



(REVIEW ARTICLE)



## Technology adoption and leadership strategies for enhancing human capital development in Bangladeshi NPOs

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World Journal of Advanced Research and Reviews, 2024, 21(03), 1185–1190

Publication history: Received on 27 January 2024; revised on 05 March 2024; accepted on 08 March 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.21.3.0747>

### Abstract

In Bangladesh, non-profit organizations (NPOs) face evolving challenges and opportunities in leveraging technology and leadership strategies to enhance human capital development. This study explores the intersection of technology adoption and leadership strategies within Bangladeshi NPOs, examining their impact on human capital development. Drawing from qualitative research, it identifies key challenges such as financial constraints and resistance to change while highlighting success stories of some NPOs of Bangladesh. Leadership styles like transformational, servant, and distributed leadership play pivotal roles in driving technology integration. The study underscores technology's potential to foster collaboration, skills development, and operational efficiency within NPOs. Recommendations include developing comprehensive technology adoption roadmaps, fostering cultures of innovation, investing in leadership development, and promoting collaboration. Ultimately, embracing technology as a catalyst for innovation and change can empower Bangladeshi NPOs to maximize their impact on societal challenges.

**Keywords:** Non-profit Organizations; Technology Adoption; Leadership Strategies; Human Capital Development

### 1. Introduction

In recent years, the landscape of non-profit organizations (NPOs) in Bangladesh has witnessed significant transformations, driven by the increasing importance of technology adoption and effective leadership strategies. As NPOs endeavor to fulfill their missions and address societal challenges, the integration of technology and the implementation of innovative leadership approaches have emerged as critical factors for sustainable human capital development (Uddin, 2018). Despite the potential benefits of technology adoption and leadership strategies, many NPOs in Bangladesh encounter various challenges and barriers in effectively leveraging these resources to enhance human capital development. Limited financial resources, technological infrastructure constraints, and resistance to change are among the key impediments faced by organizations in this sector (Samad, Ahmad, & Suria, 2023).

This study aims to explore the intersection of technology adoption and leadership strategies in Bangladeshi NPOs and their impact on human capital development. By examining best practices, identifying challenges, and offering recommendations, this research seeks to provide actionable insights for NPO leaders, policymakers, and stakeholders. The study has been employed a qualitative approach, to gain a comprehensive understanding of technology adoption and leadership strategies in Bangladeshi NPOs. Secondary documents have been studied to explore their perceptions, experiences, and challenges related to technology adoption and leadership practices.

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## 2. Contextual Discussion

The Technology Acceptance Model (TAM) by Davis (1989) and the Diffusion of Innovations Theory by Rogers (1962) provide theoretical foundations for understanding the adoption of technology in organizations. TAM posits that an individual's intention to use technology is influenced by perceived usefulness and ease of use, while the Diffusion of Innovations Theory explores how new technologies are adopted and diffused within social systems. In the context of Bangladeshi NPOs, these theories help elucidate the factors influencing technology adoption decisions among organizational members and the processes through which innovative technologies become integrated into organizational practices (Silva, 2015).

Transformational Leadership, as described by Bass (1985), and Servant Leadership, proposed by Greenleaf (1970), offer valuable insights into effective leadership approaches for promoting technology adoption and facilitating human capital development in NPOs. Transformational leaders inspire and motivate followers to achieve higher levels of performance, while servant leaders prioritize the needs of their team members and foster a culture of collaboration and empowerment. Within Bangladeshi NPOs, these leadership theories inform strategies for engaging organizational stakeholders, building consensus around technology initiatives, and creating supportive environments conducive to continuous learning and innovation (Chou, 2014).

Human Capital Theory, articulated by Becker (1964), and Social Learning Theory, proposed by Bandura (1977), shed light on the processes by which individuals acquire skills and knowledge within organizational contexts. Human Capital Theory emphasizes the role of education and training in enhancing individual productivity, while Social Learning Theory highlights the importance of observation, imitation, and modeling in shaping behavior (Indah & Jahidi, 2017). In the context of Bangladeshi NPOs, these theories underscore the significance of investing in human capital development initiatives that equip employees and volunteers with the competencies needed to effectively utilize technology and drive organizational change.

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## 3. Technology Landscape in Bangladeshi NPOs

The technology landscape within Bangladeshi Non-profit Organizations (NPOs) represents a complex interplay of opportunities and challenges, reflective of broader socio-economic dynamics within the country. While Bangladesh has made significant strides in technological advancement in recent years, the adoption and integration of technology within the NPO sector present nuanced considerations (Ahmed, Hossain, & Tareque, 2020). Firstly, it's imperative to acknowledge the commendable efforts of pioneering Bangladeshi NPOs such as BRAC and Grameen Bank, which have effectively utilized technology to catalyze social change and empower marginalized communities. For instance, BRAC's innovative use of mobile technology for microfinance and health interventions has revolutionized access to financial services and healthcare in rural areas, underscoring the transformative potential of technology within the NPO landscape.

However, such success stories are not without their challenges. One of the primary obstacles confronting Bangladeshi NPOs is the digital divide, characterized by uneven access to technology and digital infrastructure across different regions and demographic groups. While urban centers boast relatively robust digital ecosystems, rural and remote areas often grapple with inadequate connectivity and technological literacy, limiting the reach and effectiveness of NPO interventions. Furthermore, financial constraints pose a significant barrier to technology adoption and innovation within the NPO sector (BFIU, 2015). Many organizations operate on shoestring budgets, with limited resources allocated for technological investments and capacity-building initiatives. As a result, NPOs are often compelled to prioritize immediate operational needs over long-term technological sustainability, perpetuating a cycle of underinvestment and missed opportunities for innovation. In addition to financial limitations, the shortage of skilled professionals adept in both technology and social development exacerbates the challenges faced by Bangladeshi NPOs. The dearth of individuals with expertise in areas such as data analytics, digital marketing, and technology strategy constrains organizations' ability to leverage technology effectively and adapt to evolving digital trends (Ali, Nirob, & Noor, 2016).

Nevertheless, amidst these challenges lie untapped opportunities for collaboration, knowledge-sharing, and strategic partnerships. Initiatives such as the Digital and Smart Bangladesh campaign, spearheaded by the government, underscore the commitment to bridging the digital divide and fostering an inclusive digital ecosystem that empowers all segments of society, including NPOs.

#### **4. Leadership Strategies for Technology Integration**

The interplay of various leadership styles within Non-profit Organizations (NPOs) in Bangladesh underscores the multifaceted approach required to navigate the complexities of technology integration effectively. Transformational leadership stands as a cornerstone in driving technological change within NPOs. Leaders who espouse this style articulate a compelling vision for technological advancement, inspiring stakeholders to embrace innovation while navigating through resistance (Khondaker, 2006). By fostering a sense of purpose and instilling a shared commitment to technological evolution, transformational leaders catalyze organizational momentum towards embracing digital transformation.

Servant leadership, another prominent style, emphasizes empathy, collaboration, and empowerment. Within the context of technology integration, servant leaders prioritize the needs of their team members, fostering a culture of trust and psychological safety conducive to experimentation and learning (Rahman & Sultana, 2012). Through supportive leadership practices, such as mentorship and skill development initiatives, servant leaders empower individuals to leverage technology as a means of collective progress and innovation.

Distributed leadership models represent a departure from traditional hierarchical structures, decentralizing decision-making and empowering frontline staff to drive change. By distributing leadership responsibilities across various levels and functions, NPOs in Bangladesh tap into a diverse array of perspectives and expertise, fostering innovation and adaptability (Islam & Siengthai, 2010). This collaborative approach ensures that technology initiatives resonate with the nuanced needs of different stakeholders, enhancing their relevance and efficacy.

The successful implementation of leadership strategies for technology integration is exemplified by organizations like BRAC in Bangladesh. Through the establishment of a cross-functional technology and data-based system, BRAC streamlined the oversight of new initiatives, monitored staff performance, and identified capacity gaps (BFIU, 2015). This systematic approach, coupled with regular meetings, training sessions, and feedback mechanisms, facilitated seamless collaboration and alignment across the organization, culminating in the successful implementation of initiatives and the development of human resources.

Similarly, Grameen Bank, founded by Nobel laureate Muhammad Yunus, exemplifies servant leadership principles in its pursuit of financial inclusion and poverty alleviation. By prioritizing the needs of the economically disadvantaged and empowering them through microcredit initiatives, Grameen Bank has revolutionized traditional banking models, fostering economic empowerment and social upliftment. Through innovative use of technology, including mobile banking and digital financial services, Grameen Bank continues to extend its reach to remote and underserved communities, bridging the digital divide and fostering inclusive growth.

In the realm of distributed leadership, initiatives such as the Access to Information (a2i) programme epitomize collaborative approaches to technology integration within the Bangladeshi NPO landscape. Launched by the Government of Bangladesh in partnership with UNDP, a2i seeks to decentralize decision-making processes and empower frontline stakeholders to drive innovation at the grassroots level. By harnessing local expertise and leveraging digital solutions, a2i has spearheaded initiatives ranging from e-governance platforms to digital literacy programs, transforming service delivery and enhancing citizen engagement across the country.

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#### **5. Impact of Technology Adoption on Human Capital Development**

The adoption of technology presents significant opportunities for skills development and capacity building among NPO staff and volunteers. Through targeted training programs and workshops, organizations can equip their workforce with the technical knowledge and digital literacy skills needed to effectively leverage technology for program delivery, fundraising, and communication purposes (Phipps & Burbach, 2010). Technology serves as a catalyst for knowledge sharing and collaboration within NPOs, enabling geographically dispersed teams to collaborate in real time and exchange ideas and best practices. Platforms such as cloud-based document management systems, online project management tools, and virtual meeting platforms facilitate seamless communication and collaboration, breaking down silos and fostering a culture of transparency and teamwork (Chou, 2014). Technology empowers employees and volunteers by providing them with access to information, resources, and decision-making tools. Through online training modules, self-service portals, and interactive feedback mechanisms, organizations can empower individuals to take ownership of their professional development and contribute meaningfully to organizational goals (Gajdová & Majdúchová, 2018). The effective use of technology can lead to significant improvements in organizational performance and effectiveness. By automating routine tasks, streamlining processes, and leveraging data analytics for informed

decision-making, NPOs can enhance operational efficiency, optimize resource allocation, and maximize impact (Moldavanova & Goerdel, 2018).

BRAC, one of Bangladesh's pioneering NPOs which mentioned earlier, exemplifies the transformative impact of technology adoption on human capital development. Through targeted training programs and workshops, BRAC equips its staff and volunteers with the technical acumen and digital literacy skills essential for leveraging technology in diverse domains, ranging from healthcare and education to microfinance and disaster response. By fostering a culture of continuous learning and skill development, BRAC empowers its workforce to harness the full potential of technology in advancing its mission of poverty alleviation and social empowerment.

Similarly, initiatives such as the a2i program, spearheaded by the Government of Bangladesh in collaboration with UNDP, underscore the role of technology as a catalyst for knowledge sharing and collaboration within NPOs. By leveraging digital platforms and online collaboration tools, a2i facilitates real-time communication and information exchange among geographically dispersed teams, fostering a culture of transparency and teamwork. Through initiatives like the Innovation Hub and Digital Service Innovation Fund, a2i empowers individuals to co-create innovative solutions and drive transformative change at the grassroots level, thereby enhancing human capital development and organizational resilience.

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## 6. Challenges and Barriers to Technology Adoption

Limited financial resources pose a significant barrier to technology adoption for many NPOs in Bangladesh. The initial costs associated with purchasing hardware, software, and infrastructure upgrades, as well as ongoing maintenance and support expenses, can strain organizational budgets and hinder investment in technological innovation (Amagoh, 2015). Inadequate technological infrastructure, including unreliable internet connectivity and outdated hardware and software systems, presents challenges to effective technology adoption and utilization. Many NPOs struggle to access reliable and affordable internet services, particularly in rural and underserved areas, limiting their ability to leverage cloud-based solutions and online collaboration tools. Additionally, compatibility issues between existing systems and new technology solutions may further complicate the implementation process and hinder user adoption (Glavas & Kelley, 2014). Resistance to change among organizational stakeholders, including staff, volunteers, and board members, can impede technology adoption initiatives. Fear of job displacement, lack of familiarity with new technologies, and concerns about privacy and data security may contribute to resistance and undermine efforts to introduce innovative solutions (Kitonga, Bichanga, & Muema, 2016). Effective leadership and management are critical drivers of successful technology adoption and integration. However, many NPOs struggle to cultivate a supportive and strategic leadership culture that prioritizes innovation, fosters collaboration, and empowers staff to embrace change. Inadequate leadership capacity, limited understanding of technology's potential, and competing priorities may hinder efforts to champion technology initiatives and drive organizational transformation (Nga & Shamuganathan, 2010).

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## 7. Conclusion and recommendation

NPOs should develop a comprehensive technology adoption roadmap that aligns with their mission, vision, and strategic objectives. This roadmap should outline clear goals, timelines, and resource requirements for technology implementation, as well as strategies for capacity building, user training, and ongoing support. By taking a phased approach to technology adoption and prioritizing investments based on organizational needs and priorities, NPOs can mitigate risks, build internal buy-in, and ensure sustainable implementation. NPO leaders should foster a culture of innovation and learning that encourages experimentation, risk-taking, and continuous improvement. By creating opportunities for staff and volunteers to explore new technologies, share insights and lessons learned, and celebrate successes, organizations can nurture a collaborative environment where innovation thrives and technology becomes integral to achieving mission-driven outcomes. NPOs should prioritize investments in leadership development programs that equip leaders and managers with the skills, knowledge, and competencies needed to effectively lead technology-driven change initiatives. Leadership development initiatives should focus on building digital literacy, fostering innovation, managing change, and promoting a culture of inclusivity and collaboration. By providing ongoing training, mentorship, and coaching opportunities, organizations can empower leaders at all levels to navigate complex technology landscapes, inspire their teams, and drive organizational growth and resilience. NPOs should prioritize collaboration and knowledge sharing initiatives that facilitate cross-sector partnerships, peer learning, and information exchange. By participating in networks, forums, and communities of practice, organizations can access valuable resources, share best practices, and leverage collective expertise to address common challenges and accelerate progress towards shared goals.

In conclusion, the successful adoption and integration of technology in Bangladeshi NPOs require visionary leadership, strategic planning, and a commitment to continuous learning and improvement. By embracing technology as a catalyst for innovation and change, NPOs can unlock new opportunities, enhance organizational effectiveness, and maximize their impact on the communities they serve.

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