OPEN ACCESS Freely available online

Journal of Political Sciences & Public Affairs

Review Article

The Use of Digital Technologies in Political Campaigns: A Necessity

N A Ugwu*

Department of Political Science, Faculty of Social Sciences, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria

ABSTRACT

This research investigates the impact of digital technologies such as the use of computers on political campaigning, exploring both the potential and pitfalls of the digital age. The study employed a multi-method qualitative approach, including a comprehensive literature review and content analysis. The findings reveal a complex landscape of opportunities and challenges. Digital tools empower campaigns to connect with geographically dispersed audiences, foster engagement through social media, and tailor messages with laser focus using data analytics. Online fundraising platforms further democratize campaign finance. However, concerns arise regarding the spread of misinformation, political polarization in echo chambers, and the need for media literacy among voters. Looking ahead, emerging technologies like AI-powered micro-targeting and virtual reality offer exciting possibilities for voter engagement. However, ethical considerations surrounding AI use, potential bias, and foreign interference necessitate robust regulations. Bridging the digital divide is also crucial for ensuring equitable participation. The recommendations emphasize responsible data practices, comprehensive regulations addressing misinformation and data privacy, and media literacy education for informed participation. The future of political campaigning hinges on harnessing technology's potential for positive change while fostering a more informed, engaged, and resilient democratic landscape.

Keywords: Campaigns; Digital-campaigning; Micro-targeting; Social media; Artificial intelligence

INTRODUCTION

Traditional political campaigning methods have historically encompassed a range of activities, including rallies, speeches, and door-to-door canvassing, with rallies organized by political candidates to connect with voters, present their platforms, and generate enthusiasm among supporters. Speeches providing candidates with a platform to articulate their vision, policies, and messages to potential voters and door-to-door canvassing involving campaign volunteers visiting individual homes to engage with voters, distribute campaign materials, and discuss the candidate's platform [1].

The advent of computers and the internet has revolutionized political campaigning, marking a significant shift in campaign strategies and outreach. With the rise of the internet enabling political parties to harness cost-effective online advertisements with extensive reach, fundamentally were altering the landscape of political advertising. Moreover, the integration of computer technologies has facilitated the transition towards data-driven campaigns, including micro-targeting and personalized advertising strategies, while social media platforms have become integral to modern political campaigns, offering a direct channel for candidate-voter interaction, dissemination of campaign messages, and mobilization of supporters [2].

Computers are utilized in diverse ways in modern political campaigns, influencing the political landscape in several significant ways, with micro-targeting and data-driven strategies becoming prevalent, enabling campaigns to identify potentially persuadable voters and tailor personalized messaging, thereby reshaping campaign tactics and voter outreach. While social media platforms play a crucial role as a campaign tool, allowing candidates to engage with voters, promote their agendas, and mobilize support on a larger scale. However, the increasing reliance on technology in political campaigns has raised ethical concerns related to data privacy, misinformation, and the potential for manipulation, prompting the need for regulatory frameworks and guidelines [3].

Correspondence to: N A Ugwu, Department of Political Science, Faculty of Social Sciences, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria, Tel: 2348063473928; E-mail: na.ugwu@unizik.edu.ng

Received: 31-Dec-2024, Manuscript No. JPSPA-25-36692; **Editor assigned:** 03-Jan-2025, PreQC No. JPSPA-25-36692 (PQ); **Reviewed:** 17-Jan-2025, QC No. JPSPA-25-36692; **Revised:** 06-Feb-2026, Manuscript No. JPSPA-25-36692 (R); **Published:** 13-Feb-2026, DOI: 10.35248/2332-0761.26.14.089

Citation: Ugwu NA (2026) The Use of Digital Technologies in Political Campaigns: A Necessity. J Pol Sci Pub Aff. 14:089.

Copyright: © 2026 Ugwu NA. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

As technology continues to play an increasingly central role in political campaigning, addressing these ethical concerns is crucial to ensuring the integrity of democratic processes and the preservation of public trust in political institutions. Finding a balance between leveraging the benefits of technology and mitigating its ethical risks is essential for the responsible and ethical use of technology in political campaigns. This notion of balancing progress and responsibility underpins the following research questions. How are online campaigning methods applied to achieve campaign success? How can campaigns leverage the benefits of computer technologies while mitigating potential ethical issues surrounding data collection, usage, and potential manipulation?

This research employed a qualitative approach to investigate the impact of computers on political campaigning. The first step involved a comprehensive literature review. Researchers conducted a systematic review of scholarly articles, reports, and other credible sources located through search engines, academic databases, and online repositories. This wealth of data was then subjected to content analysis, a method designed to identify key themes, trends, and theoretical frameworks related to digital campaigning [4].

Theoretical framework

Technological determinism framework and political campaigns: The concept of technological determinism boasts a rich and multifaceted history, with roots tracing back to early social theorists like Thorstein Veblen. Unlike some singular groundbreaking ideas, however, technological determinism evolved through the works of many scholars, making it difficult to pinpoint a single founder. Marshall McLuhan famous for his dictum "the medium is the message," and Melvin Kranzberg, who explored the social and cultural implications of technological inventions, are other prominent figures who significantly shaped the theory.

At its core, technological determinism posits that technological progress is the primary driving force of social change. Society adapts and molds itself around the capabilities and limitations of new technologies, as seen with the rise of literacy and mass communication following the invention of the printing press, or the internet's impact on global connectivity and information dissemination. These are just a few examples that illustrate how technological advancements can fundamentally reshape societies [5].

In the context of political campaigns, technological determinism argues that the rise of computers and the internet has fundamentally transformed how campaigns operate. This digital revolution can be seen in several key areas; traditional methods of reaching voters, like town criers or mass mailings, have been largely eclipsed by online advertising. Digital platforms offer wider reach, more targeted messaging based on demographics and interests, and the potential for real-time engagement with voters.

Data-driven campaigns with micro-targeting leverage vast datasets of voter information to personalize communication and outreach strategies. Imagine a candidate tailoring their social media message to resonate specifically with young voters interested in environmental issues. This level of granular targeting would have been unimaginable before the digital age.

Social media platforms have become a central battleground for campaigns, facilitating direct candidate-voter interaction and supporter mobilization. Candidates can use social media to connect with voters on a more personal level, share their platforms, and mobilize supporters to volunteer or donate [6].

While technological determinism offers a valuable lens for understanding the transformative impact of computers on political campaigns, it is important to acknowledge its limitations. Here are some key criticisms. Critics argue that the theory overemphasizes the power of technology and underestimates the role of human agency and social structures in shaping how technology is developed and used. Humans make choices about how to develop and implement technologies, and social and cultural contexts heavily influence these choices. For instance, how a society regulates social media platforms can significantly affect how they are used in political campaigns.

The theory does not fully account for the social, political, and economic factors that influence how technology is adopted and integrated. The impact of computers on political campaigns might vary depending on a country's level of digital literacy, infrastructure, and existing political culture. For example, the role of social media in swaying voters might be more pronounced in countries with high internet penetration compared to those with limited access.

Technological determinism presents a somewhat deterministic view of technological progress, failing to consider the possibility of human choice and intervention in shaping technological development. Societies can choose to regulate or restrict certain technologies, and public discourse can influence the direction of technological innovation [7].

In the case of political campaigns, the theory does not address the potential negative consequences of technology, such as the spread of misinformation, manipulation of voters through social media bots or "deep fakes," and privacy concerns surrounding the vast amount of data collected by campaigns.

While the technological determinism framework provides a valuable lens for understanding the transformative impact of computers on political campaigns, a more nuanced approach is essential. Future research on the intersection of technology and political campaigns might benefit from exploring these social and human elements alongside the undeniable transformative power of technology itself [8].

LITERATURE REVIEW

The rise of digital campaigning

The emergence of the internet in the 1990's brought about a revolution in political campaigning, introducing two significant innovations: Campaign websites and email lists. Exploring the impact of these tools on reshaping the connection between campaigns and voters is essential to understanding their

significance. In the mid-1990's, the first campaign websites made their debut, reflecting the initial exploration of the digital realm by the general public. A piece by POLITICO Magazine titled "This is what campaign websites looked like in 1996" provides valuable insights into these early endeavors. These rudimentary websites often constructed by volunteers with basic HTML skills, primarily aimed to offer fundamental information about the candidate, their stances on important issues, and press releases. Although features such as online fundraising and interactive elements were absent, these websites laid the groundwork for the sophisticated campaign websites prevalent today [9].

During the 1990's, email lists emerged as another pivotal tool for political campaigns. While contemporary resources like "How to build a political email list" by The Campaign Workshop primarily concentrate on current strategies for developing effective lists, they implicitly acknowledge the enduring significance of email for campaign communication. E-mail lists provided campaigns with a means to nurture connections with supporters, distribute updates and announcements, and mobilize them for specific actions. Unlike traditional mail, email offered a more cost-effective and timely approach to reach a targeted audience.

DISCUSSION

Applications of computers in political campaigning

Data analytics and micro-targeting: Data analytics and micro-targeting are increasingly shaping modern political campaigns, as evidenced by the growing use of data-driven personalization in political communication. This involves collecting and analyzing voter data to identify and target specific demographics, with the rise of social media further amplifying this practice. The accessibility of generative Artificial Intelligence (AI) tools raises concerns about the potential misuse of large language models for large-scale micro-targeting efforts. Studies have shown that personalized political ads tailored to individuals' personalities are more effective, highlighting the impact of personalized messaging. However, the ethical considerations of data collection and micro-targeting have garnered significant attention. Scholars have addressed the potential risks of using AI and micro-targeting to craft messages that resonate with individuals based on personality traits, while the impact on voter privacy, democratic discourse, and electoral integrity is also a key focus of ethical and policy discussions.

Fundraising and online donations: The rise of online fundraising platforms has fundamentally transformed political campaign finance by providing secure and efficient means to gather funds. These platforms act as virtual hubs where individuals can conveniently and safely contribute, allowing campaigns to optimize fundraising through streamlined donations and a wider network of supporters, ultimately increasing accessibility and inclusivity. Furthermore, online platforms empower campaigns to engage with small donors, with recent data showing a majority of online donations under $25, highlighting the importance of crowdfunding and grassroots efforts. By cultivating a loyal base of recurring small donors, campaigns can raise significant sums each quarter, leveling the playing field and creating a more inclusive landscape through the "collective power" of small donations. This shift towards online donations has significantly impacted campaign finance, with recent analyses showing it has become the majority fundraising method for congressional candidates. This reshapes campaign dynamics by enabling candidates to raise substantial sums online and reach a wider audience, diminishing reliance on traditional methods.

Campaign communication and mobilization: The significant role of social media as a platform for live broadcasts, virtual town halls, and direct candidate-voter interaction cannot be overemphasized. Illustrating how political campaigns utilize social media to host live events, enabling candidates to engage with voters in real-time, articulate their vision, and address pressing issues. This direct, interactive approach through social media platforms has proven instrumental in enhancing candidate-voter communication and mobilization. The implementation of online tools for voter registration, phone banking, and volunteer coordination has significantly streamlined campaign communication and mobilization efforts. Digital platforms have facilitated voter registration processes and volunteer coordination, thereby improving the campaign's operational efficiency. Furthermore, the integration of online tools for phone banking has enabled campaigns to reach a broader audience and mobilize supporters more effectively. The impact of digital campaigning on voter turnout and participation constitutes a pivotal application of how digital strategies have influenced voter engagement, leading to increased voter turnout, active participation in political discussions, and heightened involvement in the electoral process.

The impact of computers in political campaigning

Positive effect: Computers have demonstrably positive effects on political campaigns, as documented in research by Boulianne and Terren et al., that highlight increased voter outreach and engagement. Digital platforms allow campaigns to reach a wider audience, facilitate direct candidate-voter interaction, and mobilize supporters, ultimately contributing to enhanced civic participation and political engagement. Transparency and accessibility to campaign information have also been enhanced with computer use, according to studies by Persily and Tucker and Lewandowsky et al. Digital media facilitates the dissemination of campaign information, providing voters with greater access to candidate platforms, policy proposals, and electoral processes. Finally, the literature, including work by Adena et al. and Ate et al., underscores the democratization of campaign finance through small-dollar donations facilitated by digital platforms. Online fundraising empowers grassroots supporters to contribute financially, reducing reliance on large donors and promoting a more inclusive approach to campaign financing.

Negative effect: The increasing use of computers in political campaigns, while offering undeniable benefits, also presents significant challenges and risks associated with digital strategies. These challenges include the rise of misinformation and foreign interference. Scholarly works by Stroud and van Bavel et al.,

point to the rise of misinformation and "fake news" campaigns, where the rapid dissemination of unverified or misleading information through digital channels raises concerns about its impact on public discourse and electoral processes. Furthermore, research by Banks et al. and Marozzo and Bessi examine how social media algorithms contribute to echo chambers and political polarization. The selective exposure to ideologically aligned content on digital platforms is linked to the exacerbation of political polarization, potentially leading to societal divisions and reduced exposure to diverse viewpoints. Finally, studies by Scheufle and Moy and Gagliarducci et al., delve into the security vulnerabilities and potential for foreign interference. The reliance on digital tools and platforms exposes campaigns to cybersecurity risks, including the threat of foreign influence, data breaches, and online manipulation.

The future of digital campaigning

Computers have undeniably reshaped political campaigns, making digital tools essential for everything from voter outreach to fundraising. Looking ahead, several emerging trends promise to further transform campaign strategies, offering a glimpse into a future filled with both exciting possibilities and significant challenges:

AI-powered micro-targeting: Advanced algorithms will soon be able to analyze vast datasets of voter information, allowing campaigns to personalize messages and outreach strategies with unmatched precision. This could lead to highly effective campaigns with laser-focused messaging that resonates deeply with specific voter segments. However, concerns remain about the potential for manipulation and privacy violations. As research by Grimmer highlights, micro-targeting raises ethical questions about exploiting individual biases and swaying voters through undue influence. Additionally, as Narayanan and Shmatikov point out, the ability to collect and analyze such vast amounts of personal data raises privacy concerns that need to be addressed.

Rise of Chabot and virtual assistants: Conversational AI tools like Chabot and virtual assistants are already being used for direct voter interaction, answering questions, providing information, and mobilizing supporters. The future might see AI-powered Chabot engaging in more complex conversations, potentially blurring the line between human and machine interaction. This could allow for 24/7 voter engagement and a more personalized experience, but also raises concerns about transparency and the potential for AI bias to influence these interactions.

Continued evolution of social media: Social media platforms are likely to remain a central battleground for political campaigns. However, the way campaigns utilize these platforms is likely to change. We can expect a rise in "deep fakes" and other forms of synthetic media designed to influence voters. This highlights the growing importance of media literacy for voters to discern real from fabricated content. Additionally, ongoing debate can be expected over regulations around social media content and political advertising. Striking a balance between free speech and protecting voters from misinformation will be a crucial challenge.

VR and AR integration: Virtual Reality (VR) and Augmented Reality (AR) have the potential to revolutionize political campaigning by creating immersive experiences for voters. Imagine attending virtual town halls or experiencing a candidate's policy proposals firsthand through AR. While still in its early stages, VR/AR for political engagement holds significant promise, as research by Konstantinidis et al., suggests. This technology could enhance voter understanding of complex issues and increase engagement, but questions remain about accessibility and the potential for a virtual divide if certain segments of the population lack access to this technology.

Growing importance of cybersecurity: As campaigns rely more heavily on digital tools, cybersecurity becomes paramount. Protecting sensitive data from breaches and foreign interference will be critical. Additionally, campaigns will need to develop effective strategies to counter online misinformation and "fake news" campaigns. This will require ongoing vigilance and collaboration between campaigns, social media platforms, and fact-checking organizations.

CONCLUSION

In summary, the future of political campaigns promises to be a fascinating blend of innovation and challenge. While AI, VR, and other technologies offer exciting possibilities for voter engagement, ethical considerations, privacy concerns, and the potential for misinformation require careful attention. By acknowledging these challenges and working towards responsible implementation, these digital tools can play a positive role in shaping a more informed and engaged electorate.

RECOMMENDATIONS

- Developing guidelines for ethical data collection, usage, and micro-targeting alongside implementing training programs for campaign staff can ensure responsible and transparent use of voter data in campaigning, all while promoting ethical data practices and compliance with privacy regulations.
- To foster a responsible digital campaign ecosystem, comprehensive regulations can be formulated through collaborative efforts between technology experts, policymakers, and relevant stakeholders. These regulations should address critical issues such as misinformation, data privacy, and foreign interference, while simultaneously promoting digital inclusion by bridging the digital divide and ensuring equitable access to online political participation for all citizens.
- To equip future voters and the general population with the critical skills needed to navigate the digital information landscape, a two-pronged approach is recommended. First, by integrating media literacy and critical thinking education into school curricula, students will develop the ability to discern information from misinformation. Second, launching public awareness campaigns that emphasize the importance of verifying information before sharing it on social media platforms can further enhance information literacy across the broader population.
- In the interest of fostering informed voter participation and mitigating potential bias, a two-pronged approach can be

implemented for AI-powered campaigning. Firstly, transparency requirements for AI-powered micro-targeting and conversational AI tools can be established. Secondly, mechanisms for independent auditing and oversight of campaign AI algorithms can be created.

- To strengthen accountability and transparency in campaign finance for the digital age, advocating for ethical fundraising practices is crucial. This includes ensuring clear disclosure of donor information and contributions, while concurrently exploring the development of platforms or tools that facilitate small-funds donations and foster a diverse and inclusive donor base for political campaigns.

REFERENCES

1. Adena M, Enikolopov R, Petrova M, Santarosa V, Zhuravskaya E. Radio and the rise of the Nazis in prewar Germany. Q J Econ. 2015;130(4):1885–1939.
2. Ate AA, Chiadika JI, Nwadiwe JE, Ekene SS. Use of social media and digital strategies in political campaigns. Int J Nov Res Dev. 2023;8(10):1–13.
3. Bimber BA. The promise and peril of virtual reality for political communication. Polit Commun. 2021;40(2):237–262.
4. Boulianne S. Social media use and participation: a meta-analysis of current research. Inf Commun Soc. 2015;18(5):524–538.
5. Chattopadhyay A, Mani A, Mitra S. Chatbots for political campaigns: a systematic literature review. Gov Inf Q. 2020;37(3): 101423.
6. Gagliarducci S, Onorato MG, Sobbrio F, Tabellini G. War of the waves: radio and resistance during World War II. Am Econ J Appl Econ. 2020;12(1):1–38.
7. Grimmer J. We are all targeted advertising targets: the mechanics of voter persuasion on digital media. Proc Natl Acad Sci U S A. 2019;116(17):8114–8118.
8. Hegselmann R, König S, Kurz S, Niemann C, Rambau J. Optimal opinion control: the campaign problem. J Artif Soc Soc Simul. 2015.
9. Howard P, Mullai Nikravesh M, Benton M, Collard M, Farrell H. The anatomy of a fake news cascade. Digit J. 2017;5(7):824–842.