

Content is available at: CRDEEP Journals
Journal homepage: <http://www.crdeepjournal.org/category/journals/ijssah/>

International Journal of Social Sciences Arts and Humanities

(ISSN: 2321-4147) (Scientific Journal Impact Factor: 6.002)
A Peer Reviewed UGC Approved Quarterly Journal



Review Research Paper

Role and Importance of Digital Techniques in the Election of India

Dr. Geeta Verma*

Assistant Professor, Department of Chemistry, PMCOE , Chandra Shekhar Azad Govt. Post Graduate Lead College Sehore M.P. India

ARTICLE DETAILS

Corresponding Author:

Geeta Verma

Key words:

Digital, EVM, Voters, EMBs, ICT, ECIL, SVEEP

ABSTRACT

Elections are the strands that weave society together in the vast tapestry of democracy. With the advancement of technology at an indomitable pace in the digital era, this vast tapestry is changing drastically. In the last decades, it was up to the domains of business and industry, but at present digital transformation has increasingly focused on elections, the fundamental component of democratic governance. Digital transformation, the process of incorporating digital technology into all areas of society, has pervaded every aspect of Indian life, and elections are no exception. Today, through the vast use of digital techniques elections are conducted, monitored, and analyzed. This paper focuses on the impact of digitalization on elections conducted in India's democratic system. Method: Over the past decade use of Digital Technology & Social and new technologies have been playing an increasingly integral role in the organization of elections in India Voters and practitioners worldwide are becoming intrigued and concerned about the integration of information and communications technology (ICT) into the electoral process. Conclusion: In India, technological advancements driven by the digital revolution affect the party system and election campaigns. The investments in IT and social media units to build their digital presence can certainly bear fruit, but party leaders must recognize the limits of online-only campaign.

1. Introduction

Free and fair elections are the bedrock of any healthy democracy. But conducting free and fair elections is easier said than done. In a huge and diverse country like India, it is much more complex and challenging. A major push to use of technology in the Indian elections came with the use of electronic voting machines (EVMs). It entirely disrupted the way the elections were conducted. The use of EVMs was not simply the replacement of sturdy ballot boxes and ballot papers. It was a paradigm shift for everyone including the political parties, candidates and the voters. [1] Voters and practitioners worldwide are becoming intrigued and concerned about the integration of information and communications technology (ICT) into the electoral process. The majority of electoral management bodies (EMBs) worldwide now employ modern technology in an effort to enhance the electoral process. These technologies include a wide spectrum of applications, from simple spreadsheets and word processing to more complex data processing tools like geographic information systems, database management systems, and optical scanning. E-voting, or the use of electronic technology for voting and vote counting, is one particularly significant use of technology in elections.

There are many benefits to electronic voting, including increased voter turnout overseas and improved accessibility for voters with impairment. The ease of communication with society has been greatly improved by digital technology. Social media, blogs, and block chains are examples of technology platforms that have facilitated more rapid and efficient communication

* Author can be contacted at: Assistant Professor, Department of Chemistry, PMCOE , Chandra Shekhar Azad Govt. Post Graduate Lead College Sehore M.P. India
Received: 15-12-2024; Sent for Review on: 21-12-2024; Draft sent to Author for corrections: 25-12-2024; Accepted on: 01-01-2025; Online Available from 03-01-2025

DOI: [10.13140/RG.2.2.17010.82881](https://doi.org/10.13140/RG.2.2.17010.82881)

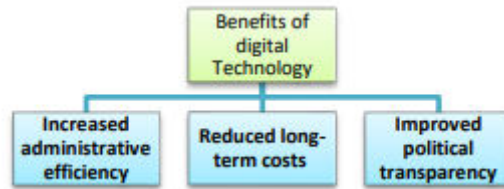
IJSSAH-0099/© 2025 CRDEEP Journals. All Rights Reserved.

across many societal groups. Although digital technology can indeed be utilized to improve voter communication during an election, there are differences in the relative efficacy of various digital initiatives.[2]

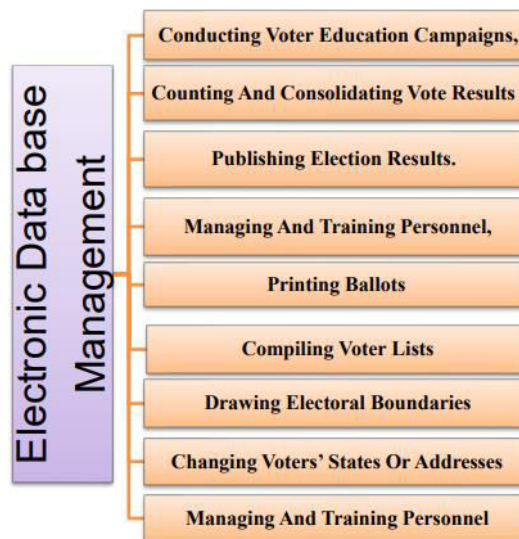
Over the past decade, new technologies have been playing an increasingly integral role in the organization of elections in India. This is because the country has turned to a variety of technological solutions in its bid to make elections more transparent and cost-effective, including the first use of electronic voting machines or EVMs (in 1982) that were developed in partnership with the Electronics Corporation of India (ECIL) and Bharat Electronics Limited (BEL) was introduced on an experimental basis for Bye-Election in an Indian state (Kerala) . This was a pioneering development when it came to elections in India, considering that there are still other countries that prefer hand-marked and manually counted paper ballots.[3]

2. Use of Digital Technology & Social Media

In the past two years, the pandemic has created a novel challenges. The Commission’s Systematic Voters’ Education and Electoral Participation (SVEEP) is a multi-intervention program that reaches out to various categories of voters to inform, educate, and motivate them regarding the electoral process. SVEEP Programs utilized digital technology & modern media & communication tools to reach out to voters.[4] SVEEP played a critical role in educating stakeholders about the COVID-19 safety protocols of the Commission. ECI is actively reaching out through Facebook, Instagram, YouTube, and Twitter handles.



Apart from EVMs, technology is currently used in activities related to the electoral process. For instance, technology is present in the form of electronic database management systems that are used in several stages of the electoral process, Technology also finds presence in software programs and electronic equipment such as computers, printers, scanners, barcode readers, and the Internet. There has also been a good rise in the influence of information technology in the electoral process. According to a news report by *HT Mint*, after the 2016 assembly polls, voters in Kerala got election results in minute detail on a real-time basis on their mobile phones. This was due to an aggressive IT initiative undertaken by the office of the Chief Electoral Officer, Kerala.[6]

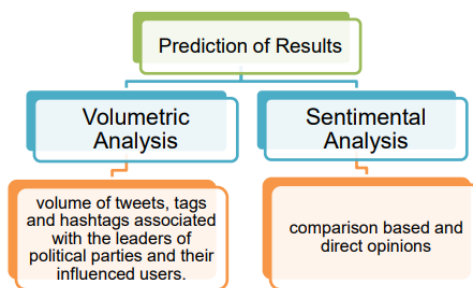


Data and technology have been playing a great and crucial role in elections in India when we focus or take into account the growing trend of digital and data-driven elections. The 2014 elections were one of the first where data, technology, and digital platforms played a central role in the manner in which the campaigns were designed, structured, targeted, implemented, and communicated. During this time, parties used technology for political purposes. They targeted mobile voters through voice broadcasting, used GPS in campaign vans to increase efficiency, and used cookies on their website to allow them to harvest and further use information about users’ internet activity for customized advertisements. Over the years, social media has also become a potent campaign tool for political parties, both for collecting information as well as customizing and getting their message to voters. This is because the increase in the use of smartphones and the expansion of 4G to rural villages has increased the number of connected users in India. Parties even used social media to reach young

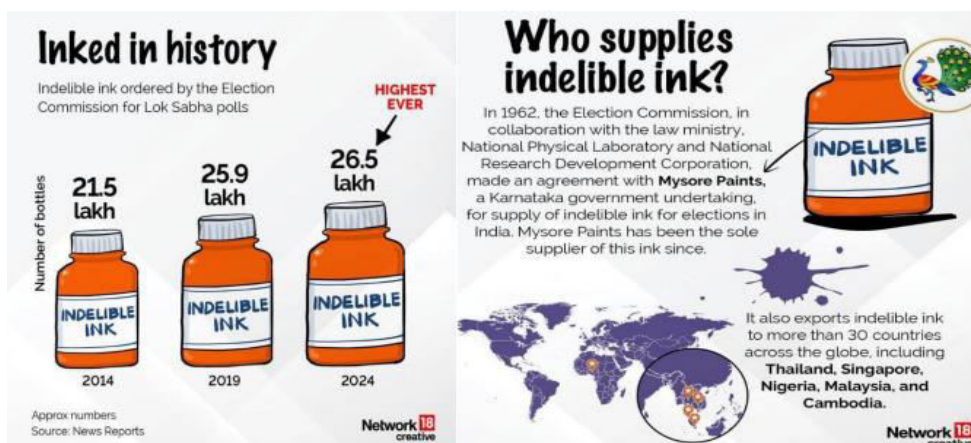
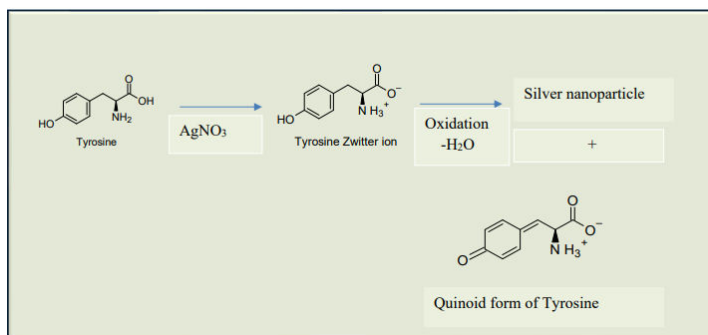
voters in the Lok Sabha elections of 2014 and the Delhi Assembly elections of 2015. In fact, a report by Tactical Technology Collective states that the number of tweets rose 600 percent from the 2009 elections to the 2014 elections.. But in 2024, things will be different since artificial intelligence (AI) has given digital campaigning a boost.[6]. In fact, *Down to Earth* magazine states that more than 9,00,000 volunteers of a prominent political party are creating neighborhood-based WhatsApp groups to disseminate information about their party’s campaign activities. Many parties have also appointed volunteers to coordinate local digital campaigns.[4,6] Additionally, a wide array of apps that one can access from one’s smartphone, makes this the most technologically advanced election ever. These apps include those developed by political parties and Netas. Many of these apps have clocked more than millions of downloads on Android alone [5]



Political parties are also increasingly using big data tools to increase voter turnout and swing the elections in their favor. For example, a news report by *India Today* states that a famous political party is banking on its data analytics department to analyze vote share, seats, and shifting voting patterns from 2009 to the 2019 elections. It's not new for political parties to employ technology to support their election campaigns. Political parties, not only in India but also in other nations, have included WhatsApp and other messaging apps, Facebook, Twitter (now known as X), and websites in their campaign toolkits. But in 2024, things will be different since artificial intelligence (AI) has given digital campaigning a boost. The Indian Express reports on the widespread use of generative AI for voter phone calls. According to the story, an AI startup called Polymath Solutions, with its headquarters in Ajmer, has been testing a project in which local politicians take calls and respond to inquiries from voters. The politician makes the call while posing queries to the public, such as which problems are most important to them. The local policeman's voice is used by AI to generate the call.[6] When it comes to adopting digital technologies, the Bharatiya Janata Party is always one step ahead of its competitors. This includes their usage of AI smarts. AI was employed by the BJP a few months ago to interpret and dub Prime Minister Narendra Modi's speech at Kashi Tamil Sangamam. AI allowed for real-time dubbing and translations to be done during Modi's speech, which was given in Hindi. Bhashini, an IT ministry tool with an emphasis on Indian languages, was used to accomplish it. Technology also has the greatest importance theme of free symbols released by the Election Commission, reflecting our country’s transformation into an urban nation. Among these crop of symbols assigned to independent candidates and unrecognized parties are accessories that have become a part of our daily lives, like CCTV cameras, pen drives, laptops, and mobile chargers.[7]



This was seen in the Delhi elections that took place in 2015 where the researchers got overall positive sentiment towards the political party AAP and their CM candidate. In the case of the election procedure chemistry also plays a nice role in staining fingertips with Electoral ink, indelible ink, electoral stain or phosphoric ink, or dye that is applied to the forefinger (usually) of voters during elections to prevent electoral fraud such as double voting. One of the more common election ink compositions is based on silver nitrate, which can produce a stain lasting several weeks. The ink was developed by the Council of Scientific and Industrial Research-National Physical Laboratory (CSIR-NPL), a Research Institute of CSIR, Ministry of Science and Technology, Govt. of India, and manufactured by Mysore Paints and Varnish Ltd. [8] There is a reaction of silver nitrate on the melanin pigment of the skin to produce a stain that lasts for several days. Macromolecule melanin of skin pigment reacts instantly with the silver nitrate of indelible ink, leaving a mark that is impossible to wash off and is only removed as external skin cells are replaced. Tyrosine and glutamine amino acids of melanin react with silver ions in the presence of ultraviolet rays of sunlight to produce zwitter-ion which is responsible for the production of silver nanoparticles at a time. [9,10]



3. Conclusion

In India, technological advancements driven by the digital revolution affect the party system and election campaigns. Technology has been an essential component of every aspect of the Indian electoral system during the last fifty years, from registration and enrolment to the final results. It greatly influences the overall election delivery system's efficacy and effectiveness. Its honesty and simplicity benefit all voter types and, consequently, all other stakeholders. This incorporation has given assistance in delivering all its elections well on time with high levels of reliability and acceptability. The investments in IT and social media units to build their digital presence can certainly bear fruit, but party leaders must recognize the limits of online-only campaigns

4. Acknowledgment

I would like to thank my husband Dr R K Verma my daughter Aditi Verma and my son Aditya Verma for helping and motivating me to write a manuscript

References:

- <https://timesofindia.indiatimes.com/readersblog/humblyspeaking/technological-intervention-in-indian-elections-1028>
- https://aceproject.org/ace-en/topics/et/explore_topic_new
- <https://blog.ipleaders.in/influence-of-social-media-and-technology-in-the-indian-elections/>
- <https://m.economictimes.com/news/politics-and-nation/how-the-mobile-phone-is-shaping-to-be-bjps-most-important-weapon-in-elections/articleshow/65508743.cms>
- <http://www.eci.gov.in/ict-app>
- <https://www.livemint.com/Politics/7pmpnvuhr53qmfUvYmv3fP/The-rise-of-IT-in-the-electoral-process.html>
- <https://voicenet.in/Article leveraging technology%20.htm>
- <https://www.candortechspace.com/blogs/technology-in-elections/>
- <https://www.nplindia.org/>
- "Lok Sabha elections 2024: Sole supplier of indelible ink says 70% production complete". *Hindustan Times*. 2024-03-06. Retrieved 2024-04-03.
- Dhillon, Amrit (2019-03-28). "The ink with a 'secret formula' that powers the world's biggest democratic exercise". *The Guardian*. ISSN 0261-3077. Retrieved 2024-04-03.