

Role of ICT in Public Service Delivery in India

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ABSTRACT

There are a good number of initiatives in India that use information and technology to promote sustainable growth. Organizations in the public and government sectors have also acknowledged the value of automation in boosting labour productivity and reducing unnecessary spending, which frees up more money to be used toward enhancing public satisfaction and experiences with public administration. The public and government sectors are getting ready for a technologically sophisticated, people-centered era. Many different organizations, including governmental organizations, for-profit businesses, civil society organizations, and cooperative societies, have participated in these public initiatives at a relatively small scale. To enable the replication of successful efforts on a broader scale, policymakers must identify scalable initiatives and create institutional channels on a larger scale. There is sufficient proof to conclude that well-crafted E-governance efforts with innovative process design decrease discretion, promote efficiency, and reduce corruption. Unfortunately, very few of these ideas have been fully implemented. It is necessary to expedite the momentum of E-governance adoption, increase capability to change the service delivery process for public. This article focuses on developing a conceptual framework through secondary sources, on how information and communication technology (ICT) might improve governance by increasing efficiency, openness, accountability, and reducing bribery in the provision of public services. Various components that support the effective delivery of public services through e-governance are built into a conceptual framework. According to the study, the implementation of information and communication technology (ICT) in public administration as e-governance would have a favourable impact on providing individuals with government services in a fast, effective, and transparent way.

Keywords: *Public service delivery; ICT; e- Governance; public administration*

I. INTRODUCTION

ICT, or information and communication technology, has assimilated into our daily lives. It has the possibility to reduce expenses, promote transparency and responsibility, regulate workforce members, and expedite processes. The advantages are enormous if we have the motivation, wisdom, and understanding to put it to use. One of the tools that promotes democracy the most is information and communication technology. E-governance is necessary for transparent governance. We must create techniques to enhance knowledge exchange in today's climate of abundant information. We need to alter our viewpoint. From India's standpoint, nothing has changed yet. Since we lack knowledge, the true purpose of public service has never been achieved. Only if the government ensured perfect openness and the free flow of information would the nation develop (Edwards, 2012). The potential benefits that may result from this ICT application have given rise to fresh optimism. India has been surprisingly at the vanguard of this new growth, notably among the South Asian countries, despite its strict bureaucracy and rigorous government system. India was one of the first emerging nations to use e-governance. You might say that the first wave developed from the bottom up. Several social entrepreneurs were successful in persuading authorities of the benefits of emerging ICTs, particularly in terms of delivering convergent services to rural locations and enhancing transparency and supervision in this sector. ICT has a significant role in decreasing corruption, according to Bhatnagar (2013), although

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it has not always been straightforward to realize this promise. While it is necessary to carry on service delivery continuing manner, governments should start to reconsider in the context of e-governance and e-government when evaluating the state of e-governance where ICT being used in delivering government services (Stringer, C.2011) In order for the government to convert itself into coherent, synchronized, and coordinated processes and structures, the extent of e-government must be expanded. It's critical to comprehend the entire possibilities of using ICT to enhance delivery of service. Understanding difficulties in realizing promise by figuring out the basic components for mass adoption is equally vital. The potential advantages of using ICT within businesses have been imagined in a variety of ways. One of these advantages is ICT's capacity to reduce information access asymmetry and, as a result, better handle the primary dilemma (Gurubaxani and Whang 1991).

Other advantages that apply to all kinds of organizations include extending market accessibility and suppliers, processing operations with every participant efficiently, improving availability of information by electronic publication. Through suitable ICT infrastructure, like datacentres, broad area networks, delivering services portals, and app development through targeted mission mode projects, India's e-Governance initiative seeks to enhance the government's ability to provide services to citizens. e-Government is anticipated in guaranteeing open, transparent, responsible, and citizen-oriented structure of administration with the incorporation of ICT in good governance. Focusing on this issue, the article makes an effort to examine two key aspects: first, the role that ICT plays in good governance process, and second, the E- governance aspect among countries like India.

The main objective of the study is to

- i. Understand ICTs role in E- governance
- ii. Connect link among public service delivery and E- governance
- iii. Create conceptual framework for adopting ICT use in public service delivery in India

The study comprised books, internet blogs, white papers, expert interviews, and journal publications. Search engines were used to find relevant literature on E- governance, public service delivery, ICT. These reviews helped construct the framework.

II. E- GOVERNANCE IN INDIA

Both the term "e-government", "e-governance," that are used in characterizing Government endeavours employ ICT-based services to implement various programs and offerings for the wellbeing of its population, are closely connected. While the definitions of e-governance focus on the utilization of ICT to assist government processes, inform public, and efficiently offer services to them, e-governance also serves as an instrument which renders most government programs readily available and open to the general public. If we consider e-government to also be a system, we may argue that e-governance refers to the system's operational component. On the one hand, e-governance functions as just a one-way interaction whereby website provide the public with information, norms, regulations, and services, such as forms that may be downloaded for governmental services and applications. e-governance, conforms to a two-way transmission line in which requests for rules and procedures are made and feedback from individuals is received. Coleman (2006) described e-government as that of the fusion of digital knowledge services and the enhancement of public participation features like e-democracy in order to achieve the objective of balanced e-government. E-government was defined as the delivery of public goods and information online and through other digital channels (Oppenheim,2002). E-government, according to Kumar et al. (2007), is the process of delivering improved citizen services to businesses, other facets of society by fundamentally changing the way that governments manage information. According to the World Bank (2001), this refers to information and communication technology (ICT) systems that are owned or operated by the government and that change how it interacts with the public, private, other government entities to enhance responsibility, enhance transparency, and/or promote civilian empowerment. However, Abramson and Means (2001) claimed that electronic contact in between governance, public and people may be classified as e-government. E-governance, which is supported by the innovative use of ICT, does have power to revolutionize interactions between the public, businesses, and different branches of government. Heeks (2001) distinguished three key e-governance domains (Figure 1)

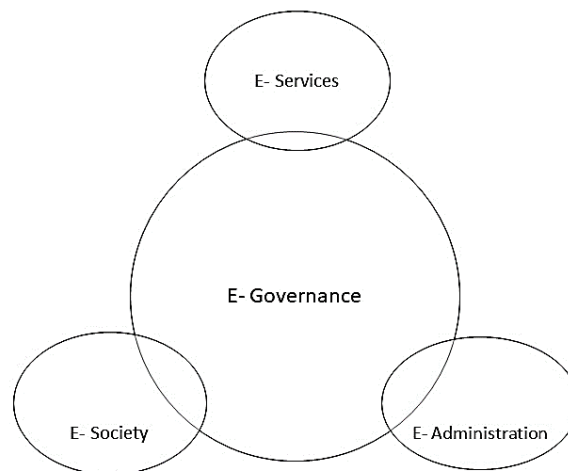


Figure 1: e- governance domains

- E-services: linking individuals with the government;
- E-administration: enhancing governmental operations;
- E-society: fostering relationships with and among the civic society

Good Governance:

Five fundamental principles of good governance were identified by UNDP (1997), including legitimization and speech, vision, effectiveness, accountability, and fair treatment. By contrast, the OECD (2001) concentrated on transparency, accountability, performance, and efficiency, as well as ability to respond, critical thinking, and the law. Eight characteristics were outlined by Kettani (2009), including engagement, legal system, efficiency and effectiveness, equitable and inclusion, openness, integrity, accountable, and credence.

The implementation of e-governance comprises reducing administrative procedures, electronically converting data stored by government agencies, connecting dispersed databases, enhancing public access to services. To facilitate government-to-government (G2G) exchanges and turning it to be easy to execute government-to-citizen (G2C) interactions and government-to-business (G2B), information exchange between government agencies should be standardized (Seifert and Bonham, 2003). E-Governance systems have the potential to boost competition, cut down on prerogative, eliminate bottlenecks in daily transactions, improve the predictability and continuity of governmental process, make sure equitable availability of services, information and encourage accountability with openness. By removing discretion from the process and empowering citizens to handle their own transactions, a pure e-governance system discourages corruption (Cisar, 2003). It is anticipated that corruption would become far more difficult, if not impossible, to perpetrate in a situation with many people present and numerous witnesses (Mahmood, 2004). The states and the federal government of India have advanced their e-governance policies and projects significantly during the past ten years. The Indian central and state governments have been collaborating to extend the use of E-governance software to country's "ordinary citizens." Tangkitvanich, 2003 says some state governments in India are beginning to recognize the benefits of e-Governance. According to Kochar & Dhanjal (2005) due to effective e-governance initiatives, corruption has significantly decreased in India.

Kranti: National e-Governance Plan 2.0: It serves as a fundamental supporter of Digital India program. With the mission of "Transforming e-Governance for Reshaping Governance," it was approved in 2015. Under e-Kranti, 44 Mission Mode Initiatives that are at varying levels of completion. Few areas are, e-Education where each school will have a broadband connection. Every secondary and high school schools will have free Wi-Fi. Six crore rural Indians are expected to become digitally literate as part of Gramin Digit Saksharta Abhiyaan. MOOCs are included in SWAYAM to take advantage of e-learning. It offers a platform that makes it possible for anybody, anywhere, at any time to access all of the courses that are offered in schools from Class 9 through Post-Graduation. E-Healthcare will include patient information interchange throughout India, online medical consultations, online health records, online drug supply, etc. Using mobile banking, this will make it easier for landowners and farmers to get genuine pricing

data, acquire inputs electronically, and make some cash, loans, and distress payments online. Emergency services which are mobile based connected to disasters would be made available to residents in real-time so that they may take precautions early and reduce the property and lives lost. Through the use of mobile payments, a micro-ATM program, and Post Offices, financial inclusion will be strengthened. The e-Courts, e-Police programs may all be used to enhance the interoperable criminal justice system. Nationwide GIS Mission Model for Planning would be put into action to make GIS-based planning process, conception, designing, and planning systems easier. To maintain a secure and safe cyberspace throughout the nation, the National Cyber Coordinating Centre has been established.

III. IMPORTANCE OF ICT IN GOVERNANCE

As we know, the digital world has changed society, and public institutions are influenced by it. In addition to military, law enforcement, taxes, education, social equity, and healthcare, governments must now harness more ICT-based services to create a more citizen-friendly administrative structure. Marginalizing individuals in governance has been linked to backwardness and sluggish growth in numerous nations. Good governance encourages citizen engagement to create an open and responsive institutional framework, (Abbas, M. H., & Ahmed, V., 2014). ICT has been utilized to change the people-government link to involve every individual in good governance for this noble aim. ICT in governance promotes an efficient, responsive, and accountable administrative structure. This is projected to improve people's life quality, efficiency, and economic expansion, especially for the poor (Mayer-Schonberger & Lazer, 2007).

ICT application in governance:

Thus, applying ICT to governance entails more than just computerizing offices; it is complete transformation the way government works. It entails fresh government machinery obligations. ICT also helps organizations evolve by handling enormous amounts of data and improving government department and agency connections by eliminating mistakes. It also involves creating common apps to reduce governance task repetition. ICT in governance minimizes space between individuals and providers of public service, resolves concerns like public works delays, red tape, bribery, and public harassment. It prioritizes faster public grievance responses. Panneervel, P. (2005) says ICT-based operations also provide openness, decreasing bureaucrats' informational monopolies and empowering people. Today, the government cuts red tape with ICT to improve public institutions. Online services have given individuals greater knowledge about public services, helping them solve daily difficulties. The Internet has been utilized to provide and implement government programs and services to citizens. Alexander, D. M. (2006). says E-governance uses contemporary technology to regulate citizens. E-governance can only improve government if the necessary reforms are done. E-governance may enable the government adapt services to changing requirements and bring ICT to the public. ICT-based services let departments and governmental entities perform public services without superfluous human engagement and hierarchies. ICT services are adaptable, accessible, effective, quick to respond, and reliable. To inform the general public using ICT-based services, the government uses two different types of websites. (Mahmood, R. 2004)

Government sites handle non-financial operations, such as voting systems, form uploading and downloading, online tax filing, and the application procedure for various certifications, permits, and licenses. It also manages various type of economic transactions, such as money transfers through a secure server. Online transactional services also make it simple and flexible to apply for things like student loans, unemployment, job seeking assistance. In order to create a connection between both the people and the government, ICT-based services essentially operate. We may therefore conclude that ICT primarily serves as a go-between between the government and people to provide a superior institutional framework. Salam, M.A. (2012) demonstrates the significance of ICT in forging a connection between the two by fostering an environment of mutual confidence and gain. ICT-based services connect government and citizens in the following way. Thus, ICT mediates in between government and its citizens to improve administration. ICT fosters trust and mutual benefit.

IV. E- PUBLIC SERVICE DELIVERY

In order to move goods and funds in a transparent manner and to lessen income disparity, public service delivery (PSD) is essential. Additionally, it quickens a nation's social and individual development. When the market fails and the underprivileged unable to purchase essential commodities and services, it becomes the government's duty to offer

incentives or essential services and goods to shield them from further suffering. The survival and growth of poor nations depend on PSD. For a nation's socioeconomic progress, effective PSD is of paramount importance. Additionally, several studies assert there is a substantial correlation between economic success and a transparent system for delivering public services (Shah, A.2005). More PSD progress is being made in nations like the Philippines and Indonesia mostly as a result of the use of ICT in public bodies. Bangladesh, Pakistan, and India are among the South Asian nations that have lagged behind in development. Many developing nations lack computerized procedures for national identity documents, smart card, communities score cards, social auditing, and community participation, as well as mechanisms for resolving grievances that improve the fairness of the process. These processes are abused and give unjustified advantages or influence over the government structure because of a lack of ICT. By providing balanced control and information at every stage, ICT will eliminate these problems. Effective resource management and competent public services increase the effectiveness of decentralized structure (Azfar O. et.al., 1999)

ICT is regarded as one of the key tools for managing organizational or cultural shifts, community development strategies, and public or private activities. By facilitating simple access to reliable information, it may empower individuals and indirectly monitor how the government is run. Adopting ICT for public service is based on variables, as indicated in Figure 2 (Arfeen, M. I., & Khan, N., 2009).

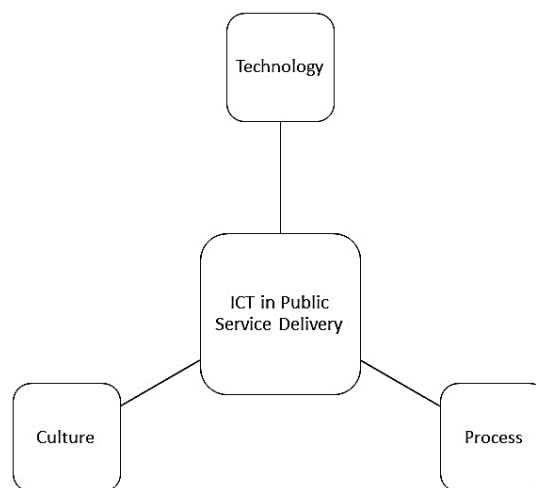


Figure 2. ICT in public service delivery

- a. Technology: Bringing changes into effect while making use of the most recent and cutting-edge information technology
- b. Culture: Moving cultural norms or behaviour away from manual procedures or towards ICT for both service providers and customers
- c. Process: The modern method of providing services that improves the outcomes of the government policies

Policy reform with the newest IT architecture and principles is needed to establish successful electronic PSD systems (Khalid, 2012). However, physical growth of institutions without services elements, ICT implementation, registry of national population, department register, and human capital development may not enhance the delivery system. After building infrastructure, governmental agency should implement IT reforms to reduce papers in national and regional institutes and encourage online forms. Preventing violations requires a regulatory environment. However, public access and free-market policies should prioritize fairness and equity. Cultural transformations need capacity development, according to Backus (2001). In underdeveloped nations like India, unemployment, ignorance, and inadequate law enforcement make it hard to modify society's behaviour. ICT's transparency and openness help curb cultural vices like bribery and partiality. According to Tapscott and Caston (1993), a paradigm change in public service delivery's principles or manner of operation has begun as ICT blooms. The paradigm of e-governance has replaced the documentary method and interpersonal participation of the administrative paradigm with electronic interchange but no interaction. User modification and personalization cause the ideals of uniformity, fairness, and

equity to change. ICT is one of main technologies that promotes responsibility and transparency in good governance, thus aiding in the decrease in the cost of governmental operational processes (Harris,2000). Batho Pele advocated for nine principles, including working with the public to establish service levels, expanding the availability of information maintaining civility, transmitting knowledge, being transparent and open, offering redress, and delivering a good value (RSA, 1997). Additionally, Citizen Contracts are distinguished by six principles, including good value for money, civility, thoughtfulness, choices and collaboration, time and cost and service level (BSI, 2008). According to Yong (2004), there has been noticeable transition in the way services are delivered from being agency-centric to being citizen-centric. Contemporary governments are gradually moving away from conventional department-focused service delivery model and toward citizen focused (Shapiro, 1999). Citizen-centric is a practical strategy for delivering public services and a great way for the public and government to interact (Salam, 2012).

V. CONCEPTUAL FRAMEWORK

People that use e-governance benefit from a unique experience thanks to the dynamic information dissemination. A lot of e- public service quality research starts with an infusion of conventional quality of service measures, web application characteristics. According to Field et al. (2004), e- public service can be crucial in enhancing services quality offered to consumers since it helps firms thrive, enhance client satisfaction and confidence, and lead to profitable growth. Dabholkar (1996) done research on e- public service quality dimensions with a focus on web site design. He asserts that seven e-service dimensions on quality, including website, dependability, easiness, pleasure, command, is represented as fundamental criteria in evaluation of quality. Comparing conventional characteristics of quality of service like web aesthetic, interaction, usability, trustworthiness, awareness, affordability, Cox & Dale (2001) established six aspects of quality of service. According to Yang (2001), buyers determine if a service or a product is satisfactory by evaluating how well it performs in comparison to their past expectations. Positive disconfirmation happens when performance surpasses expectations, and satisfaction levels are likely to rise as a result. Providing a high service quality is a crucial problem in all businesses (Saha and Zoha, 2005). An important factor in preserving patron happiness is online quality service. Customer satisfaction will be final result of how customers perceive, evaluates, and reacts about their interaction with service, product. Kalsi (2009) discussed how e-Government projects directly influence individuals and how they get advantages by dealing with government agencies directly. According to research by Al-Tarawneh (2012) on correlation among quality of e-service and client perspective, responsiveness, accessibility, customization, safety, and site design all affect how customers see e-service quality. As a primary tool ICT supports governance by enhancing openness, transparency, responsibility and subsequently assisting in the decrease in the cost of governmental daily operations (Harris,2000). Heeks (2001) investigated how new technologies for information, communication may significantly aid in the accomplishment of good governance objectives. Good governance may result from initiatives like e-governance system.

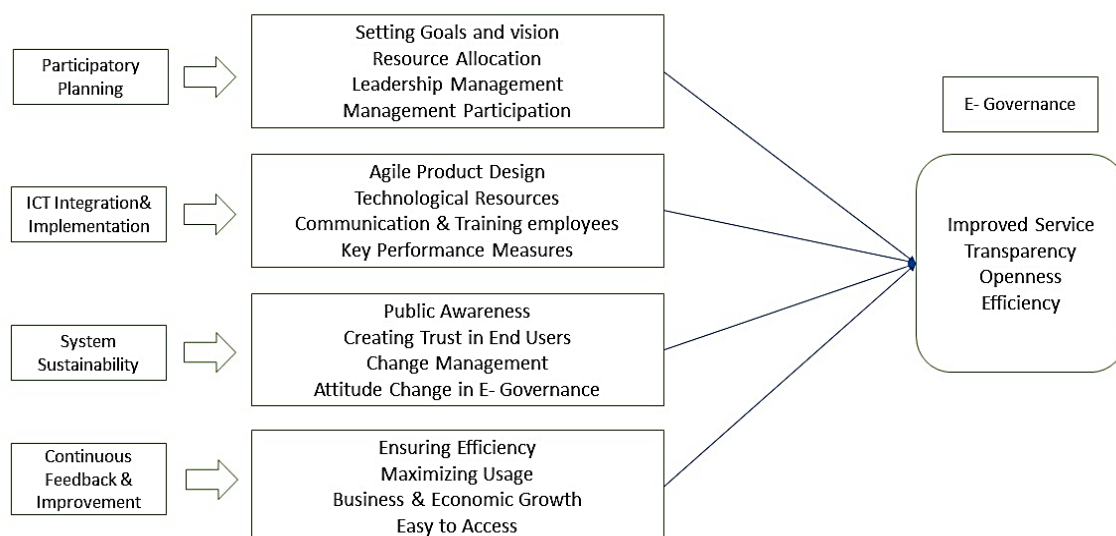


Figure 3. Conceptual framework for role of ICT in public service delivery

This framework contained in this study takes into account sensitivity to both culture and the general public, as well as organized and skilled groups, information availability, and accountability from Government. Integration and usage of information and communications are both required for enhanced delivery of public services. Accountability, participation, respect for rights and welfare, and openness are essential components of effective government. Therefore, the first step in e-governance and the provision of public services is creating and planning, which in turn requires having clearly defined goals, active involvement, the availability of resources, and leadership. Following that comes the stage of implementation, which includes the design of ICT, the utilization of the necessary technology, trainings, communication and transparency, and well-defined metrics. After the implementation has been finished, the system has to be evaluated for its success by considering how easy it is to use, how much longer it can be used, and how much more efficient it is. To achieve sustainable e-governance, it is prime importance to implement a variety of measures, including but not limited to conducting public awareness campaigns, instilling confidence, ensuring seamless transitions, and modifying attitudes.

VI. CONCLUSION

In India, e-government is gaining ground, but challenges like awareness creation and the technological gap must be tackled. The successful implementation of e-Government projects means enormous speed internet connection, and the imminent nationwide rollout of 5G will strengthen our resolve. A hybrid solution that includes a centralized method for documentation, knowledge transfer, file systems, grievance governance, etc. must be used to improve interchange across e-governance applications. In order to be successful, e-governance initiatives in rural areas must take into consideration the regional circumstances. For a number of participants, including bureaucratic, inhabitants of rural and urban communities, elected leaders, and others, our government must focus on developing techniques of building capacity that are pertinent, practical, unique, and efficient. (Ho, T.K., 2002) The usage of cloud technology, which is becoming more significant, has enhanced the delivery of services related to e-governance. In addition to helping to save costs, cloud computing also helps to enable new services, enhance the educational system, and produce new employment and possibilities. This project's main goal is to maximize government ICT spending while quickening the provision of e-services throughout the nation. For countries like India, where participants come from many linguistic origins, e-Government across local languages is noticeable. For ensuring accountability and delivery of services in high-quality and products by the public and private sectors without damaging community as a whole, updated laws and regulations are critical with regards to the use of ICT in improving governance. Eliminating laws, practices and powers, streamlining processes to eliminate bureaucratic obstacles, and creating single windows all contribute to the quick resolution of disputes. A variety of legislative rules encompassing digital documents, digital archives, information mirroring, information freedom, data security, cybercrimes, and rights to intellectual property are necessary for the effective implementation of electronic governance. However, there are issues that prevent the development of electronic governance in India, such as a lack of skilled manpower, an absence of appropriate attitude - behaviour alignment on the part of authorities and citizens, an absence of sufficient e-infrastructure, instances of people abusing technology, an absence of appropriate consciousness just on component of the overall public, a lack of funding, etc. The removal of financial restraints, orientation for public employees, promoting awareness by conferences, seminars, and tutorials, enough government budget for developing the necessary e-infrastructure, correct electronic governance legislation, preserving e-readiness, promoting democratic society involvement in carrying out goal-oriented E-governance projects, etc., might all contribute to the advancement of the field. For the promotion of E-governance in improving service delivery quality, sensible policy, legal structure, suitable infrastructure, educated resources, cooperative private business, emerging civil community, and people's participation are important.

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