AN EXPLORATION OF THE IMPACT OF 4G NETWORKS ON MEDIA CONTENT CREATION SPEED AND ACCESSIBILITY

***NAVNEESH BHARDWAJ**

****DR. PRITHVI SENGAR**

ABSTRACT

In today's era of technology, rapid and dynamic changes are taking place in the fields of media and content creation. Over the past two decades, digital media has gained remarkable prominence, especially after the huge adoption of 4G technology and the increasing availability of smartphones. The trend of publishing content and news through digital and social media platforms has now become very popular. Platforms such as social media networks, online news portals, and video-sharing websites have provided individuals with the opportunity to create and distribute content without relying solely on traditional media institutions. This shift has encouraged the growth of citizen journalism and independent content creators, who can now reach a large audience through their mobile devices. This research is based on a qualitative research methodology and analyzed secondary sources. The study indicates that 4G networks have accelerated mobile journalism, live streaming, and social media-based content creation, thereby further democratizing media production. It has reduced technical barriers and enabled even small creators and independent journalists to participate in the media ecosystem. Overall, the growth of 4G technology has played a significant role in shaping a faster, more interactive, and participatory media environment.

Keywords: 4G Network, Digital Media, Accessibility, Content Creation, Mobile Journalism.

*Research Scholar, Department of Journalism & Mass Communication, IIMT University, Meerut

**Assistant Professor, Department of Journalism & Mass Communication, IIMT University, Meerut

INTRODUCTION

In the digital age, internet-based communication technologies developed as an essential component of media development. Information and communication technologies (ICTs) have transformed modern society into a networked structure. The development of the Internet and mobile networks has made communication faster and more interactive, eliminating the traditional boundaries of media production. The conventional structure of information generation and distribution has been transformed by network technology. Castells (2010), information flow in the network society depends on fast communication structures, which reorganize social and media structures. Jenkins (2006), 4G Network has revolutionized the media and content space. Digital convergence has transformed users into content creators, not just consumers. 4G networks provide the technological foundation for this convergence. The growth of 4G networks has expanded digital communication in a developing nation like India. Media consumption has moved from TV and print to mobile screens because of mobile internet access (TRAI, 2023). Consequently, a "mobile-first communication ecosystem" is seen in the media sector.

Literature Review

In this era of digital media, where content is being created and distributed rapidly by content creators, internet connectivity plays an important role in this field. The advancement of digital communication technology has contributed to a great deal of media studies research. In particular, broadband networks and mobile internet have completely changed how media is produced, distributed, and consumed. 4G network technology is seen as an important phase in the evolution of digital media. Important research on network society theory, media convergence, mobile journalism, digital participation, and the Indian digital environment is examined in this survey of the literature.

Manuel Castells (2010), introduced the concept of "Network Society," said that the structure of modern society is increasingly based on information networks. According to him, digital networks become not just technological infrastructure but the basis of social power, economic activity, and cultural communication.

After the emergence of smartphones in India, mobile journalism became a very important factor in the media industry. Where the news channels and organisations were using traditional cameras and processes to copy and edit the data became easy after the arrival of mobile journalism. Research on mobile journalism suggests that high-speed internet directly impacts the process of media production. According to Westlund (2013), mobile news production is a new model of journalism in which reporters can record, edit, and publish content via smartphone.

Mobile Journalism is not only restricted to capturing content and making it edit, it is now creating and publishing data on the websites and digital media and podcasting platforms as well.

Pavlik (2013) argues that digital technology is making journalism more instantaneous and multimedia-based. 4G networks have made live reporting, on-site video uploads, and real-time news updates possible.

Hermida (2010) introduced the concept of "ambient journalism" and explained that social media and mobile networks make news flow continuous and dynamic.

Research on the growth of video streaming and OTT platforms suggests that high-speed mobile internet is a key factor in their success. According to Lotz (2017), on-demand media culture is linked to internet speed and mobile device usage.

The Nokia (2019) MBiT report indicates that a large portion of mobile data usage in India is related to video content, which grew rapidly after the expansion of 4G networks. This has led to a shift in media consumption from televisions to mobile screens.

In the Indian context, the TRAI (2023) report shows that mobile broadband services have led to a rapid increase in internet users. This growth is particularly linked to the expansion of 4G networks.

Athique (2019), analyzed the growth of Indian digital media, stating that cheap data and smartphone availability have made digital media the primary medium of mass communication. 4G technology has also boosted regional language media, leading to increased local content creation. Henry Jenkins (2006) theorized convergence culture, arguing that digital technology blurs the boundaries between traditional media and new media. In this process, the audience becomes an active participant.

4G networks provided the technological foundation for this convergence, as high-speed mobile internet simplified video creation, uploading, and live interaction. According to Jenkins (2006), participatory culture involves users playing an active role in content creation, sharing, and discussion—a practice evident today on social media platforms.

Research Objectives

1. To analyze the impact of 4G networks on the speed of media content creation and uploading.
2. To identify the changes in information accessibility.
3. Understanding the social and industrial changes in the digital media sphere.

Research Methodology

This study is based on the Qualitative Exploratory Research method, which helps in understanding a topic in detail by exploring different ideas, opinions, and developments related to it. This method is useful when the researcher wants to study a subject in a descriptive and analytical way. It allows the researcher to examine the issue from different perspectives and gain a deeper understanding of the topic. The data sources used were academic books and journals, government data such as TRAI reports and digital media. In the form of secondary sources various data has been taken from the prominent magazines and news and media platforms.

All the collected information was carefully reviewed, compared, and analyzed to identify important ideas and patterns related to the research objectives. By using different secondary sources, the study aims to present a clear and comprehensive understanding of the topic.

Analysis and Discussion

The introduction of 4G technology has brought a huge difference in the pattern of media consumption. The mobile network has changed the way you consume the media in many ways. It's stated that when, where, and how the audience engaged with content. Before the 4G technology network the media consumption was limited and fixed schedules were structured. Limited and

slow internet speed disturbs media consumption such as buffering of video, slow download and loading with less multi- media platforms and content. From the beginning of 4G or LIT on the global level remarkable changes in the high - speed services connectivity and much more the consumption of the media. 4G has changed the era from the video consumption standpoint to the end of the era of buffering of video streaming. One of the most significant changes in the global media pattern was the rise of on demand content which can be enabled by 4g technology by providing more fixability on the production, distribution and consumption of the content, scheduling the content. While taking example of developing countries like India where in 2017 it became the largest in terms of the data usage as the country emerged as the largest consumer of data services in the world. According to the TRAI Indians spend an average of 4.5 hours daily on smartphones, much of which is devoted to consuming video and other media content. Including the usage of high- speed video streaming, mobile T.V., video sharing, over-the- top (OTT) platforms and online gaming. The growth of the annual data consumption is largely on account of video application. 4G technology has significant dominance in the traffic of video consumption in the form of the primary media consumption. With the real time interactive and high-speed data connectivity 4G technology has made it possible in the social media landscape of offering faster download and buffer free video enabling the experience of the smooth and high quality of videos, which enhances the user experiences. The increase in speed of the network connectivity has transformed the users experience across the board and changed their behavior pattern of consumption. 4G networks have reduced media production time by increasing data transmission speeds. Previously, video uploading and live broadcasting were technically complex, but with 4G, this process has become simpler.

According to Westlund (2013), mobile journalism relies on fast internet, allowing breaking news to be published immediately. Live streaming and on-location reporting have become commonplace in journalism.

4G networks have broadened access to information. The TRAI (2023) report shows that mobile broadband has led to a rapid increase in internet users in India.

Increased internet access in rural areas has led to the growth of local language media and citizen journalism (MeitY, 2023). This has enabled the democratization of information.

According to Jenkins (2006), participatory culture is a key outcome of digital media. 4G networks have strengthened social media platforms, allowing even ordinary users to become content creators.

YouTube, Instagram, Facebook and various short video platforms are strong examples of the growing creator economy, where individuals can create and share content independently. The introduction of 4G technology has greatly changed the economic model of the media industry by making online content distribution faster and more accessible. One major change has been the rapid growth of digital advertising, as brands now prefer online platforms to reach targeted audiences. At the same time, OTT platforms have expanded quickly, offering movies, web series, and shows directly through the internet. Media organizations have also adopted subscription-based models, allowing users to access premium content through paid memberships. These changes have reduced dependence on traditional revenue sources such as print advertising and television broadcasting. Faster internet connectivity has encouraged audiences to shift toward on-demand content consumption. As a result, creators and media companies now focus more on digital engagement and audience data. According to Amanda D. Lotz (2017), internet-based distribution systems are gradually replacing traditional broadcasting models. Overall, 4G technology has supported the rise of a digital, creator-driven, and platform-based media economy.

Findings

The study found various important changes in the media & communication industry after the arrival of 4G networks. One major finding was that content creation time reduced tremendously because the faster internet allowed journalists and creators to produce and upload content quickly. The study also highlights that live streaming and real-time reporting have become more common after the introduction of 4G technology. News organizations, digital media platforms, and individual creators are now able to broadcast events instantly through social media platforms. This has helped audiences receive updates immediately, particularly during important events such as elections, protests, disasters, or major public gatherings. Media production through mobile phones also increased, as smartphones became powerful tools for video recording, video and photo editing, and sharing news. 4G networks helped to give access to information in regional and remote areas, allowing more people to stay informed and connected. The growth of user-generated content

provided common people a chance to share their views and stories, it supported media democratization. Social media platforms became important platforms for news sharing and public discussion. The media industry also shifted towards a digital-first model, where online platforms became more important than traditional media. Data and audience analytics started playing a major role in decision-making. Media organizations start focusing more on audience preferences and engagement. Thus, we can say that 4G technology made media faster, more accessible, and more interactive for both creators and audiences.

Conclusion

4G network technology has played an important role in the growth of modern digital media. It has changed the traditional ways of producing, sharing, and consuming media content. With faster internet speed, journalists and content creators are able to create and publish content more quickly than before. 4G has also improved access to information, allowing people in different regions to stay connected and informed. Digital engagement has increased as audiences now interact more through social media and online platforms. News, entertainment, and communication have become more mobile and easily available. Another important impact of 4G technology is the growth of mobile journalism and social media content creation. Reporters, bloggers, and independent creators can now record videos, conduct live sessions, and upload stories directly from the field. This has made media production more flexible and immediate, especially during important events where quick reporting is necessary. Media organizations have also shifted their focus toward online and digital platforms. The technology has helped both professionals and common users participate in content creation. In the coming years, technologies like 5G and artificial intelligence are expected to make media even faster and more advanced. These developments will further change how content is created and shared. Overall, 4G can be seen as an important step in the ongoing digital media revolution.

References

[1] Castells, M. (2010). *The rise of the network society* (2nd ed.). Wiley-Blackwell.https://doi.org/10.1002/9781444319514
[2] Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press.
[3] Westlund, O. (2013). Mobile news: A review and model of journalism in an age of mobile media. *Digital Journalism, 1*(1), 6–26.https://doi.org/10.1080/21670811.2012.740273
[4] Pavlik, J. V. (2013). Innovation and the future of journalism. *Digital Journalism, 1*(2), 181–193.https://doi.org/10.1080/21670811.2012.756666
[5] Hermida, A. (2010). Twittering the news: The emergence of ambient journalism. *Journalism Practice, 4*(3), 297–308.https://doi.org/10.1080/17512781003640703
[6] Lotz, A. D. (2017). *Portals: A treatise on internet-distributed television*. Michigan Publishing.https://doi.org/10.3998/mpub.9699689
[7] Nokia. (2019). *Mobile broadband index report India*. Nokia Corporation.
[8] Telecom Regulatory Authority of India (TRAI). (2023). *Indian telecom services performance indicators*. Government of India.
[9] Athique, A. (2019). *Digital media and society: An introduction* (2nd ed.). Polity Press.
[10] Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press.