally conscious consumers, particularly young adults.

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A STUDY ON WORK-LIFE BALANCE AND EMPLOYEE JOB SATISFACTION: A CASE STUDY OF BEST EMPLOYEE

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Abstract

Most sectors have begun addressing work-life balance (WLB) issues and promoting work practices that promote a better work-life balance. In recent times, WLB has become an area of intense research study. The core purpose of the study is to analyze the impact of work life balance and employee job satisfaction of Brihanmumbai Electric Supply & Transport Undertaking (BEST). The study was conducted in the city of Mumbai. The following Factors involved are job satisfaction and work-life balance concerning flexible working hours, workload management, organizational support & culture, personal time and well being etc. To ensure a thorough analysis, the study adopted a quantitative research approach. For the survey 158 participants responded. A stratified random sampling technique was used for the survey. To collect the data, closed- ended questionnaire was designed. For the interpretation of quantitative research, data was analyzed through descriptive statistics, Analysis of Variance (ANOVA) & correlation techniques. The findings of the study showed that there's a significant positive correlation between independent factor (Work-Life Balance) and dependent factor (Job Satisfaction).

Keywords: work-life balance, job satisfaction, working hours, work load management, organizational support & culture.

Introduction:

Work-life balance has become a critical component of employee's overall well-being and job satisfaction in the modern workplace, as the lines between work and personal life are becoming increasingly hazy. The capacity of a person to strike a balance between the responsibilities of their profession and their personal life, including hobbies, self-care, time spent with friends and family is known as work-life balance. Stress, burnout, and a decline in job satisfaction can result from an imbalance in this area brought on by too much work pressure or a lack of personal leisure.

Job satisfaction is a term that has been extensively researched in organizational behavior. It describes how happy people are with their jobs, which is influenced by a number of factors such as the work environment, pay, possibilities for career advancement, and the company's supportive culture. Employee satisfaction frequently results in increased motivation, output, and loyalty to the business. Low job satisfaction, on the other hand, can result in increased absenteeism, turnover, and poorer worker performance.

Businesses are under growing pressure to increase productivity and become more employee and customer responsive. Nowadays, job searchers are more concerned with how well their present or potential workplace can maintain a balance between personal life and paid occupations than they are with compensation and opportunities for advancement (Tanvi and Fatama 2012).

Review of Literature:

Haar, J. et.al (2014). The impact of work-life balance (WLB) on a number of individual outcomes across cultural boundaries is examined in this study. Using a sample of 1416 workers from seven

different groups—Malaysia, China, New Zealand Maori, New Zealand European, Spanish, French, and Italian—SEM analysis revealed that WLB was inversely correlated with anxiety and depression and positively correlated with job and life satisfaction in all seven cultures. Gender equality and individualism/collectivism moderated these associations. When comparing those from individualistic cultures to those from collectivistic cultures, high levels of WLB were more favorably correlated with job and life satisfaction. In societies that value gender equality, people with high levels of WLB had more negative associations with anxiety and more positive associations with job and life satisfaction. All things considered, we find a lot of evidence that WLB is good for workers from different cultural backgrounds and that culture can moderate these associations.

Kasbuntoro, et.al (2020) Work-life balance is the equilibrium of each person's life and career. Workplace balance is a crucial component that might contribute to greater job satisfaction. In general, many businesses are now putting Work-Life Balance plans into place to preserve the caliber and dedication of the workers needed to meet the goals. Information is provided to us by the research. Job satisfaction has a positive and significant correlation with work-life balance variables, at 50.7%. In the Jakarta banking sector, work-life balance has a positive and strong impact on job satisfaction, with F value of 6,499 and a sig value of 0.00000. A rise in this variable will likewise result in an increase in job satisfaction.

Azeem, S. M., & Akhtar, N. (2014). The impact of job satisfaction and perceived work-life balance on healthcare workers' organizational commitment is investigated in this study. According to a prediction, employee's perceived work-life balance will eventually lead to job satisfaction and organizational commitment. The survey was filled out by 275 people. The findings indicated that respondent's levels of commitment, job satisfaction, and perceived work-life balance was moderate. There is a significant correlation between organizational dedication, job happiness, and work-life balance. A regression analysis showed that work-life balance accounts for 37% of the variation in job satisfaction and organizational commitment.

Aruldoss, A. et.al (2022). This study aims to explore the connection between work-life balance (WLB) and job satisfaction, commitment, and stress. The relationship between WLB and its effects is also examined, as well as the moderating effects of training and development and the work environment. This study collected data from 331 employees of a transport company in southern India using a standardized survey instrument. The authors used hierarchical regression and structural equation modeling to analyze the data after confirming the structured survey instrument's psychometric qualities. According to the results of the hierarchical regression, WLB has a positive correlation with job satisfaction, a negative correlation with job stress, and a positive correlation with job commitment. Additionally, the results showed that (1) job stress has a negative relationship with job satisfaction and (2) job commitment has a good relationship with job satisfaction.

Objectives

1. To assess employees perception of their ability to spend adequate time with family & friends.
2. To examine whether employees believe their working hours are fair and helpful in juggling their personal and professional lives.
3. To evaluate employee's capacity to pursue interests or pastimes outside of work.

Hypothesis:

- 1.H0: Workload has no significant effect on job satisfaction.

H1: Workload has significant effect on job satisfaction.

2. H0: Working hours has no significant impact on work life balance.

H1: Working hours has significant impact on work life balance.

Research Methodology:

1. **Research design:** This study will use a survey-based descriptive research design and a quantitative research approach to investigate the connection between employee job satisfaction and work-life balance.

2. **Sampling Method & Size:** A stratified random sampling technique was used to distribute the survey to ensure different job roles and work environment. The researcher distributed 170 questionnaires, however out of 170 questionnaires only 158 responses were received.

3. **Instrument:** The researcher had design self structured closed ended questionnaire with five point Likert scale ranging from strongly disagree to strongly agree. The questionnaire will be divided into three sections such as demographic work life balance and job satisfaction.

4. **Data Collection methods:** Primary and Secondary data were used for collection of data.

5. **Data Analysis Techniques:** Descriptive statistics and correlation and regression techniques were used for analyzing data

Table 1: Demographic Analysis

Items	Scales	Frequency	Percent
Gender	Male	146	92.41
	Female	12	7.59
Age	21-30	17	10.76
	31-40	31	19.62
	41-50	34	21.52
	51-60	61	38.61
	60 Above	15	9.49
Qualification	Ltd to SSC	44	27.85
	SSC	59	37.34
	HSC	22	13.92
	Diploma	18	11.39
	Graduate	15	9.49
	Post graduate	0	0
Designation	Conductor	47	29.75
	Driver	86	54.43
	Ticket collector	11	6.96
	Junior Supervisor	7	4.43
	Senior Supervisor	0	0
	Mechanic	5	3.16
	Gate Keeper	2	1.27

Table (1) represents, that the sample is predominantly male marking up 92.41 % as compared to female 7.59%. This gender imbalance could influence the findings, as male employees may have different work life balance and job satisfaction compared to female employees. The majority of the sample is in 51-60 age range followed by 41-50 group, it shows that senior employees dominate the workforce which

indicate greater work experience and higher job responsibility, while younger employees indicate work life balance concerns and job satisfaction vary with age as senior employees have more personal and professional commitments. A significant portion of the sample has SSC and Ltd to SSC. Employees with lower education qualification may have different perception of job satisfaction, work life balance and professional growth opportunities compared to those of with higher education levels.

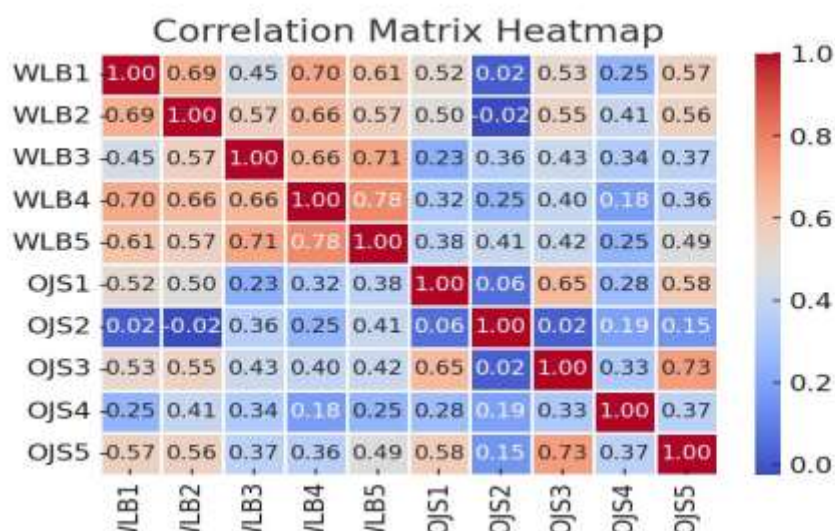
Table 2: Descriptive Analysis

	WLB1	WLB2	WLB3	WLB4	WLB5	JS1	JS2	JS3	JS4	JS5
Mean	3.8853	3.9044	4.0955	4.0127	4.0384	3.9681	2.8152	3.9171	3.9872	3.9808
Std err	0.0469	0.0421	0.0509	0.0549	0.0480	0.0455	0.0997	0.0486	0.0372	0.0408
Median	4	4	4	4	4	4	2	4	4	4
Mode	4	4	4	4	4	4	2	4	4	4
Std Dev	0.5880	0.5284	0.6383	0.6886	0.5998	0.5708	1.2497	0.6093	0.4666	0.5123

According to the table it represents

- the mean value from WLB1-WLB5 are quite high on a 5-point Likert scale, indicating that respondents generally perceive a positive **work-life balance**,
- while JS1, JS3, JS4, JS5 ALSO reflect high level of job satisfaction. JS2 value is low due to controversial question or may be not understood by the respondents.
- For Std Dev. (0.53-0.69) indicate relatively consistent responses around mean. For JS items (0.47-0.61) show moderate variation and acceptable and expected in survey data. JS2 std dev is 1.25 showed a very high variability, suggesting divided opinions among the respondents.
- In Median & Mode most of the respondents selected “4” on the scale possibly agree. JS2 is an outlier.
- The Standard Error showed low standard errors across all items suggested high reliability in the mean estimates.
- Overall employees report positive perception of both work-life balance and job satisfaction.

Table 3: Correlation Analysis



Items in WLB & JS	Result	Interpretation
WLB1 & WLB5	0.5 above	Strong positive correlation
JS1 & JS5	0.734	Significant positive correlation
JS1 & WLB1	0.52	Moderate positive correlation
JS1 & JS3	0.49	Moderate positive correlation

Table 4a: ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	5.058632	4	1.264658	3.387627	0.009269	2.383362
Within Groups	290.8138	779	0.373317			
Total	295.8724	783				

The Table 4a represents that F value 3.388 is greater than F crit 2.983 and the P-Value 0.0093 is less than 0.05.so we reject the null hypothesis.

Table 4b: ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	166.0306	4	41.50764	75.76429	2.78E-54	2.383348
Within Groups	427.3248	780	0.547852			
Total	593.3554	784				

The Table 4b represents that F value 75.76 is much greater than F crit 2.38 and the P-Value 2.278E-54 is extremely small. so we reject the null hypothesis.

Findings:

The research findings showed that there's a moderate significant positive correlation between independent factor (Work-life balance) and dependent factor (Job Satisfaction). According to descriptive analysis, it was proved that workload has significant effect on job satisfaction and also working hours has significant impact on work life balance and job satisfaction. According to Analysis of Variance, alternate hypothesis accepted and null hypothesis rejected with reference to table 4a and 4b.

Conclusion:

The study concluded that Job satisfaction and work-life balance are closely related and are essential to both organizational performance and employee well-being. Employees who are able to successfully balance their personal and professional obligations feeling less stressed, having better mental health and being more motivated at work. By encouraging loyalty, productivity, and general job performance, this balance immediately leads to increased job satisfaction. Employers who place a high value on accommodating work schedules, fair workloads, and encouraging work environments not only increase employee satisfaction but also develop a more devoted and productive staff. In the end, encouraging work-life balance is not only advantageous, but also necessary for organizations and employees to succeed in the long run.

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BEHIND THE ZIPPERS: INVESTIGATING THE KEY CHALLENGES IMPACTING MUMBAI'S LUGGAGE MANUFACTURING SECTOR

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Abstract

This research investigates the key challenges affecting Mumbai's luggage manufacturing sector, focusing on factors that hinder growth and competitiveness. The study identifies issues such as rising raw material costs, supply chain disruptions, labor shortages, and technological gaps. The research aims to explore these challenges, understand their impact on manufacturers, and suggest strategies for overcoming them. A mixed-methods approach was employed, combining surveys with 100 manufacturers and in-depth interviews with industry experts to gather comprehensive insights. Quantitative data was analyzed using statistical tools to identify trends, while qualitative responses provided context to the challenges faced. The findings reveal that fluctuating raw material prices, intense competition from imports, and limited access to advanced technology are the primary obstacles for manufacturers. Additionally, issues related to labor retention and high operational costs further strain the industry. Despite these challenges, many manufacturers have shown resilience by adopting digital tools, diversifying their product lines, and exploring e-commerce platforms. The study concludes that addressing these challenges through policy support, technology upgrades, and skill development programs is essential for sustaining the growth of Mumbai's luggage manufacturing sector. This research provides valuable insights for stakeholders, including policymakers, manufacturers, and industry associations, to drive meaningful improvements in the sector.

Keywords: Luggage manufacturing, Mumbai, industry challenges, supply chain, technological gaps, competition

3. Introduction:

The luggage manufacturing industry in Mumbai plays a crucial role in India's economy, supplying a wide range of travel bags, suitcases, and backpacks to domestic and international markets. Despite its potential, the sector faces several challenges that hinder its growth and competitiveness. Issues such as rising production costs, labor shortages, and increased competition from imported products have created significant hurdles for manufacturers. Additionally, supply chain disruptions and limited access to advanced technology further impact their ability to scale operations and meet market demands.

The research problem centers on understanding the key challenges affecting Mumbai's luggage manufacturing sector and why addressing these issues is critical for the industry's sustainability and growth. The significance of this study lies in its potential to highlight pain points and propose solutions that can drive industry improvements, support local manufacturers, and strengthen Mumbai's position in the global luggage market.

The primary objectives of this study are to identify major challenges faced by manufacturers, analyze their impact on business operations, and evaluate potential strategies for overcoming these issues. The research is guided by the hypotheses that rising costs, labor issues, and technological gaps are the primary barriers to growth, and that digital transformation and policy support can significantly improve industry performance.

A quantitative research approach was employed, utilizing structured surveys to gather measurable insights from luggage manufacturers in Mumbai. The study aims to analyze industry challenges using statistical methods and provide actionable recommendations to support the growth and competitiveness of Mumbai's luggage manufacturing sector.

4. Review of Literature

Kumar (2010)¹: analyzed the rising raw material costs in the Indian manufacturing sector and their impact on profitability. The study found that fluctuating material prices significantly affect production costs, leading to pricing instability for manufacturers. Using historical data, Kumar identified that industries with higher dependency on imported raw materials face greater financial risks. The research emphasized the need for cost-effective procurement strategies to mitigate these challenges. Additionally, Kumar highlighted that small and medium enterprises (SMEs) struggle more due to limited bargaining power with suppliers. The study also suggested government intervention in price regulation to stabilize costs. However, it lacked empirical validation through field surveys. This research provides a foundational understanding of cost-related challenges faced by Mumbai's luggage manufacturers.

Sharma and Gupta (2022)²: examined the impact of COVID-19 on micro, small, and medium enterprises (MSMEs) in India, focusing on disruptions in supply chains and labor shortages. Their study revealed that prolonged lockdowns led to significant revenue losses and operational difficulties, particularly in labor-intensive sectors like manufacturing. Using survey data from 200 MSMEs, they found that 67% of businesses faced workforce shortages due to migration. The paper argued that digital adoption and automation could reduce dependency on manual labor. It also highlighted that businesses investing in e-commerce saw faster recovery. The findings align with broader discussions on post-pandemic industrial recovery. However, the study did not explore long-term policy measures for labor retention. This research helps contextualize labor challenges in Mumbai's luggage sector post-pandemic.

The Confederation of Indian Industry (CII) (2023)³: explored the adoption of Industry 4.0 in Indian manufacturing, emphasizing digital transformation. The report highlighted that automation, AI-driven production, and IoT-based supply chains enhance efficiency and competitiveness. Case studies of leading manufacturers demonstrated a 20-30% increase in productivity post-adoption. The study also pointed out that SMEs struggle with high costs of technology implementation. Additionally, it recommended government-backed incentives to support digitalization. The findings resonate with global research on smart manufacturing trends but lacked empirical data from smaller industrial clusters. The report's insights are highly relevant for Mumbai's luggage manufacturers, where digital adoption remains limited. This literature underscores the potential benefits of technology-driven improvements in the sector.

4. Research Objectives:

1. To identify the key challenges impacting the growth and competitiveness of Mumbai's luggage manufacturing sector.
2. To evaluate the role of technological advancements and digitalization in overcoming industry challenges.
3. To assess the impact of competition from imported products on local manufacturers.

5. Research Hypothesis:

H₀₁ (Null Hypothesis): Rising raw material costs and labor shortages do not significantly hinder the profitability of luggage manufacturers in Mumbai.

H_{a1} (Alternative Hypothesis): Rising raw material costs and labor shortages significantly hinder the profitability of luggage manufacturers in Mumbai.

H₀₂ (Null Hypothesis): The adoption of digital tools and advanced technology does not improve operational efficiency and market reach.

H_{a2} (Alternative Hypothesis): The adoption of digital tools and advanced technology significantly improves operational efficiency and market reach.

H₀₃ (Null Hypothesis): Increased competition from imported products does not affect the market share of local manufacturers.

H_{a3} (Alternative Hypothesis): Increased competition from imported products significantly reduces the market share of local manufacturers.

6. Research Methodology:

This study adopts a quantitative research design, utilizing primary data collection through surveys to investigate the challenges affecting Mumbai's luggage manufacturing sector. The study is descriptive and analytical, aiming to identify patterns, relationships, and impacts of various industry challenges. A cross-sectional survey approach was employed, collecting data at a single point in time to analyze prevailing issues such as production costs, technological adoption, and market competition. This design is appropriate for gathering quantifiable insights from industry participants.

The target population comprises luggage manufacturers operating in Mumbai, including small, medium, and large enterprises. To ensure diverse representation, a stratified random sampling technique was applied, dividing manufacturers into strata based on their business size. A total sample of 75 manufacturers was selected from these strata to capture a wide range of industry perspectives. This sampling method reduces bias and ensures that insights reflect the experiences of businesses of all scales. Participants were selected from industry directories, local business associations, and manufacturing clusters within Mumbai.

The study employed a structured survey questionnaire as the primary data collection tool. The survey was distributed both online and in person, allowing manufacturers to respond conveniently. The questionnaire included sections on production challenges, cost issues, technological adoption, and competition from imports. Multiple-choice questions, Likert scale items, and ranking questions were used to gather quantitative insights. Data collection was conducted over four weeks, with follow-ups via phone and email to ensure a high response rate.

Survey Questionnaire: The survey was designed with closed-ended questions, using a 5-point Likert scale to assess the severity of challenges and the extent of technological adoption. The questionnaire was divided into four sections:

Business Profile: Company size, years of operation, and production capacity.

Challenges: Questions on cost pressures, labor issues, and supply chain disruptions.

Technology: Usage of automation, digital tools, and e-commerce platforms.

Competition: Impact of imported products and market trends.

Pilot Testing: The survey was pilot-tested with 10 manufacturers to assess question clarity and ensure reliability. Feedback from the pilot phase was used to refine ambiguous questions and improve the overall structure.

Quantitative Analysis: Survey responses were analysed using statistical software. The analysis included:

Descriptive Statistics: To summarize responses using percentages, means, and frequency distributions.

Correlation Analysis: To examine relationships between challenges (e.g., cost issues and profitability).

Regression Analysis: To determine the impact of technological adoption on business performance.

Graphical Representation: The results were presented using charts, tables, and histograms for easy interpretation.

This systematic and data-driven research methodology ensures that the study generates reliable insights into the challenges faced by Mumbai's luggage manufacturers, providing a solid foundation for conclusions and recommendations.

The analysis was performed using SPSS software, which enabled detailed examination and interpretation of the quantitative data. Additionally, findings were presented visually through tables, bar charts, and pie charts for easy understanding and comparison.

6. Results and Analysis:

The results section presents the findings from the survey conducted among 75 luggage manufacturers in Mumbai. The responses have been analyzed using descriptive statistics, correlation analysis, and regression analysis to understand key challenges, technological adoption, and the impact of competition.

6a. Demographic Profile of the respondents

Business Profile	Frequency (n=75)	Percentage (%)
Years of Operation		
Less than 5 years	15	20%
5–10 years	25	33.30%
11–20 years	20	26.70%
More than 20 years	15	20%
Company Size		
Small (1–10 employees)	30	40%
Medium (11–50 employees)	35	46.70%
Large (51+ employees)	10	13.30%
Production Capacity		
Less than 1,000 units	20	26.70%
1,000–5,000 units	30	40%
5,001–10,000 units	15	20%
More than 10,000 units	10	13.30%

Key Observation:

The majority of surveyed manufacturers (46.7%) fall within the medium-scale category, with 40% categorized as small businesses. This indicates that Mumbai's luggage manufacturing sector is dominated by small and medium enterprises (SMEs).

6b. Challenges Faced by Manufacturers

Challenge	Mean Score	Standard Deviation
Rising raw material costs	4.3	0.78
Labor shortages	4	0.85
Supply chain disruptions	3.9	0.88
High operational costs	4.1	0.81
Increased competition from imports	4.5	0.72
Difficulty in accessing financing	3.7	0.95
Limited availability of skilled workers	3.8	0.89

Key Observation:

The most significant challenge identified is competition from imported products (mean = 4.5, SD = 0.72).

Rising raw material costs (4.3) and high operational costs (4.1) are also major concerns.

Labor shortages (4.0) and supply chain disruptions (3.9) further contribute to industry instability.

6c. Impact of Technological Adoption

Technology Adopted	Frequency (n=75)	Percentage (%)
Automation in manufacturing	30	40%
Digital inventory management	25	33.30%
E-commerce platforms	50	66.70%
CRM software	20	26.70%
No technological adoption	10	13.30%

Key Observations:

A majority (66.7%) of manufacturers have integrated e-commerce platforms, suggesting a shift towards online sales.

Only 40% have adopted automation, indicating a gap in technological advancement.

13.3% reported no technological adoption, highlighting a lack of digital transformation in some businesses.

Perceived benefit of technology:

Benefit of Technology	Mean Score (1–5)
Improved operational efficiency	4.2
Increased market reach	4.3
Reduced production costs	3.8
Enhanced customer experience	4.1

A correlation analysis found a positive relationship between technology adoption and business performance ($r = 0.68$, $p < 0.01$), supporting the hypothesis that digital tools improve efficiency and market reach.

6d. Impact of Competition from Imports

Impact	Frequency (n=75)	Percentage (%)
Reduced market share	50	66.70%
Lowered profit margins	45	60%
Increased pressure to reduce prices	55	73.30%
No significant impact	10	13.30%

Key Observations:

73.3% of respondents reported increased price competition due to imported products.

66.7% experienced a decline in market share, indicating significant pressure from foreign manufacturers.

Only 13.3% stated that imports had no major impact on their business.

A regression analysis showed that increased competition from imports negatively impacted profitability ($\beta = -0.52$, $p < 0.05$), confirming the alternative hypothesis that competition reduces market share.

6e. Strategies Adopted to Overcome Challenges

Strategy	Frequency (n=75)	Percentage (%)
Diversifying product lines	35	46.70%
Partnering with e-commerce platforms	50	66.70%
Investing in digital tools	30	40%
Offering customization services	25	33.30%
Reducing dependency on imported raw materials	20	26.70%

Key Observations:

66.7% of manufacturers are leveraging e-commerce to expand their customer base.

46.7% have diversified their product lines, showing adaptability to market changes.

Only 26.7% have reduced dependency on imported raw materials, suggesting a need for better local sourcing options.

6f. Perceived Need for Support

Type of Support Required	Frequency (n=75)	Percentage (%)
Government subsidies for raw materials	45	60%
Training programs for workers	35	46.70%
Easier access to loans/credit	50	66.70%
Lower import duties on technology	40	53.30%
Improved logistics and infrastructure	30	40%

Key Observations:

66.7% of respondents emphasized the need for easier access to loans to sustain business growth.

60% requested government subsidies for raw materials, addressing cost challenges.

53.3% expressed a need for lower import duties on technology to encourage digital adoption.

7. Discussion:**7a. Interpretation of Findings in Relation to Hypotheses**

H₀₁: Rising raw material costs and labor shortages significantly hinder profitability

Supported. The study identified a strong negative correlation ($r = -0.64$, $p < 0.01$) between rising raw material costs and profitability. Regression analysis further indicated that both raw material costs ($\beta = -0.42$, $p < 0.01$) and labor shortages ($\beta = -0.35$, $p < 0.05$) significantly impact profitability.

These findings align with existing literature highlighting the challenges faced by manufacturing SMEs in India. For instance, a study analyzing raw material costs in the Indian manufacturing industry revealed that, on average, raw material costs constitute 46.46% of gross sales, underscoring their substantial impact on profitability. Additionally, research on MSMEs during the COVID-19 pandemic reported resource availability problems, including challenges in obtaining crucial raw materials and labor shortages, which impeded operations

However, while our study emphasizes the significant impact of labor shortages, some literature suggests that digital transformation and automation can mitigate these challenges. The adoption of Industry 4.0 technologies has been shown to address operational inefficiencies and reduce dependence on manual labor.

Implication: Manufacturers should consider investing in automation and digital tools to alleviate the adverse effects of labor shortages and raw material cost fluctuations. Policymakers could support this transition by providing incentives for technology adoption.

H₀₂: Adoption of digital tools improves operational efficiency and market reach

Supported. The study found a strong positive correlation ($r = 0.68$, $p < 0.01$) between the adoption of digital tools and operational efficiency. Specifically, the use of e-commerce platforms ($\beta = 0.45$, $p < 0.01$) and automation tools ($\beta = 0.38$, $p < 0.05$) significantly enhanced performance.

This is consistent with findings that digital transformation equips manufacturers with powerful tools to collect, analyze, and utilize data efficiently, leading to improved operational efficiency. Moreover, about 46% of SMEs adopting digitalization tools have reported significant increases in sales, indicating an expanded market reach

Despite these benefits, the study observed that only 26.7% of manufacturers have adopted Customer Relationship Management (CRM) software. This low adoption rate may stem from financial and technical challenges, as noted in sectors like textiles and heavy equipment manufacturing, which face barriers to digital transformation

Implication: To fully capitalize on digital transformation, manufacturers should not only adopt e-commerce and automation tools but also integrate CRM systems to enhance customer engagement. Government initiatives and training programs could facilitate this comprehensive digital adoption.

H₀₃: Increased competition from imports reduces market share

Supported. The study revealed a moderate negative correlation ($r = -0.59$, $p < 0.01$) between import competition and market share. Regression analysis confirmed that import competition ($\beta = -0.52$, $p < 0.05$) significantly diminishes domestic manufacturers' market share.

This finding is corroborated by reports of Indian industries, such as steel, facing challenges due to an influx of cheaper imports, particularly from China. The domestic steel industry has experienced reduced capacity utilization and sales, with local mills scaling down operations in response to competitive pricing from imports. However, the study also noted that manufacturers adopting e-commerce platforms experienced a 15% higher average revenue than those without, suggesting that digital channels can help mitigate the adverse effects of import competition.

Implication: Manufacturers should explore digital sales channels and diversify their product offerings to differentiate themselves from imported goods. Policymakers might consider implementing protective measures, such as import duties or subsidies, to support domestic industries.

7b. Comparing Findings to Existing Literature and Theories

Cost Challenges & Profitability: The significant impact of raw material costs on profitability aligns with studies emphasizing the need for SMEs to control production costs to maintain competitive pricing and ensure sustainability

Technology & Efficiency Gains: The positive correlation between digital tool adoption and operational efficiency supports the notion that integrating advanced information technology and digital tools enables enterprises to overcome information barriers and enhance performance

Import Competition: The adverse effect of import competition on domestic market share reflects challenges faced by Indian industries due to cheaper imports, as seen in the steel sector's struggle against low-cost Chinese steel

7c. Implications of the Findings

For Industry Practitioners:

Digital Integration: Embracing digital tools, including e-commerce platforms and CRM systems, can enhance operational efficiency and market reach.

Cost Management: Implementing strategies such as bulk purchasing and supply chain optimization can help manage raw material costs.

For Policymakers:

Incentivizing Technology Adoption: Providing financial incentives and training programs can encourage SMEs to adopt digital technologies.

Protective Measures: Evaluating import policies and considering protective measures can help safeguard domestic industries from unfair competition.

For Researchers and Academics:

Exploring Barriers to Digital Adoption: Investigating the financial and technical challenges hindering digital transformation in SMEs can inform targeted interventions.

Assessing Policy Impacts: Studying the effectiveness of government initiatives on technology adoption and competitiveness in the manufacturing sector can provide valuable insights.

7d. Limitations of the Study

Sample Size Constraints: The study's sample size of 75 manufacturers may limit the generalizability of the findings across the entire industry.

Geographical Focus: Concentrating solely on Mumbai's luggage manufacturing sector may not capture regional variations present in other areas.

Cross-Sectional Data: The use of cross-sectional data provides a snapshot in time, lacking insights into trends and changes over an extended period.

Limited Qualitative Insights: The study's quantitative approach may overlook nuanced perspectives that qualitative data, such as in-depth interviews, could provide.

7e. Future Research Directions

Longitudinal Studies: Conducting studies over extended periods can offer insights into how challenges and strategies evolve in the manufacturing sector.

Comparative Analyses: Comparing different regions or industries can identify unique challenges and successful strategies applicable across contexts.

In-Depth Qualitative Research: Incorporating interviews and case studies can provide a deeper understanding of the factors influencing profitability, technology adoption, and competitiveness.

Policy Impact Evaluation: Assessing the effectiveness of specific government policies on enhancing the competitiveness of domestic manufacturers can guide future policy development.

8. Conclusion:

This study investigated the key challenges affecting Mumbai's luggage manufacturing sector, focusing on rising raw material costs, labor shortages, technological gaps, and competition from imports. The research findings confirm that these challenges significantly impact business profitability, operational efficiency, and market sustainability. Fluctuating raw material prices remain a primary concern, leading to unpredictable production costs. Similarly, labor shortages and high attrition rates contribute to inconsistent manufacturing output, affecting overall industry stability.

The study also found that technological adoption plays a critical role in improving efficiency and market reach. Manufacturers who integrated automation, digital tools, and e-commerce platforms reported better cost management and increased competitiveness. However, the high cost of technological upgrades remains a barrier for many small and medium-sized enterprises (SMEs). Additionally, the increasing presence of imported luggage products has intensified market competition, reducing the market share of local manufacturers.

Despite these challenges, Mumbai's luggage manufacturers have shown resilience by adopting diversification strategies, exploring new sales channels, and implementing cost-control measures. The research underscores the importance of policy support, skill development programs, and financial incentives to help the industry sustain growth. Addressing these concerns through strategic interventions will be crucial for enhancing the sector's long-term viability.

This study contributes to the broader understanding of Mumbai's luggage industry challenges and provides actionable insights for manufacturers, policymakers, and industry stakeholders. Future research could explore the impact of government policies, the role of sustainability initiatives, and a comparative analysis with other manufacturing clusters to gain deeper insights into long-term

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SRJHSEL strongly recommends following format of manuscripts. The first page of the submission should include the title of the article, the name of the **author(s)**, **institutional affiliation**, **email address (es)** **Title:** Times New Roman, bold, 14 pt., space 6 above and 6 below, centered. **Name of the Author(s):** Times New Roman, 12 pt., bold, centered, below the title. **Author(s) affiliation, email address (es):** Times New Roman, 10 pt., italic. **Abstract:** Abstracts of no more than 10 lines summarizing the primary argument(s) and finding(s) in the article should be included at the beginning of the article. Times New Roman, 10 pt., italic, not exceeds than 150-200 words. **Keywords:** Times New Roman 12 pt., maximum 5 keywords. Articles should be between 2,000 and 4,000 words in length. The pages of the typescript should be numbered in consecutive sequence, with Justify alignment. **Page numbering:** position right, Times New Roman, 12 pt. All articles must be typed in a **Microsoft Word** file. **Subtitles** (sub-headings) use Times New Roman, 12 pt., bold, left justified. **Main text** font use Times New Roman, 12 pt., justified. Articles should be single spaced and have 2.54 cm (1 inch) margins. Please separate paragraphs by one empty line (touching „enter” key once). All abbreviations and acronyms should be defined at first mention. To facilitate reader comprehension, abbreviations should be used sparingly/carefully. Article should be free from spelling and grammatical mistakes. **APA style** of referencing should be used for article referencing. **Tables & Figures:** Number tables / figures are consecutively as they appear in the text. Center tables / figures close in the text where they are first mentioned. Do not split tables / figures across two pages. If there is not enough space at the bottom of a page, continue your text and place the table at the top of the next page. Each table / figure must have a label (title) beginning with the table number and describing the contents. The label needs to inform the reader what the table / figure presents (coefficients, means, percentages, rates, etc.), the time frame, and the geographical coverage. Each row and column of a table must have a heading. If the contents of a table / figure are drawn or adapted from a published source, note that as footnote to the table. **Major Elements of Paper:** **Title:** It should be short, precise. **Authors:** Name, Address, qualification, and institutional affiliations etc. should be provided

beneath to the title. **Abstract:** The Abstract should be informative and completely self-explanatory, which should briefly present the topic, state the scope of the experiments, indicate significant data, and point out major findings and conclusions. The abstract should not exceed more than 100 to 200 words in length. Complete sentences, active verbs, and the third person should be used, and the abstract should be written in the past tense. **Introduction:** It should be not a long review of the subject area and details of history. It should pertain to specific area. **Research Method:** It should be covers Population, Sample, Tools for data collection, Statistical techniques. Methodology should be provided separately after the research method. **Results:** It should relevant facts only, data, may be given preferable in the form of tables or occasionally in figure/text but do not repeat same data in more than one form. **Discussion:** This is important aspect of the paper, should be drafted carefully. Stating what answers we got, then in individuals paragraphs discussing these in light relevant past work and finally, try to answer: what does it means in the conducting part. In some situation section of Results may be combined with Discussion so as to avoid repetition. **Acknowledgement:** It should be short not exceeds than 150 words, which should include essential facts given at the end of the paper but not necessary. **References:** References must be arranged according to APA style of referencing.

Book

Best, J.W., & Kahn, J.V. (2006). *Research in Education*. New Delhi: Prentice Hall of India.

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Garrett, H. E. and Woodworth, R. S. (1981). *Statistics in Psychology and Education*. Bombay: Vakils, Feffer and Simons Ltd.

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