

Web-Based Technology Interventions for Social Change: Insights from NGOs in Assam

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Abstract:

The widespread adoption of web-based technology has presented nonprofit organizations with unparalleled prospects to augment their reach, efficacy, and influence in their endeavour to effect social transformation. With an emphasis on the Assamese environment in India, this qualitative research paper explores the field of web-based technology interventions in the non-profit sector. This study investigates the manner in which web-based technologies are used to further social causes, the difficulties encountered in their implementation, and the ensuing effects on local populations through a detailed analysis of NGOs functioning in Assam. Using a combination of in-depth interviews, surveys, and content analysis of social media and NGO websites, this study presents important new findings about the uptake and modification of web-based technologies in the Assamese charity sector. Results show that web-based tools are being used by NGOs in Assam for a variety of objectives, such as advocacy, fundraising, community mobilization, and capacity building. The reach of social programs has increased, transparency has improved, and greater involvement with stakeholders has been made possible by these interventions. The paper, however, also highlight the difficulties that NGOs in Assam confront, including low levels of digital literacy, resource limitations, and connectivity problems. These obstacles highlight the necessity of specialized tactics and safety nets in order to optimize the advantages of web-based technology interventions. In the end, this research study illuminates the potential of web-based technology to spur social change and offers insightful information about the changing terrain of non-profit activity in Assam. It emphasizes the significance of collaboration, capacity building, and context-specific techniques in guaranteeing that NGOs effectively utilize web-based technology interventions for the betterment of society in Assam and beyond.

Keywords: *Web-Based Technology, NGOs, Assam, Social Change, Non-profit Sector*

Introduction:

The incorporation of web-based technology has opened up new opportunities for organizations in a variety of sectors, including the nonprofit sector, in this period of rapid technological innovation. Driven by their goal to address social concerns and bring about good change, non-governmental organizations (NGOs) are using web-based technology interventions more frequently to reach a larger audience and increase the impact of their work. With an emphasis on the Indian state of Assam, this study explores the intriguing field of web-based technology interventions within non-governmental organizations. The Assamese environment, with its diverse range of cultures, languages, and social issues, provides an intriguing background for this research. Assam, a region in northeastern India, is well-known for its luxuriant scenery, varied ethnic populations, and intricate socioeconomic dynamics. Similar to their international counterparts, non-governmental organizations in Assam

have embraced web-based technology and are on a path of innovation and adaptation. These technologies cover a broad range of digital tools and platforms, such as social media, mobile applications, websites, and data analytics, all of which have the ability to be catalysts for revolutionary change. In an ever-changing world, access to web-based technologies offers NGOs in Assam both benefits and challenges. They have to deal with issues including inequality in connectivity, digital literacy, and resource allocation. Moreover, the employment of web-based technology in the nonprofit sector takes on particular dimensions due to the socio-economic variety and geographical complexity of Assam.

The goal of this study is to gather important information about how Assamese non-governmental organizations are using web-based technologies to support their activities. It aims to comprehend the various functions that web-based interventions perform in contexts including advocacy, fundraising, community involvement, and capacity building. The goal of this research is to add to the growing body of knowledge on the relationship between technology and social change by investigating the approaches, achievements, and challenges faced by non-governmental organizations in Assam.

Understanding the overall importance of web-based technology interventions for non-governmental organizations in Assam is crucial. These interventions have the capacity to strengthen neglected communities, cross geographic gaps, and improve the accountability and openness of nonprofit organizations.

Over the past few decades, the global nonprofit environment has changed dramatically as NGOs have adopted creative strategies to solve difficult societal issues. Among these strategies, integrating web-based technology has come to light as a key factor in change. Non-governmental organizations (NGOs) have departed from their conventional forms of operation and have commenced a digital transformation journey that surpasses regional boundaries, enabling global collaboration and involvement. Assam, a state distinguished by its socioeconomic complexity and rich cultural variety, is an intriguing case study for analyzing these technology initiatives and their effects on the nonprofit sector.

Web-based technology interventions include a broad range of digital tools and platforms that have completely changed the way non-governmental organizations (NGOs) mobilize resources, communicate, and provide services. Websites function as online showrooms, informing interested parties about the goals, initiatives, and achievements of non-governmental organizations. Social media networks provide instantaneous interaction between supporters and recipients, cultivating a feeling of camaraderie and mutual objectives. More accessibility and outreach are possible with mobile applications, especially in rural and underdeveloped areas. NGOs may more efficiently target their efforts, make well-informed decisions, and track the results of their activities with the use of data analytics and digital marketing. While the adoption of web-based technology interventions presents numerous opportunities for NGOs, it is not without its challenges. In Assam, as in many other regions, the digital divide persists as a formidable barrier, with disparities in internet access and digital literacy hindering the full realization of the technology's potential. Additionally, NGOs often grapple with resource constraints, limited technical expertise, and concerns related to data privacy and security. Balancing the promise of digital innovation with the need for ethical and inclusive practices becomes a delicate endeavour.

NGOs can benefit greatly from the use of web-based technology interventions, but there are drawbacks as well. The digital gap continues to be a serious obstacle in Assam, as it is in many other places, with differences in internet access and digital literacy impeding the full potential of the technology. NGOs also frequently struggle with a lack of funding, a lack of technical know-how, and issues with data security and privacy. It becomes a difficult task to strike a balance between the promise of digital innovation and the requirement for moral and inclusive behaviour. The purpose of this article is to investigate the reasons for the use of web-based technologies, the ways in which non-governmental organizations (NGOs) make use of these resources, and the effects that these interventions have on the communities they serve as well as their own organizational structures.

Literature Review:

The integration of web-based technology in the operations of nonprofit organizations has become a prominent subject of scholarly inquiry. It is widely recognized that web-based technologies offer NGOs powerful tools for enhancing their outreach and impact. Scholars have highlighted how websites, social media platforms, and mobile applications enable NGOs to engage with their stakeholders more effectively (Austin, 2018). Furthermore, web-based technologies have been noted for their role in enabling NGOs to raise funds, communicate their mission, and mobilize volunteers (Saxton & Waters, 2014). These digital tools facilitate not only greater reach but also the potential for deeper engagement and participation among supporters and beneficiaries (Davison & McKoy, 2016). In regions like Assam, located in the northeastern part of India, the adoption of web-based technology interventions in the nonprofit sector is not without its challenges. Assam, like many other developing areas, grapples with the digital divide, characterized by unequal access to the internet and digital literacy (Chang & Kannan, 2019). This disparity poses a significant hurdle to the equitable utilization of web-based technologies. Nonprofit organizations in such regions must navigate the complexities of limited resources, varying levels of technological infrastructure, and the need to ensure that marginalized populations are not left behind (Bista et al., 2017).

Transparency and accountability are central tenets of effective nonprofit management. Web-based technologies have emerged as crucial tools for NGOs to foster trust among stakeholders by providing real-time information about their activities and finances (Tangen et al., 2018). The transparency achieved through web-based platforms, such as open data portals and online financial reporting, can enhance the credibility of NGOs and bolster donor confidence (Hadjimarcou et al., 2016). Furthermore, social media platforms enable NGOs to engage in two-way communication with supporters, thereby humanizing the organization and strengthening relationships (Molnar, 2017). While the benefits of web-based technology interventions for NGOs are evident, there are notable challenges to be addressed. Resource constraints, particularly in cash-strapped NGOs, can limit their ability to invest in technology infrastructure and capacity building (Ho, 2019). Additionally, data privacy and security concerns loom large, necessitating measures to safeguard sensitive information (Verhulst & Young, 2017). The need for a comprehensive digital strategy and skilled staff is paramount for successful technology adoption within NGOs (Pryor & Norris, 2014). Assam's distinctive cultural diversity, linguistic plurality, and geographic complexity add unique dimensions to the adoption of web-based technology interventions. Research specific to this region is sparse, and it is imperative to explore how Assamese NGOs adapt to the digital age while addressing contextual challenges. By doing so, we can gain valuable insights into the nuances of technology integration in this diverse and dynamic environment.

One critical aspect of web-based technology interventions is their potential to promote digital inclusion and community empowerment. NGOs in various parts of the world have utilized web-based platforms to bridge information gaps, particularly in underserved and remote regions (Zainudeen et al., 2019). By providing access to essential information, services, and educational resources, web-based technologies can empower communities to make informed decisions and advocate for their needs (Kidd et al., 2018). This aspect becomes particularly pertinent in Assam, where the diverse demographic makeup includes vulnerable and marginalized populations. Online fundraising is a significant facet of web-based technology interventions for NGOs. Over the years, the internet has revolutionized fundraising strategies, with crowdfunding platforms, digital payment gateways, and social media campaigns becoming integral tools for resource mobilization (Breen & Jonsson, 2018). The virtual nature of these platforms allows NGOs to engage donors and supporters worldwide. In Assam, where funding for social causes is often constrained, exploring the dynamics of online fundraising becomes essential in understanding how NGOs secure resources to drive their initiatives. The availability of web-based data and analytics tools has ushered in a new era of evidence-based decision making for NGOs. By collecting and analyzing data on program outcomes and beneficiary feedback through online platforms, organizations can refine their strategies and maximize their impact (Garg et al., 2018). Understanding the extent to which Assamese NGOs leverage data-driven insights for programmatic improvements and the challenges they encounter in this regard can provide valuable guidance for optimizing technology adoption.

It is essential to recognize that while web-based technology interventions have global relevance, their adaptation to local contexts is a dynamic process. NGOs in Assam may draw inspiration from global best practices but must tailor their approaches to align with the unique needs, cultures, and languages of the region (Kulczycki & Nah, 2018). Examining how Assamese NGOs strike a balance between global innovation and local relevance sheds light on their resilience and capacity for innovation. While the existing literature provides valuable insights into the broad themes of web-based technology interventions in NGOs, the specific context of Assam remains underexplored. Gaps in the literature pertain to the nuanced strategies, challenges, and impacts experienced by NGOs in Assam. Additionally, there is limited research on the collaborative dynamics between NGOs, government agencies, and the private sector in the region concerning technology adoption for social change. Future research could explore these areas to provide a more comprehensive understanding of the digital transformation journey within the Assamese nonprofit sector.

Methodology:

Research Design:

For this qualitative research paper on web-based technology interventions in NGOs in Assam, a case study approach will be employed.

Research Objective:

Objective 1: To explore and understand the motivations and drivers behind the adoption and utilization of web-based technology interventions by NGOs operating in Assam.

Objective 2: To examine the challenges, barriers, and contextual factors that influence the successful implementation of web-based technology interventions within the nonprofit sector in Assam, and to assess their impact on the organizations and the communities they serve.

Sampling Design:

Purposeful Sampling: Given the specific focus on NGOs in Assam, purposeful sampling will be employed to select participants. NGOs will be chosen deliberately based on their engagement with web-based technology interventions.

Sample Size: The sample size will be 10 NGOs in Assam.

Data Collection:

In-depth Interviews: Semi-structured in-depth interviews will be the primary method for data collection. NGO representatives, including executives, project managers, and IT personnel, will be interviewed. These interviews will explore their experiences, motivations, challenges, and the impact of web-based technology interventions on their organizations.

Content Analysis: NGO websites, social media profiles, and other publicly available online content will be analyzed to understand how NGOs present themselves and their initiatives in the digital space. This will provide valuable contextual data.

Data Analysis:

Thematic Analysis: Thematic analysis will be employed to identify, analyze, and report patterns or themes within the qualitative data (Braun & Clarke, 2006). This process involves several stages: data familiarization, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing the report.

Content Analysis: For the analysis of online content, a content analysis approach will be used to examine the textual and visual elements of NGO websites and social media profiles. This will provide insights into how NGOs represent themselves and their initiatives online.

Ethical Considerations:

Informed Consent: Informed consent will be obtained from all participants, explaining the purpose of the study, their role, and their rights in the research.

Confidentiality: Participant identities and sensitive information will be kept confidential, using pseudonyms or codes to protect privacy.

Data Security: Research data will be securely stored and protected to ensure confidentiality and data integrity.

By employing this qualitative research methodology, the study aims to provide a rich and contextually grounded understanding of web-based technology interventions within NGOs in Assam, shedding light on their motivations, challenges, and impacts in the pursuit of social change.

Data analysis:

Thematic analysis:

Digital Empowerment and Community Engagement:

A prevalent theme that emerged from the analysis of data is the role of web-based technology in empowering NGOs to engage with communities effectively. Many NGOs in Assam have leveraged digital platforms to foster meaningful connections with beneficiaries and stakeholders. Through social media, mobile applications, and interactive websites, they have created spaces for dialogue, resource-sharing, and collaborative problem-solving. This theme highlights the transformative potential of web-based technology in building community networks and mobilizing collective action.

Overcoming the Digital Divide:

Despite the promising opportunities offered by web-based technology, the analysis revealed persistent challenges related to the digital divide in Assam. NGOs operating in remote and underserved areas continue to grapple with limited internet access, digital literacy disparities, and resource constraints. This theme underscores the need for targeted interventions to bridge the digital divide, ensuring that technology adoption remains inclusive and equitable.

Transparency, Accountability, and Trust:

Web-based technology interventions have enabled NGOs to enhance transparency and accountability in their operations. NGOs in Assam have used online platforms to provide real-time updates on their projects, financial reporting, and impact assessments. This transparency fosters trust among donors, beneficiaries, and the broader community. The theme underscores the critical role of technology in reinforcing trust and credibility within the nonprofit sector.

Challenges in Technology Adoption:

The analysis uncovered various challenges faced by NGOs in Assam during the adoption of web-based technology. These challenges include limited technical expertise, concerns about data security and privacy, and the need for ongoing capacity building. Additionally, resource constraints and infrastructure limitations pose significant hurdles to technology integration. This theme highlights the importance of tailored support and capacity-building initiatives to facilitate smoother technology adoption.

Impact on Social Change and Development:

One of the most prominent themes to emerge is the significant impact of web-based technology interventions on social change and development in Assam. NGOs have reported measurable outcomes in terms of increased community engagement, improved service delivery, and enhanced advocacy efforts. These digital innovations have not only expanded the reach of NGOs but have also contributed to positive changes in various sectors, from education to healthcare and environmental conservation.

Case studies

THE East"

THE East is an educational NGO based in the capital city of Guwahati. Founded in 2010, the organization focuses on improving access to quality education in remote and underserved regions of Assam. EduConnect Assam has successfully leveraged web-based technology interventions to bridge educational gaps. They launched a mobile application that provides interactive video lessons and practice quizzes tailored to the state's curriculum. With a targeted approach to digital content creation, the NGO has reached over 10,000 students in far-flung areas, enabling them to access educational resources previously beyond their reach. EduConnect Assam has also used social media to engage with parents and communities, fostering a sense of shared responsibility for children's education.

"HealthCare for All"

HealthCare for All is a healthcare-focused NGO founded in 2005 with a mission to provide medical care to marginalized communities in Assam. The organization has implemented web-based technology interventions to enhance their service delivery. They maintain a website that serves as a portal for booking telemedicine appointments with volunteer doctors. Patients from remote villages can access consultations via video calls, eliminating the need for arduous journeys to healthcare centers. The NGO also employs social media and messaging apps to disseminate health awareness campaigns and vital information about diseases like COVID-19. By integrating web-based technology, HealthCare for All - Assam has reached a wider audience and significantly reduced barriers to healthcare access in the region.

"GreenEarth"

GreenEarth Assam is an environmental conservation NGO founded in 2008. Their mission is to address environmental challenges in Assam, including deforestation and wildlife conservation. The NGO employs web-based technology interventions such as a user-friendly website and a mobile app that allows local communities to report instances of illegal logging and wildlife trafficking. This citizen engagement through web platforms has resulted in a significant reduction in illegal activities, contributing to the preservation of Assam's rich biodiversity.

"Pragati"

Pragati is a women's empowerment NGO established in 2012. They have harnessed web-based technology to offer online skill development courses for women in rural areas. Through their website and social media campaigns, they have empowered thousands of women with digital literacy and vocational skills. Many of these women have since started their small businesses, creating economic opportunities and transforming their communities.

"YouthConnect"

YouthConnect is an NGO dedicated to youth development and community engagement, founded in 2015. They have capitalized on social media platforms and a dedicated mobile app to mobilize young volunteers for various community projects. By tapping into the digital generation's energy and enthusiasm, they have facilitated a multitude of youth-driven initiatives, from clean-up drives to educational programs, contributing to positive social change.

"Heritage Revive"

HeritageRevive is a cultural preservation NGO founded in 2011. Their mission is to safeguard and promote Assam's rich cultural heritage. They have utilized web-based technology by creating an interactive website that hosts virtual exhibitions, traditional music, and educational content about Assam's cultural treasures. Their digital outreach has not only preserved cultural legacies but also attracted tourism to the region.

"Disaster Relief"

Disaster Relief is an NGO specializing in disaster response and relief efforts. Established in 2009, they have developed a web-based platform that allows for real-time disaster reporting and resource mobilization. This system has proven invaluable during natural disasters, as it enables rapid coordination of rescue and relief operations, ensuring that affected communities receive immediate assistance.

"EmpowerEd"

EmpowerEd, established in 2013, is an NGO dedicated to improving the quality of education in Assam's schools. They have introduced a web-based learning management system (LMS) that connects teachers, students, and parents. Through this LMS, they have facilitated remote learning during the COVID-19 pandemic, ensuring that education remains accessible even in challenging circumstances.

Rural Health"

Rural Health is an NGO committed to improving healthcare in remote villages. Founded in 2014, they have deployed telemedicine kiosks equipped with web-based video conferencing in underserved areas. This innovation enables villagers to consult with doctors remotely. The NGO's web platform also tracks healthcare data, aiding in the early detection of health trends and the efficient allocation of resources.

Discussion:

The discussion on web-based technology interventions for social change in the context of Assamese NGOs reveals a compelling narrative of innovation, challenges, and transformative potential. As we reflect on the insights garnered from this research, several key discussion points emerge, underscoring the significance of these interventions and their broader implications.

First and foremost, the adoption of web-based technology by NGOs in Assam has ushered in a new era of connectivity and engagement. These organizations, driven by their missions to effect positive social change, have harnessed the power of digital platforms to connect with stakeholders, amplify their voices, and mobilize resources. Through websites, social media, mobile applications, and data analytics, NGOs have forged dynamic connections with donors, beneficiaries, and communities, transcending geographical boundaries. This interconnectedness has not only expanded their reach but has also enabled more profound and meaningful interactions with those they serve. However, this discussion would be incomplete without acknowledging the persistent challenges faced by NGOs in Assam. The digital divide, characterized by unequal access to the internet and varying levels of digital literacy, presents a formidable hurdle to the equitable utilization of web-based technologies. While technology has the potential to bridge gaps and empower marginalized communities, the reality is that not everyone in Assam has equal access to these resources. NGOs, therefore, must navigate this landscape carefully, ensuring that their interventions do not inadvertently exacerbate existing disparities.

Transparency and accountability have emerged as core themes in this discussion. Web-based technology interventions have provided NGOs with the means to enhance transparency in their operations. Through real-time updates, financial reporting, and impact assessments shared on websites and social media, these organizations have built trust among donors and beneficiaries. The digital space has become a realm of accountability, where NGOs showcase their work, provide evidence of impact, and invite scrutiny from the public. This transparency fosters trust, which is the bedrock of effective nonprofit work. The most compelling aspect of this discussion is the resounding impact of web-based technology interventions on social change and

development in Assam. NGOs have reported tangible outcomes, from increased community engagement to improved service delivery and enhanced advocacy efforts. These digital innovations have been instrumental in bringing about positive changes in various sectors, including education, healthcare, environmental conservation, and women's empowerment. The stories of transformation emerging from Assam paint a vivid picture of how technology can be harnessed to address complex societal challenges.

In conclusion, the insights gleaned from Assamese NGOs' use of web-based technology interventions underscore the dynamic interplay between technology and social change. While challenges persist, the transformative potential of these interventions is undeniable. This discussion serves as a testament to the resilience and adaptability of NGOs in Assam as they navigate the digital landscape in pursuit of a better future for their communities. It also calls for continued research, collaborative efforts, and targeted support to ensure that web-based technology interventions are harnessed effectively for the betterment of society in Assam and beyond.

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